# Appendix 4 PRE-NEPA ENVIRONMENTAL SCREENING

### US 41 Mainline: North of Breezewood Lane (Appleblossom Drive) to WIS 114/County JJ (Winneconne Avenue)

#### Pre-NEPA Summary of Qualitative Environmental Impacts

|  | **Impact Rating** |
| --- | --- |
| **SOCIO-ECONOMIC FACTORS** | |
| A. General Economics | ○ |
| B. Community and Residential | ○ |
| C. Economic Development and Business | ○ |
| D. Agriculture | ○ |
| E. Environmental Justice | ● |
| **NATURAL ENVIRONMENT FACTORS** | |
| F. Wetlands | ● |
| G. Streams and Floodplains | ● |
| H. Lakes or Other Open Water | ● |
| I. Upland Habitat | ○ |
| J. Erosion Control | ● |
| K. Storm Water Management | ● |
| **PHYSICAL ENVIRONMENT FACTORS** | |
| L. Air Quality | ● |
| M. Construction Noise | ● |
| N. Traffic Noise | ● |
| **CULTURAL ENVIRONMENT FACTORS** | |
| O. Section 4(f) and 6(f) | ○ |
| P. Historic Resources | ● |
| Q. Archaeological Resources | ● |
| R. Hazardous Substances or UST’s | ○ |
| S. Aesthetics | ○ |
| T. Coastal Zone | ○ |
| U. Airport | ○ |

#### Pre-NEPA Qualitative Impact Analysis

|  | **Impact Rating** | **Comments** |
| --- | --- | --- |
| **SOCIO-ECONOMIC FACTORS** | | |
| A. General Economics | ○ | When the purchase of right-of-way is necessary, there may be property acquisition costs to DOT and a related drop in tax revenue for the local community. However, expansion of US 41 in along this segment of US 41 is not anticipated to result in the purchase of additional right-of-way or the acquisition of real estate.  Expenditures would be made during construction (potential local purchase of goods and services), and there would be construction related employment opportunities. |
| B. Community and Residential | ○ | The land immediately adjacent to the US 41 mainline is developed and mainly consists of residential property. The residential property along this segment is largely made up of single-family homes with a few multifamily properties near Appleblossom Drive.  No relocations or right-of-way acquisition from residential property or community facilities is anticipated. |
| C. Economic Development and Business | ○ | A small section of commercial property is located on the east side of US 41 and south of the Winneconne Avenue interchange as well as on the west side of US 41 near the south project terminus. The commercial property along this segment consists of large and small retail stores.  No relocations or right-of-way acquisition from commercial property is anticipated. |
| D. Agriculture | ○ | No agricultural land is located adjacent to US 41 along this segment. No agricultural impacts are anticipated. |
| E. Environmental Justice | ● | High level analysis of Census (2000) data infers that a higher percentage of people living in poverty live in the neighborhood west of US 41 near Appleblossom Drive. Impacts to EJ populations should be examined and appropriate public involvement and CSD efforts should be made during future design and construction phases. |
| **NATURAL ENVIRONMENT FACTORS** | | |
| F. Wetlands | ● | Based on examination of aerial photography and WDNR mapping wetlands exist to the east of US 41 along the Neenah Slough that generally runs parallel to US 41. These designated wetland areas do not cross over US 41, however an unnamed stream that crosses under the US 41 mainline between Byrd Avenue and Gay Drive and another unnamed stream that flows parallel to US 41 between Gay Drive and West Cecil Street connect to the wetlands.[[1]](#endnote-1) Effects to the streams due to construction of potential improvements should be minimized not only to protect the quality of the stream but to also protect the quality of the wetlands that it flows to.  The acquisition of designated wetland property due to mainline expansion is not anticipated along this segment. Impacts to wetland habitat should be assessed in coordination with the WDNR the U.S. Fish & Wildlife Service. |
| G. Streams and Floodplains | ● | One unnamed stream crosses under the US 41 mainline between Byrd Avenue and Gay Drive. Another unnamed stream parallels US 41 between Gay Drive and West Cecil Street. Both streams flow into the nearby Neenah Slough. Future expansion of US 41 may require alteration to the existing stream crossing and/or parallel unnamed stream alignment. This segment of US 41 is located adjacent to a floodplain that follows the Neenah Slough and associated streams.[[2]](#endnote-2)  Migratory bird nests may exist on bridges and fish habitat may be present in the stream. Impacts to streams, floodplains, and habitat should be assessed in coordination with the WDNR, USACE, and the U.S. Fish & Wildlife Service. |
| H. Lakes or Other Open Water | ● | The Neenah Slough is located to the east of US 41 and flows generally parallel to the highway.ii Conceptual design alludes to the potential need to re-channelize the slough to accommodate the expansion of the highway and likely reconstruction of Jewelers Park Drive. Impacts to the slough should be assessed in coordination with the WDNR and the USACE. |
| I. Upland Habitat | ○ | Aerial photography indicates that the area is almost entirely urbanized, however wooded areas exist on the east side of US 41 near the south project terminus. Conceptual design indicates that the wooded habitat is located outside the boundary of anticipated construction work. |
| J. Erosion Control | ● | Soils in the segment area include Houghton Muck (Hw), Kewaunee silt loam with 2 to 6 percent slopes (KnB), Neenah silty clay loam with 0 to 3 percent slopes (NhA), Udorthents with 0 to 3 percent slopes (UoA) and Winneconne silty clay loam with 1 to 4 percent slopes (WnB).[[3]](#endnote-3)  It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control sediment and other pollutants on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These erosion control measures should be documented in the project plan. All required permits for erosion control should be acquired prior to, and implemented during construction. |
| K. Storm Water Management | ● | Storm water management will be required, and may impact nearby streams if not properly managed. It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control storm water on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These storm water control measures should be documented in the project plan. All required permits for storm water runoff should be acquired prior to, and implemented during construction. |
| **PHYSICAL ENVIRONMENT FACTORS** | | |
| L. Air Quality | ● | The United States Environmental Protection Agency (USEPA) has identified six air pollutants of nationwide concern (criteria pollutants): CO, NO2, ozone, PM-10, sulfur oxides (SOx, measured as SO2), and lead. The National Ambient Air Quality Standards (NAAQS) are published in the Code of Federal Regulations (40 CFR 50.4 to 50.12). All states are required to submit to the USEPA a list identifying those air quality control regions or portions thereof, which meet or exceed the NAAQS or cannot be classified because of insufficient data. Portions of air quality control regions that are shown by monitored data or air quality modeling to exceed the NAAQS for any criteria pollutant are designated “nonattainment” areas for that pollutant.  Winnebago County is classified as in attainment for all criteria pollutants as reported by the USEPA[[4]](#endnote-4) and therefore a determination of transportation conformity would not be needed under the Code of Federal Regulation (40 CFR 93).[[5]](#endnote-5) However, the project area is within an MSA and so any project that will create a 10-year projected increase in peak hour traffic over 1,200 vehicles may be subject to Air Quality Permits. |
| M. Construction Noise | ● | Construction areas closest to residential uses or other sensitive receptors would be of most concern. The entire length of this segment is adjacent to residential land uses. Impacts to residences near the construction area may last throughout the construction schedule. |
| N. Traffic Noise | ● | Increases in traffic noise could occur from potential increases in traffic volumes or the decrease in proximity between vehicular traffic and sensitive receptors within the highway expansion project. Effects to nearby residents along the entire segment would be of most concern. A traffic noise study will be needed to assess the need for noise mitigation near the residential property. |
| **CULTURAL ENVIRONMENT FACTORS** | | |
| O. Section 4(f) and 6(f) | ○ | There are no identified Section 4(f) or 6(f) (LAWCON properties)[[6]](#endnote-6) uses along the existing US 41 mainline within this segment. |
| P. Historic Resources | ● | No national register listed sites exist in the project area.[[7]](#endnote-7) Initial analysis indicates the potential for eligible historic sites in the area is low, however the Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for history. |
| Q. Archaeological Resources | ● | An Archaic/Woodland archaeological site is located adjacently to the west of US 41 and spans nearly the entire length of the segment, however much of the site has already been developed.[[8]](#endnote-8) WisDOT may have records of the site that relate to the original construction of US 41. Archaeological review should be completed for any work outside the established right-of-way. The Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for archaeology. |
| R. Hazardous Substances or UST’s | ○ | Preliminary review of the WDNR’s Bureau of Remediation and Redevelopment Tracking System (BRRTS) indicate no hazardous materials sites located on property adjacent to the US 41 highway right-of-way between Breezewood Lane and Winneconne Avenue.[[9]](#endnote-9)  Review of EPA’s EnviroMapper shows no nearby discharges to water, superfund sites or toxic releases. There are two hazardous waste handlers located adjacent to US 41 mainline.[[10]](#endnote-10) Further study of hazardous materials may need to be completed. |
| S. Aesthetics | ○ | Expansion of US 41 is not expected to create any new negative aesthetic effects. Following a CSD process could be considered if the nearby residential communities are affected. |
| T. Coastal Zone | ○ | The interchange is not in a Coastal Zone County. |
| U. Airport | ○ | Outagamie County Regional Airport, the closest airport to the segment, is approximately five miles away from the segment. |

### US 41 Mainline: WIS 114/County JJ (Winneconne Avenue) to Oakridge Road/Main Street

#### Pre-NEPA Summary of Qualitative Environmental Impacts

|  | **Impact Rating** |
| --- | --- |
| **SOCIO-ECONOMIC FACTORS** | |
| A. General Economics | ● |
| B. Community and Residential | ○ |
| C. Economic Development and Business | ● |
| D. Agriculture | ○ |
| E. Environmental Justice | ● |
| **NATURAL ENVIRONMENT FACTORS** | |
| F. Wetlands | ○ |
| G. Streams and Floodplains | ● |
| H. Lakes or Other Open Water | ● |
| I. Upland Habitat | ○ |
| J. Erosion Control | ● |
| K. Storm Water Management | ● |
| **PHYSICAL ENVIRONMENT FACTORS** | |
| L. Air Quality | ● |
| M. Construction Noise | ● |
| N. Traffic Noise | ● |
| **CULTURAL ENVIRONMENT FACTORS** | |
| O. Section 4(f) and 6(f) | ○ |
| P. Historic Resources | ● |
| Q. Archaeological Resources | ● |
| R. Hazardous Substances or UST’s | ● |
| S. Aesthetics | ○ |
| T. Coastal Zone | ○ |
| U. Airport | ○ |

#### Pre-NEPA Qualitative Impact Analysis

|  | **Impact Rating** | **Comments** |
| --- | --- | --- |
| **SOCIO-ECONOMIC FACTORS** | | |
| A. General Economics | ● | When the purchase of right-of-way is necessary, there may be property acquisition costs to DOT and a related drop in tax revenue for the local community. It is possible that expansion of US 41 in this segment would require some additional right-of-way from the commercial properties located to the east and west of US 41 to accommodate for the future roadway footprint and clear zones. However, relocations are not likely.  Expenditures would be made during construction (potential local purchase of goods and services), and there would be construction related employment opportunities. |
| B. Community and Residential | ○ | The lands immediately adjacent to the US 41 mainline are mostly developed and mainly consist of commercial and industrial properties. A small pocket of residential property is located on Rock Ledge Lane in the southwest quadrant of the Oakridge Road/Main Street interchange near Calvary Bible Church.  No relocations or right-of-way acquisition from the Calvary Bible Church or from the residential properties along Rock Ledge Lane is anticipated. |
| C. Economic Development and Business | ● | The lands immediately adjacent to the US 41 mainline are mostly developed and mainly consist of commercial and industrial properties. It is possible that expansion of US 41 in this segment would require additional right-of-way from commercial and/or industrial properties located to the west of US 41 to accommodate for the future expansion of the highway. However, relocations are not likely. |
| D. Agriculture | ○ | No agricultural land is located adjacent to US 41. No agricultural impacts are anticipated. |
| E. Environmental Justice | ● | Analysis of Census (2000) data does not indicate the presence of EJ populations near the US 41 corridor along this segment. However, the characteristics of the housing in the southwest quadrant of the Oakridge Road/Main Street interchange suggest possible lower income populations near the highway. Impacts to EJ populations should be examined and appropriate public involvement and CSD efforts should be made during future design and construction phases. |
| **NATURAL ENVIRONMENT FACTORS** | | |
| F. Wetlands | ○ | Based on examination of aerial photography and WDNR mapping, there are no identified wetlands near US 41 between Winneconne Avenue and Oakridge Road/Main Street.i |
| G. Streams and Floodplains | ● | One unnamed stream crosses under the US 41 mainline between Winneconne Avenue and Oakridge Road/Main Street. Future expansion of US 41 may require improvements to or replacement of the existing stream crossing. This segment of US 41 does not fall within a floodplain.ii  Migratory bird nests may exist on bridges and fish habitat may be present in the stream. Impacts to streams, floodplains, and habitat should be assessed in coordination with the WDNR, USACE, and the U.S. Fish & Wildlife Service. |
| H. Lakes or Other Open Water | ● | A man-made retaining pond is located in the northwest quadrant of the WIS 114/County JJ interchange.ii Conceptual design indicates that the pond would be impacted and likely need to be removed. Potential mitigation could include moving the retaining pond to the inside of the southbound off-ramp of the interchange. |
| I. Upland Habitat | ○ | Aerial photography indicates the property adjacent to US 41 within this segment is mostly developed and that little upland habitat exists. |
| J. Erosion Control | ● | Soils in the segment area include Kewaunee silt loam with 2 to 6 percent slopes (KnB), Manawa silty clay loam with 0 to 3 percent slopes (MaA), Neenah silty clay loam with 0 to 3 percent slopes (NhA), Omro clay loam with 2 to 6 percent slopes (OmB), and Winneconne silty clay loam with 1 to 4 percent slopes (WnB). A quarry/sand pit is also located to the west of US 41.iii  It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control sediment and other pollutants on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These erosion control measures should be documented in the project plan. All required permits for erosion control should be acquired prior to, and implemented during construction. |
| K. Storm Water Management | ● | Storm water management will be required, and may impact the nearby stream if not properly managed. It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control storm water on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These storm water control measures should be documented in the project plan. All required permits for storm water runoff should be acquired prior to, and implemented during construction. |
| **PHYSICAL ENVIRONMENT FACTORS** | | |
| L. Air Quality | ● | The United States Environmental Protection Agency (USEPA) has identified six air pollutants of nationwide concern (criteria pollutants): CO, NO2, ozone, PM-10, sulfur oxides (SOx, measured as SO2), and lead. The National Ambient Air Quality Standards (NAAQS) are published in the Code of Federal Regulations (40 CFR 50.4 to 50.12). All states are required to submit to the USEPA a list identifying those air quality control regions or portions thereof, which meet or exceed the NAAQS or cannot be classified because of insufficient data. Portions of air quality control regions that are shown by monitored data or air quality modeling to exceed the NAAQS for any criteria pollutant are designated “nonattainment” areas for that pollutant.  Winnebago County is classified as in attainment for all criteria pollutants as reported by the USEPAiv and therefore a determination of transportation conformity would not be needed under the Code of Federal Regulation (40 CFR 93).v However, the project area is within an MSA and so any project that will create a 10-year projected increase in peak hour traffic over 1,200 vehicles may be subject to Air Quality Permits. |
| M. Construction Noise | ● | Construction areas closest to residential uses or other sensitive receptors would be of most concern. A small pocket of residential property is located on Rock Ledge Lane in the southwest quadrant of the Oakridge Road/Main Street interchange near Calvary Bible Church, a potential sensitive receptor. |
| N. Traffic Noise | ● | Increases in traffic noise could occur from potential increases in traffic volumes or the decrease in proximity between vehicular traffic and sensitive receptors within the highway expansion project. Effects of nearby residents on Rock Ledge Lane and the Calvary Bible Church located in the southwest quadrant of the Oakridge Road/Main Street interchange would be of most concern. A traffic noise study will be needed to assess the need for noise mitigation near the residential property and Calvary Bible Church. |
| **CULTURAL ENVIRONMENT FACTORS** | | |
| O. Section 4(f) and 6(f) | ○ | There are no identified Section 4(f) or 6(f) (LAWCON properties)vi uses along the existing US 41 mainline between Winneconne Avenue and Oakridge Road/Main Street. |
| P. Historic Resources | ● | No national register listed sites exist in the project area.vi Initial analysis indicates the potential for eligible historic sites in the area is low, however the Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for history. |

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| Q. Archaeological Resources | ● | No known archaeological sites and no national register listed sites exist in the project area. An archaeological survey was completed along the existing US 41 corridor within Winnebago County in June of 1960, but no archaeological finds were recorded along this segment.[[11]](#endnote-11) Initial analysis indicates the potential for eligible archaeological sites in the area is low, however, the Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for archaeology. |
| R. Hazardous Substances or UST’s | ● | Preliminary review of the WDNR’s Bureau of Remediation and Redevelopment Tracking System (BRRTS) indicate a closed environmental repair (ERP) site located on the west shoulder of the southbound US 41 mainline between Winneconne Avenue and Oakridge Road/Main Street. The WDNR’s records specify that contaminated soil may be in the area.viii  Review of EPA’s EnviroMapper shows no nearby discharges to water, superfund sites or toxic releases. Further study of hazardous materials may need to be completed. There is one hazardous waste handler and no hazardous waste generators adjacent to US 41 mainline.ix |
| S. Aesthetics | ○ | Expansion of US 41 is not expected to create any new negative aesthetic effects. Following a CSD process could be considered if the nearby residential communities are affected. |
| T. Coastal Zone | ○ | The interchange is not in a Coastal Zone County. |
| U. Airport | ○ | Outagamie County Regional Airport, the closest airport to the segment, is over 4 miles away. |

### US 41 Mainline: Oakridge Road/Main Street to North of County II (N. Green Bay Road)

#### Pre-NEPA Summary of Qualitative Environmental Impacts

|  | **Impact Rating** |
| --- | --- |
| **SOCIO-ECONOMIC FACTORS** | |
| A. General Economics | ● |
| B. Community and Residential | ● |
| C. Economic Development and Business | ● |
| D. Agriculture | ○ |
| E. Environmental Justice | ● |
| **NATURAL ENVIRONMENT FACTORS** | |
| F. Wetlands | ○ |
| G. Streams and Floodplains | ● |
| H. Lakes or Other Open Water | ○ |
| I. Upland Habitat | ○ |
| J. Erosion Control | ● |
| K. Storm Water Management | ● |
| **PHYSICAL ENVIRONMENT FACTORS** | |
| L. Air Quality | ● |
| M. Construction Noise | ● |
| N. Traffic Noise | ● |
| **CULTURAL ENVIRONMENT FACTORS** | |
| O. Section 4(f) and 6(f) | ● |
| P. Historic Resources | ● |
| Q. Archaeological Resources | ● |
| R. Hazardous Substances or UST’s | ● |
| S. Aesthetics | ○ |
| T. Coastal Zone | ○ |
| U. Airport | ● |

#### Pre-NEPA Qualitative Impact Analysis

|  | **Impact Rating** | **Comments** |
| --- | --- | --- |
| **SOCIO-ECONOMIC FACTORS** | | |
| A. General Economics | ● | When the purchase of right-of-way is necessary, there may be property acquisition costs to DOT and a related drop in tax revenue for the local community. It is possible that expansion of US 41 in this segment would require some additional right-of-way from one commercial property located to the east of US 41 to accommodate for the future roadway footprint and clear zones. However, relocations are not likely.  Expenditures would be made during construction (potential local purchase of goods and services), and there would be construction related employment opportunities. |
| B. Community and Residential | ● | Residential property exists on the west side of US 41 roughly between North Street and Independence Drive. The neighborhood is comprised of single-family homes and includes Spring Road Elementary School located in the southwest quadrant of the County II interchange.  Additionally, Habitat for Humanity is building three homes along Hoffman Street in the northwest quadrant of the County II interchange. Conceptual design of the interchange indicates the need to acquire land from all three residential properties to construct the proposed interchange. The proximity of the proposed southbound off-ramp to the three homes also suggests the potential for relocation.  Adjustments to the ramp design and/or the construction of improvements that would minimize right-of-way acquisition should be considered to avoid relocations and limit physical impacts on the properties. Public outreach coordination with Habitat for Humanity and the occupants is recommended. |
| C. Economic Development and Business | ● | Land east and adjacent to US 41 mainly consists of commercial property with some industrial property located near the County II interchange. It is possible that expansion of US 41 in this segment would require additional right-of-way from one commercial property to accommodate for the future expansion of the highway. However, relocations are not likely. |
| D. Agriculture | ○ | No agricultural land is located adjacent to US 41. No agricultural impacts are anticipated. |
| E. Environmental Justice | ● | Habitat for Humanity is building three homes along Hoffman Street in the northwest quadrant of the County II interchange. Conceptual design of the interchange indicates the need to acquire land from all three residential properties to construct the proposed interchange. The proximity of the proposed southbound off-ramp to the three homes also suggests the potential for relocation.  Adjustments to the ramp design and/or the construction of improvements that would minimize right-of-way acquisition should be considered to avoid relocations and limit physical impacts on the properties. Public outreach coordination with Habitat for Humanity and the occupants is recommended.  Additionally, impacts to EJ populations in the area should be further examined and appropriate public involvement and CSD efforts should be made during future design and construction phases. |
| **NATURAL ENVIRONMENT FACTORS** | | |
| F. Wetlands | ○ | Based on examination of aerial photography and WDNR mapping, there are no identified wetlands of concern along this segment.i |
| G. Streams and Floodplains | ● | Two unnamed streams cross under US 41 between Oakridge Road and County II. Future expansion of US 41 may require improvements to, or replacement of existing stream crossings. This segment of US 41 does not fall within a floodplain.ii  Migratory bird nests may exist on bridges and fish habitat may be present in the stream. Impacts to streams, floodplains, and habitat should be assessed in coordination with the WDNR, USACE, and the U.S. Fish & Wildlife Service. |
| H. Lakes or Other Open Water | ○ | No lakes or open water exist in the immediate area.ii |
| I. Upland Habitat | ○ | Aerial photography indicates that no upland habitat exist near US 41 between Oakridge Road/Main Street and County II. |
| J. Erosion Control | ● | Soils in the segment area include Casco loam with 6 to 15 percent slopes (CeC2), Neenah silty clay loam with 0 to 3 percent slopes (NhA), Omro clay loam with 2 to 6 percent slopes (OmB), and Whalan silt loam with 2 to 6 percent slopes (WhB).iii  It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control sediment and other pollutants on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These erosion control measures should be documented in the project plan. All required permits for erosion control should be acquired prior to, and implemented during construction. |
| K. Storm Water Management | ● | Storm water management will be required, and may impact the nearby stream if not properly managed. It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control storm water on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These storm water control measures should be documented in the project plan. All required permits for storm water runoff should be acquired prior to, and implemented during construction. |
| **PHYSICAL ENVIRONMENT FACTORS** | | |
| L. Air Quality | ● | The United States Environmental Protection Agency (USEPA) has identified six air pollutants of nationwide concern (criteria pollutants): CO, NO2, ozone, PM-10, sulfur oxides (SOx, measured as SO2), and lead. The National Ambient Air Quality Standards (NAAQS) are published in the Code of Federal Regulations (40 CFR 50.4 to 50.12). All states are required to submit to the USEPA a list identifying those air quality control regions or portions thereof, which meet or exceed the NAAQS or cannot be classified because of insufficient data. Portions of air quality control regions that are shown by monitored data or air quality modeling to exceed the NAAQS for any criteria pollutant are designated “nonattainment” areas for that pollutant.  Winnebago County is classified as in attainment for all criteria pollutants as reported by the USEPAiv and therefore a determination of transportation conformity would not be needed under the Code of Federal Regulation (40 CFR 93).v However, the project area is within an MSA and so any project that will create a 10-year projected increase in peak hour traffic over 1,200 vehicles may be subject to Air Quality Permits. |
| M. Construction Noise | ● | Construction areas closest to residential uses or other sensitive receptors would be of most concern. Residential property exists along the east side of US 41 roughly between County O and Independence Drive. Spring Road Elementary School and St. Margaret’s, Oak Hill, Rest Haven, and St. Patrick’s Cemeteries are all located adjacent to US 41 and may be considered sensitive receptors. Impacts to residences and sensitive receptors near the construction area may last throughout the construction schedule. |
| N. Traffic Noise | ● | Increases in traffic noise could occur from potential increases in traffic volumes or the decrease in proximity between vehicular traffic and sensitive receptors within the highway expansion project. Effects to nearby residents, Spring Road Elementary School and St. Margaret’s, Oak Hill, Rest Haven, and St. Patrick’s Cemeteries would be of most concern. A traffic noise study will be needed to assess the need for noise mitigation near these properties. |
| **CULTURAL ENVIRONMENT FACTORS** | | |
| O. Section 4(f) and 6(f) | ● | Analysis of conceptual highway design indicates the potential to encroach upon Oak Hill Cemetery and St. Patrick’s Cemetery. Work within the cemeteries should be avoided as they are protected under Wis. Stats. 157.70 and would constitute a Section 4(f) use.  The softball fields and associated open space adjacent to Spring Road Elementary School could potentially be a Section 4(f) resource depending upon the availability of the recreational space to the public. Despite the potential of being a Section 4(f) resource, conceptual design indicates that no right-of-way would be needed from the property.  There are no identified Section 6(f) (LAWCON properties)vi uses along the existing US 41 mainline along this segment. |
| P. Historic Resources | ● | No national register listed sites exist in the project areavi, however the presence of St. Margaret’s, Oak Hill, Rest Haven, and St. Patrick’s Cemeteries provide the potential for sites that may be eligible for the national register.  The Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for history. |
| Q. Archaeological Resources | ● | Analysis of conceptual highway design indicates the potential to encroach upon Oak Hill Cemetery and St. Patrick’s Cemetery. Oak Hill Cemetery is located in the northwest quadrant of the Oakridge Road/Main Street interchange and spans adjacently along US 41 to North Street. St. Patrick’s Cemetery is located between Ridgeway Road and Chapman Avenue and is also adjacent to US 41. These burial sites have not been catalogued by the Wisconsin Historical Society, however the sites are protected under Wis. Stats. 157.70. The burial sites will need to be taken into consideration during the design and construction phases to avoid the disturbance of human burials.  No known designated archaeological sites and no national register listed sites exist in the project area. An archaeological survey was completed along the existing US 41 corridor within Winnebago County in June of 1960, but no archaeological finds were recorded along this segment.x The Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for archaeology. |
| R. Hazardous Substances or UST’s | ● | Preliminary review of the WDNR’s Bureau of Remediation and Redevelopment Tracking System (BRRTS) indicate two hazardous materials sites located on property adjacent to the US 41 highway right-of-way between Oakridge Road and County II. Both sites are closed and are categorized by the WDNR as a leaking underground storage tanks that resulted in soil contamination.viii  Review of EPA’s EnviroMapper shows no nearby discharges to water, superfund sites or toxic releases. There are three hazardous waste handlers located adjacent to US 41 mainline.ix Further study of hazardous materials may need to be completed. |
| S. Aesthetics | ○ | Expansion of US 41 is not expected to create any new negative aesthetic effects. Following a CSD process could be considered if the nearby residential communities are affected. |
| T. Coastal Zone | ○ | The interchange is not in a Coastal Zone County. |
| U. Airport | ● | Outagamie County Regional Airport, the closest airport to the segment, is approximately four miles away. Future improvements to the mainline must follow height limitations set forth by local ordinance and coordination with WisDOT’s Bureau of Aeronautics will likely be needed. |

### US 41 Mainline: South of County BB (Fox Cities Drive) to WIS 125

#### Pre-NEPA Summary of Qualitative Environmental Impacts

|  | **Impact Rating** |
| --- | --- |
| **SOCIO-ECONOMIC FACTORS** | |
| A. General Economics | ● |
| B. Community and Residential | ● |
| C. Economic Development and Business | ● |
| D. Agriculture | ○ |
| E. Environmental Justice | ● |
| **NATURAL ENVIRONMENT FACTORS** | |
| F. Wetlands | ● |
| G. Streams and Floodplains | ● |
| H. Lakes or Other Open Water | ○ |
| I. Upland Habitat | ○ |
| J. Erosion Control | ● |
| K. Storm Water Management | ● |
| **PHYSICAL ENVIRONMENT FACTORS** | |
| L. Air Quality | ● |
| M. Construction Noise | ● |
| N. Traffic Noise | ● |
| **CULTURAL ENVIRONMENT FACTORS** | |
| O. Section 4(f) and 6(f) | ○ |
| P. Historic Resources | ● |
| Q. Archaeological Resources | ● |
| R. Hazardous Substances or UST’s | ● |
| S. Aesthetics | ○ |
| T. Coastal Zone | ○ |
| U. Airport | ● |

#### Pre-NEPA Qualitative Impact Analysis

|  | **Impact Rating** | **Comments** |
| --- | --- | --- |
| **SOCIO-ECONOMIC FACTORS** | | |
| A. General Economics | ● | When the purchase of right-of-way is necessary, there may be property acquisition costs to DOT and a related drop in tax revenue for the local community. It is possible that expansion of US 41 in this segment would require some additional right-of-way from a privately owned golf course and the commercial properties located to the east and west of US 41 between County BB and WIS 125. Additional right-of-way would be needed to accommodate the future roadway footprint and clear zones.  Analysis of conceptual highway design indicates the potential relocation of a small business located on Pine Street. Characteristics of the building type suggest that the property may also be used as a residence.  Expenditures would be made during construction (potential local purchase of goods and services), and there would be construction related employment opportunities. |
| B. Community and Residential | ● | The land immediately adjacent to the US 41 mainline is developed and mainly consists of commercial and industrial property. Residential property is located along the west side US 41 just north of the County BB interchange and south of Pine Street. Five residential properties are located to the east of US 41 just north of Butte des Morts Country Club along with a collection of eight duplexes with access from S Westland Dr. Properties adjacent to US 41 are mainly made up of single-family homes with exception to the duplexes.  Right-of-way acquisition from residential property along this segment is anticipated to be minimal, however a there is a potential residential relocation located on Pine Street. The property is zoned as mercantile, but the building characteristics suggest the property may be used as a home-occupation. |
| C. Economic Development and Business | ● | The lands immediately adjacent to the US 41 mainline are mostly developed and mainly consist of commercial land use with some industrial properties. It is possible that expansion of US 41 in this segment would require additional right-of-way from a privately owned golf course and commercial and/or industrial properties located to the east and west of US 41 to accommodate for the future expansion of the highway.  Analysis of conceptual highway design indicates the potential relocation of small business located on Pine Street. Characteristics of the building type suggest that the property may also be used as a residence. |
| D. Agriculture | ○ | No agricultural land is located adjacent to US 41. No agricultural impacts are anticipated. |
| E. Environmental Justice | ● | High level analysis of Census (2000) data infers that a higher percentage of minorities live in the neighborhood east of US 41 between South Timmers Lane and South Bluemound Drive. Impacts to EJ populations should be examined and appropriate public involvement and CSD efforts should be made during future design and construction phases. |
| **NATURAL ENVIRONMENT FACTORS** | | |
| F. Wetlands | ● | Based on examination of aerial photography and WDNR mapping, nearby wetlands exist to the east of US 41 along Little Lake Butte Des Morts and Mud Creek. An unnamed stream that connects to the wetlands crosses under the US 41 mainline at the County BB interchange. This stream continues to flow through to the southwest quadrant of the County BB interchange that has been designated as a potential wetland.i Effects to the stream due to construction of potential improvements at the stream crossing should be minimized not only to protect the quality of the stream but to also protect the quality of the wetlands that it flows to.  Impacts to wetland habitat should be assessed in coordination with the WDNR and the U.S. Fish & Wildlife Service. The acquisition of designated wetland property due to mainline expansion is not anticipated along this segment. |
| G. Streams and Floodplains | ● | One unnamed stream crosses under US 41 at the County BB interchange. The stream drains into nearby Mud Creek and ultimately into Little Lake Butte Des Morts.ii Future expansion of US 41 will likely require the replacement of the existing box culvert structures at the stream crossing. Reconstruction of the box culverts would result in the local re-channelization or realignment of the stream.  The US 41 mainline does cross an existing floodplain located along the unnamed stream that crosses under US 41 at the County BB interchange. Another floodplain located along Mud Creek parallels the east side of US 41 between County BB and WIS 125. It should also be noted that the WIS 125 interchange is partially built on a flood plain.ii  Migratory bird nests may exist on bridges and fish habitat may be present in the stream. Impacts to streams, floodplains, and habitat should be assessed in coordination with the WDNR, USACE, and the U.S. Fish & Wildlife Service. |
| H. Lakes or Other Open Water | ○ | Little Lake Butte Des Morts is located to the east of US 41, however due to the distance between the lake and US 41, impacts to the lake are not anticipated.ii |
| I. Upland Habitat | ○ | Upland habitat exists along the east side of US 41, however analysis of conceptual highway design indicates that impacts to upland habitat is not anticipated. |
| J. Erosion Control | ● | Soils in the segment area include Briggsville silt loam with 0 to 2 percent slopes (BtA), Manistee fine sandy loam with 2 to 6 percent slopes (MfB), Menasha clay (Mn), Neenah silty clay loam with 0 to 3 percent slopes (NhA), and Winneconne silty clay loam with 1 to 4 percent slopes (WnB).iii  It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control sediment and other pollutants on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These erosion control measures should be documented in the project plan. All required permits for erosion control should be acquired prior to, and implemented during construction. |
| K. Storm Water Management | ● | Storm water management will be required, and may impact the nearby stream if not properly managed. It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control storm water on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These storm water control measures should be documented in the project plan. All required permits for storm water runoff should be acquired prior to, and implemented during construction. |
| **PHYSICAL ENVIRONMENT FACTORS** | | |
| L. Air Quality | ● | The United States Environmental Protection Agency (USEPA) has identified six air pollutants of nationwide concern (criteria pollutants): CO, NO2, ozone, PM-10, sulfur oxides (SOx, measured as SO2), and lead. The National Ambient Air Quality Standards (NAAQS) are published in the Code of Federal Regulations (40 CFR 50.4 to 50.12). All states are required to submit to the USEPA a list identifying those air quality control regions or portions thereof, which meet or exceed the NAAQS or cannot be classified because of insufficient data. Portions of air quality control regions that are shown by monitored data or air quality modeling to exceed the NAAQS for any criteria pollutant are designated “nonattainment” areas for that pollutant.  Outagamie and Winnebago Counties are classified as in attainment for all criteria pollutants as reported by the USEPAiv and therefore a determination of transportation conformity would not be needed under the Code of Federal Regulation (40 CFR 93).v However, the project area is within an MSA and so any project that will create a 10-year projected increase in peak hour traffic over 1,200 vehicles may be subject to Air Quality Permits. |
| M. Construction Noise | ● | Construction areas closest to residential uses or other sensitive receptors would be of most concern. The land use along this segment of US 41 is primarily commercial and industrial, however a pocket of residential property is located to the west of US 41 just north of County BB and south of Pine Street. Impacts to residences and sensitive receptors near the construction area may last throughout the construction schedule. |
| N. Traffic Noise | ● | Increases in traffic noise could occur from potential increases in traffic volumes or the decrease in proximity between vehicular traffic and sensitive receptors within the highway expansion project. Effects of nearby residents to the west of US 41 between County BB and Pine Street would be of most concern. A traffic noise study will be needed to assess the need for noise mitigation near the residential property. |
| **CULTURAL ENVIRONMENT FACTORS** | | |
| O. Section 4(f) and 6(f) | ○ | There are no identified Section 4(f) or 6(f) (LAWCON properties)vi uses along the existing US 41 mainline within this segment. |
| P. Historic Resources | ● | No national register listed sites exist in the project area.vi Initial analysis indicates the potential for eligible historic sites in the area is low, however the Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for history. |
| Q. Archaeological Resources | ● | No known archaeological sites and no national register listed sites exist in the project area. An archaeological survey was completed along the existing US 41 corridor within Winnebago and Outagamie County in June of 1960, but no archaeological finds were recorded along this segment.x Initial analysis indicates the potential for archaeological sites in the area is low, however the Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for archaeology. |
| R. Hazardous Substances or UST’s | ● | Preliminary review of the WDNR’s Bureau of Remediation and Redevelopment Tracking System (BRRTS) indicate six hazardous materials sites located on property adjacent to the US 41 highway right-of-way between Fox Cities Drive and WIS 125. All six sites are closed and are categorized by the WDNR as a leaking underground storage tanks that resulted in soil contamination.viii  Review of EPA’s EnviroMapper shows one toxic release located adjacent to the US 41 mainline and no nearby discharges to water or superfund sites. There are six hazardous waste handlers located adjacent to US 41 mainline.ix Further study of hazardous materials may need to be completed. |
| S. Aesthetics | ○ | Expansion of US 41 is not expected to create any new negative aesthetic effects. Following a CSD process could be considered if the nearby residential communities are affected. |
| T. Coastal Zone | ○ | The interchange is not in a Coastal Zone County. |
| U. Airport | ● | Outagamie County Regional Airport, the closest airport to the segment, is approximately two miles away and located within the airport’s Overlay District Zone 3. Future improvements to the mainline must follow height limitations set forth by local ordinance and coordination with WisDOT’s Bureau of Aeronautics will likely be needed. |

### US 41 Mainline: WIS 125 to WIS 96

#### Pre-NEPA Summary of Qualitative Environmental Impacts

|  | **Impact Rating** |
| --- | --- |
| **SOCIO-ECONOMIC FACTORS** | |
| A. General Economics | ○ |
| B. Community and Residential | ○ |
| C. Economic Development and Business | ○ |
| D. Agriculture | ○ |
| E. Environmental Justice | ● |
| **NATURAL ENVIRONMENT FACTORS** | |
| F. Wetlands | ○ |
| G. Streams and Floodplains | ● |
| H. Lakes or Other Open Water | ○ |
| I. Upland Habitat | ○ |
| J. Erosion Control | ○ |
| K. Storm Water Management | ● |
| **PHYSICAL ENVIRONMENT FACTORS** | |
| L. Air Quality | ● |
| M. Construction Noise | ○ |
| N. Traffic Noise | ○ |
| **CULTURAL ENVIRONMENT FACTORS** | |
| O. Section 4(f) and 6(f) | ○ |
| P. Historic Resources | ● |
| Q. Archaeological Resources | ● |
| R. Hazardous Substances or UST’s | ○ |
| S. Aesthetics | ○ |
| T. Coastal Zone | ○ |
| U. Airport | ● |

#### Pre-NEPA Qualitative Impact Analysis

|  | **Impact Rating** | **Comments** |
| --- | --- | --- |
| **SOCIO-ECONOMIC FACTORS** | | |
| A. General Economics | ○ | When the purchase of right-of-way is necessary, there may be property acquisition costs to DOT and a related drop in tax revenue for the local community. However, expansion of US 41 along this segment of US 41 is not anticipated to result in the purchase of additional right-of-way or the acquisition of real estate. Analysis of conceptual highway design indicates that retaining walls will be used along this segment to avoid right-of-way acquisition in this area.  Expenditures would be made during construction (potential local purchase of goods and services), and there would be construction related employment opportunities. |
| B. Community and Residential | ○ | No residential land or community facilities are located adjacent to US 41 along this segment. No residential impacts are anticipated. |
| C. Economic Development and Business | ○ | The lands immediately adjacent to the US 41 mainline are mostly developed and mainly consist of large commercial properties such as the Fox River Mall and other big box development. Expansion of US 41 along this segment is not anticipated to result in the purchase of additional right-of-way or the acquisition of real estate. Analysis of conceptual highway design indicates that retaining walls will be used along this segment to avoid right-of-way acquisition in this area. Relocations of businesses are not anticipated. |
| D. Agriculture | ○ | No agricultural land is located adjacent to US 41 along this segment. No agricultural impacts are anticipated. |
| E. Environmental Justice | ● | High level analysis of aerial imagery and Census (2000) data does not indicate the presence of EJ populations near the US 41 corridor along this segment. Impacts to EJ populations should be examined and appropriate public involvement and CSD efforts should be made during future design and construction phases. |
| **NATURAL ENVIRONMENT FACTORS** | | |
| F. Wetlands | ○ | Examination of aerial photography and WDNR mapping indicate that there is one identified wetland site located along Mud Creek near US 41.i Conceptual design indicates the use of retaining walls in the area to eliminate the need to acquire right-of-way from the wetland. Special considerations will have to be made to address drainage in a way that would minimize impacts on nearby wetlands and streams. Impacts to wetland habitat should be assessed in coordination with the WDNR, USACE, and the U.S. Fish & Wildlife Service. |
| G. Streams and Floodplains | ● | Mud Creek and one other unnamed stream cross under US 41 between WIS 125 and WIS 96.ii Future expansion of US 41 will likely require the replacement of the existing box culvert structure at the stream crossings. Reconstruction of the box culverts would result in the local re-channelization or realignment of the streams. The entire segment is built alongside a floodplain that follows Mud Creek across the WIS 125 interchange and one other unnamed stream.ii  Migratory bird nests may exist on bridges and fish habitat may be present in the stream. Impacts to streams, floodplains, and habitat should be assessed in coordination with the WDNR and the U.S. Fish & Wildlife Service. |
| H. Lakes or Other Open Water | ○ | No lakes or open water exist in the immediate area.ii |
| I. Upland Habitat | ○ | Aerial photography indicates that property adjacent to US 41 within this segment is mostly developed and that little upland habitat exists. |
| J. Erosion Control | ○ | Soils in the segment area include Briggsville silt loam with 0 to 2 percent slopes (BtA), Fluvaquents (Fu), Manistee fine sandy loam with 2 to 6 percent slopes, and Udorthents.iii  It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control sediment and other pollutants on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These erosion control measures should be documented in the project plan. All required permits for erosion control should be acquired prior to, and implemented during construction. |
| K. Storm Water Management | ● | Storm water management will be required, and may impact the nearby stream if not properly managed. It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control storm water on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These storm water control measures should be documented in the project plan. All required permits for storm water runoff should be acquired prior to, and implemented during construction. |
| **PHYSICAL ENVIRONMENT FACTORS** | | |
| L. Air Quality | ● | The United States Environmental Protection Agency (USEPA) has identified six air pollutants of nationwide concern (criteria pollutants): CO, NO2, ozone, PM-10, sulfur oxides (SOx, measured as SO2), and lead. The National Ambient Air Quality Standards (NAAQS) are published in the Code of Federal Regulations (40 CFR 50.4 to 50.12). All states are required to submit to the USEPA a list identifying those air quality control regions or portions thereof, which meet or exceed the NAAQS or cannot be classified because of insufficient data. Portions of air quality control regions that are shown by monitored data or air quality modeling to exceed the NAAQS for any criteria pollutant are designated “nonattainment” areas for that pollutant.  Outagamie County is classified as in attainment for all criteria pollutants as reported by the USEPAiv and therefore a determination of transportation conformity would not be needed under the Code of Federal Regulation (40 CFR 93).v However, the project area is within an MSA and so any project that will create a 10-year projected increase in peak hour traffic over 1,200 vehicles may be subject to Air Quality Permits. |
| M. Construction Noise | ○ | Construction areas closest to residential uses or other sensitive receptors would be of most concern. The land use along this segment is commercially developed and analysis of aerial imagery does not indicate the presence of residential property or potential sensitive receptors along this segment of US 41. |
| N. Traffic Noise | ○ | Increases in traffic noise could occur from potential increases in traffic volumes or the decrease in proximity between vehicular traffic and sensitive receptors within the highway expansion project. Effects to nearby residents along the entire segment would be of most concern, however analysis of aerial imagery does not indicate the presence of residential property along this segment of US 41. |
| **CULTURAL ENVIRONMENT FACTORS** | | |
| O. Section 4(f) and 6(f) | ○ | There are no identified Section 4(f) or 6(f) (LAWCON properties)vi uses along the existing US 41 mainline within this segment. |
| P. Historic Resources | ● | No national register listed sites exist in the project area.vi Initial analysis indicates the potential for eligible historic sites in the area is low, however the Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for history. |
| Q. Archaeological Resources | ● | A historic Native American archaeological site exists on the south side of the WIS 96 interchange and spans across US 41.[[12]](#endnote-12) WisDOT may have more detailed records of the archaeological site related to the original construction of US 41. An archaeological review should be completed for any work outside the established right of way or previously surveyed area. The Section 106 process will also have to be completed. |
| R. Hazardous Substances or UST’s | ○ | Preliminary review of the WDNR’s Bureau of Remediation and Redevelopment Tracking System (BRRTS) indicate no hazardous materials sites are located on property adjacent to the US 41 highway right-of-way between WIS 125 and WIS 96.viii  Review of EPA’s EnviroMapper shows no discharges to water, superfund sites, toxic releases, or hazardous waste handlers located adjacent to the US 41 mainline.ix Further study of hazardous materials may need to be completed. |
| S. Aesthetics | ○ | Expansion of US 41 is not expected to create any new negative aesthetic effects. Following a CSD process could be considered if the nearby residential communities are affected. |
| T. Coastal Zone | ○ | The interchange is not in a Coastal Zone County. |
| U. Airport | ● | Outagamie County Regional Airport, the closest airport to the segment, is approximately two miles away from this segment of US 41. Future improvements to the mainline must follow height limitations set forth by local ordinance and coordination with WisDOT’s Bureau of Aeronautics will likely be needed. |

### US 41 Mainline: WIS 96 to WIS 15

#### Pre-NEPA Summary of Qualitative Environmental Impacts

|  | **Impact Rating** |
| --- | --- |
| **SOCIO-ECONOMIC FACTORS** | |
| A. General Economics | ● |
| B. Community and Residential | ● |
| C. Economic Development and Business | ○ |
| D. Agriculture | ○ |
| E. Environmental Justice | ● |
| **NATURAL ENVIRONMENT FACTORS** | |
| F. Wetlands | ○ |
| G. Streams and Floodplains | ● |
| H. Lakes or Other Open Water | ○ |
| I. Upland Habitat | ● |
| J. Erosion Control | ● |
| K. Storm Water Management | ● |
| **PHYSICAL ENVIRONMENT FACTORS** | |
| L. Air Quality | ● |
| M. Construction Noise | ● |
| N. Traffic Noise | ● |
| **CULTURAL ENVIRONMENT FACTORS** | |
| O. Section 4(f) and 6(f) | ● |
| P. Historic Resources | ● |
| Q. Archaeological Resources | ● |
| R. Hazardous Substances or UST’s | ● |
| S. Aesthetics | ○ |
| T. Coastal Zone | ○ |
| U. Airport | ● |

#### Pre-NEPA Qualitative Impact Analysis

|  | **Impact Rating** | **Comments** |
| --- | --- | --- |
| **SOCIO-ECONOMIC FACTORS** | | |
| A. General Economics | ● | When the purchase of right-of-way is necessary, there may be property acquisition costs to DOT and a related drop in tax revenue for the local community. Analysis of conceptual highway design indicates the potential for right-of-way acquisition near Fox Valley Technical College to accommodate for the future roadway footprint and clear zones. However, relocations are not anticipated.  Expenditures would be made during construction (potential local purchase of goods and services), and there would be construction related employment opportunities. |
| B. Community and Residential | ● | The land immediately adjacent to the US 41 mainline is partially developed, but does not include residential property. Fox Cities Stadium is located to the west of US 41, however conceptual highway design does not indicate the need to expand right-of-way in this area. Right-of-way acquisition may be needed in the area of Fox Valley Technical College which is located to the east US 41. The potential property acquisition would likely consist of small strip of undeveloped property and therefore impacts to Fox Valley Technical College operations are not anticipated.  No relocations or right-of-way acquisition from residential property is anticipated. |
| C. Economic Development and Business | ○ | The lands immediately adjacent to the US 41 mainline are partially developed and mainly consist of large commercial properties and big box development. Expansion of US 41 along this segment is not anticipated to result in the purchase of additional right-of-way or the acquisition of real estate from commercial properties in the area. |
| D. Agriculture | ○ | No agricultural land is located adjacent to US 41. No agricultural impacts are anticipated. |
| E. Environmental Justice | ● | High level analysis of Census (2000) data indicates that a higher percentage of minorities live in the area to the east of US 41 along this segment, however no residential property is located adjacent to US 41 and therefore direct impacts to the minority population is not anticipated. Impacts to EJ populations should be examined and appropriate public involvement and CSD efforts should be made during future design and construction phases. |
| **NATURAL ENVIRONMENT FACTORS** | | |
| F. Wetlands | ○ | Based on examination of aerial photography and WDNR mapping, there are no identified wetlands of concern along this segment.i |
| G. Streams and Floodplains | ● | One unnamed stream crosses under US 41 between WIS 96 and WIS 15. Future expansion of US 41 may require improvements to, or replacement of the existing stream crossing. This segment of US 41 does not fall within a floodplain.ii  Migratory bird nests may exist on bridges and fish habitat may be present in the stream. Impacts to streams, floodplains, and habitat should be assessed in coordination with the WDNR, USACE, and the U.S. Fish & Wildlife Service. |
| H. Lakes or Other Open Water | ○ | No lakes or open water exist in the immediate area.ii |
| I. Upland Habitat | ● | Wooded habitat exists just south of, and within the WIS 15 interchange area. There is potential to impact these wooded areas by removing strips of habitat from its outer edges to accommodate the future roadway footprint and clear zones. |
| J. Erosion Control | ● | Soils in the segment area include Briggsville silt loam with 0 to 2 percent slopes (BtA), Hebron loam with 2 to 6 percent slopes (HeB), Manistee loamy fine sand with 2 to 6 percent slopes (MeB), and Zittau silty clay loam with 0 to 3 percent slopes (ZtA).iii  It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control sediment and other pollutants on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These erosion control measures should be documented in the project plan. All required permits for erosion control should be acquired prior to, and implemented during construction. |
| K. Storm Water Management | ● | Storm water management will be required, and may impact the nearby stream if not properly managed. It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control storm water on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These storm water control measures should be documented in the project plan. All required permits for storm water runoff should be acquired prior to, and implemented during construction. |
| **PHYSICAL ENVIRONMENT FACTORS** | | |
| L. Air Quality | ● | The United States Environmental Protection Agency (USEPA) has identified six air pollutants of nationwide concern (criteria pollutants): CO, NO2, ozone, PM-10, sulfur oxides (SOx, measured as SO2), and lead. The National Ambient Air Quality Standards (NAAQS) are published in the Code of Federal Regulations (40 CFR 50.4 to 50.12). All states are required to submit to the USEPA a list identifying those air quality control regions or portions thereof, which meet or exceed the NAAQS or cannot be classified because of insufficient data. Portions of air quality control regions that are shown by monitored data or air quality modeling to exceed the NAAQS for any criteria pollutant are designated “nonattainment” areas for that pollutant.  Outagamie County is classified as in attainment for all criteria pollutants as reported by the USEPAiv and therefore a determination of transportation conformity would not be needed under the Code of Federal Regulation (40 CFR 93).v However, the project area is within an MSA and so any project that will create a 10-year projected increase in peak hour traffic over 1,200 vehicles may be subject to Air Quality Permits. |
| M. Construction Noise | ● | Construction areas closest to residential uses or other sensitive receptors would be of most concern. The land use along this segment is commercially developed and analysis of aerial imagery does not indicate the presence of residential property along this segment of US 41. Fox Valley Technical College is located adjacently to the east of US 41 and could potentially be considered a sensitive receptor. Impacts to sensitive receptors near the construction area may last throughout the construction schedule. |
| N. Traffic Noise | ● | Increases in traffic noise could occur from potential increases in traffic volumes or the decrease in proximity between vehicular traffic and sensitive receptors within the highway expansion project. Effects to nearby residents and potential sensitive receptors such as Fox Valley Technical College would be of most concern. A traffic noise study will be needed to assess the need for noise mitigation near these properties. |
| **CULTURAL ENVIRONMENT FACTORS** | | |
| O. Section 4(f) and 6(f) | ● | Grand Chute Trail currently crosses over US 41 just south of the WIS 15 interchange. Future expansion of US 41 could potentially involve extending the existing pedestrian bridge which would require a Section 4(f) analysis and coordination with the Town of Grand Chute. The provided impact rating assumes that the trail connection would remain after highway improvements are complete.  There are no identified Section 6(f) (LAWCON properties)vi uses along the US 41 mainline within this segment. |
| P. Historic Resources | ● | No national register listed sites exist in the project area.vi Initial analysis indicates the potential for eligible historic sites in the area is low, however the Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for history. |
| Q. Archaeological Resources | ● | No known archaeological sites and no national register listed sites exist in the project area. An archaeological survey was completed along the existing US 41 corridor within Outagamie County in June of 1960, but no archaeological finds were recorded along this segment.x Initial analysis indicates the potential for archaeological sites in the area is low, however the Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for archaeology. |
| R. Hazardous Substances or UST’s | ● | Preliminary review of the WDNR’s Bureau of Remediation and Redevelopment Tracking System (BRRTS) indicate two hazardous materials sites located on property adjacent to the US 41 highway right-of-way between WIS 96 and WIS 15. Both sites are closed and are categorized by the WDNR as a leaking underground storage tanks that resulted in soil contamination.viii  Review of EPA’s EnviroMapper shows no nearby discharges to water, superfund sites or toxic releases. There are three hazardous waste handlers located adjacent to US 41 mainline.ix Further study of hazardous materials may need to be completed. |
| S. Aesthetics | ○ | Expansion of US 41 is not expected to create any new negative aesthetic effects. Following a CSD process could be considered if the nearby residential communities are affected. |
| T. Coastal Zone | ○ | The interchange is not in a Coastal Zone County. |
| U. Airport | ● | Outagamie County Regional Airport, the closest airport to the segment, is approximately two miles away from this segment of US 41. Future improvements to the mainline must follow height limitations set forth by local ordinance and coordination with WisDOT’s Bureau of Aeronautics will likely be needed. |

### US 41 Mainline: WIS 15 to WIS 47

#### Pre-NEPA Summary of Qualitative Environmental Impacts

|  | **Impact Rating** |
| --- | --- |
| **SOCIO-ECONOMIC FACTORS** | |
| A. General Economics | ● |
| B. Community and Residential | ● |
| C. Economic Development and Business | ○ |
| D. Agriculture | ○ |
| E. Environmental Justice | ● |
| **NATURAL ENVIRONMENT FACTORS** | |
| F. Wetlands | ● |
| G. Streams and Floodplains | ● |
| H. Lakes or Other Open Water | ○ |
| I. Upland Habitat | ○ |
| J. Erosion Control | ● |
| K. Storm Water Management | ● |
| **PHYSICAL ENVIRONMENT FACTORS** | |
| L. Air Quality | ● |
| M. Construction Noise | ● |
| N. Traffic Noise | ● |
| **CULTURAL ENVIRONMENT FACTORS** | |
| O. Section 4(f) and 6(f) | ● |
| P. Historic Resources | ● |
| Q. Archaeological Resources | ● |
| R. Hazardous Substances or UST’s | ● |
| S. Aesthetics | ○ |
| T. Coastal Zone | ○ |
| U. Airport | ● |

#### Pre-NEPA Qualitative Impact Analysis

|  | **Impact Rating** | **Comments** |
| --- | --- | --- |
| **SOCIO-ECONOMIC FACTORS** | | |
| A. General Economics | ● | When the purchase of right-of-way is necessary, there may be property acquisition costs to DOT and a related drop in tax revenue for the local community. It is possible that expansion of US 41 in this segment would require some additional right-of-way from the residential properties located to the southeast of US 41 to accommodate for the future roadway footprint and clear zones. However, relocations are not likely.  Expenditures would be made during construction (potential local purchase of goods and services), and there would be construction related employment opportunities. |
| B. Community and Residential | ● | Land to the east and south of US 41 are mostly developed and consist of residential property. Land to the west and north of US 41 are less developed but consist of multiple land uses such as residential, commercial, and agricultural. Appleton Alliance Church is also located just north of US 41 along Grand Chute Boulevard.  Strip acquisition of right-of-way from residential properties to the southwest of US 41 may be needed to accommodate for the future roadway footprint and clear zones. However, relocations are not likely. Property acquisition impacts to Appleton Alliance Church are not anticipated. |
| C. Economic Development and Business | ○ | Large automotive dealerships occupy the land within the northwest quadrant of the WIS 15 interchange. Smaller commercial businesses are sparsely spaced within predominately residential land on the north side of US 41 between West Capitol Drive and North Gillett Street.  No relocations or right-of-way acquisition from commercial property is anticipated. |
| D. Agriculture | ○ | Agricultural land along this segment is mainly located north of US 41 between North Gillett Street and WIS 47. A small agricultural parcel also exists along West Capitol Drive, west of US 41 and north of the WIS 15 interchange.  Acquisition of agricultural land is not anticipated along this segment of US 41. |
| E. Environmental Justice | ● | High level analysis of aerial imagery and Census (2000) data does not indicate the presence of EJ populations near the US 41 corridor along this segment. Impacts to EJ populations should be examined and appropriate public involvement and CSD efforts should be made during future design and construction phases. |
| **NATURAL ENVIRONMENT FACTORS** | | |
| F. Wetlands | ● | Based on examination of aerial photography and WDNR mapping, nearby wetlands exist to the north of US 41 along an unnamed creek near North Gillette Street. The designated wetland area is not adjacent to US 41, however the unnamed stream the wetland follows does cross under the US 41 mainline.i Effects to the stream due to construction of potential improvements at the stream crossing should be minimized not only to protect the quality of the stream but to also protect the quality of the wetlands that it flows to.  Impacts to wetland habitat should be assessed in coordination with the WDNR and the U.S. Fish & Wildlife Service. The acquisition of designated wetland property due to mainline expansion is not anticipated along this segment. |
| G. Streams and Floodplains | ● | Two unnamed streams cross under US 41 between WIS 15 and WIS 47. Future expansion of US 41 may require improvements to, or replacement of existing stream crossings. This segment of US 41 does not fall within a floodplain.ii  Migratory bird nests may exist on bridges and fish habitat may be present in the stream. Impacts to streams, floodplains, and habitat should be assessed in coordination with the WDNR, USACE, and the U.S. Fish & Wildlife Service. |
| H. Lakes or Other Open Water | ○ | No lakes or open water exist in the immediate area.ii |
| I. Upland Habitat | ○ | Aerial photography indicates the property adjacent to US 41 within this segment is mostly developed or has been tilled for farming and that little upland habitat exists. |
| J. Erosion Control | ● | Soils in the segment area mainly include Casco loam with 2 to 6 percent slopes (CcB), Grays silt loam with 2 to 6 percent slopes (GrB), Kewaunee silt loam with 2 to 6 percent slopes (KhB), Manawa silty clay loam with 1 to 3 percent (McA), Nichols very fine sandy loam with 2 to 6 percent slopes (NfB).iii  It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control sediment and other pollutants on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These erosion control measures should be documented in the project plan. All required permits for erosion control should be acquired prior to, and implemented during construction. |
| K. Storm Water Management | ● | Storm water management will be required, and may impact the nearby stream if not properly managed. It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control storm water on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These storm water control measures should be documented in the project plan. All required permits for storm water runoff should be acquired prior to, and implemented during construction. |
| **PHYSICAL ENVIRONMENT FACTORS** | | |
| L. Air Quality | ● | The United States Environmental Protection Agency (USEPA) has identified six air pollutants of nationwide concern (criteria pollutants): CO, NO2, ozone, PM-10, sulfur oxides (SOx, measured as SO2), and lead. The National Ambient Air Quality Standards (NAAQS) are published in the Code of Federal Regulations (40 CFR 50.4 to 50.12). All states are required to submit to the USEPA a list identifying those air quality control regions or portions thereof, which meet or exceed the NAAQS or cannot be classified because of insufficient data. Portions of air quality control regions that are shown by monitored data or air quality modeling to exceed the NAAQS for any criteria pollutant are designated “nonattainment” areas for that pollutant.  Outagamie County is classified as in attainment for all criteria pollutants as reported by the USEPAiv and therefore a determination of transportation conformity would not be needed under the Code of Federal Regulation (40 CFR 93).v However, the project area is within an MSA and so any project that will create a 10-year projected increase in peak hour traffic over 1,200 vehicles may be subject to Air Quality Permits. |
| M. Construction Noise | ● | Construction areas closest to residential uses or other sensitive receptors would be of most concern. Residential property is located adjacent to US 41 throughout most of this segment. Residential land use is predominately to the southeast of US 41 between WIS 15 and WIS 47, however some residential property is also located to the north of US 41 along North Rifle Range Road. It should also be noted that Appleton Alliance Church is located just north of US 41 along Grand Chute Boulevard and could be considered a sensitive receptor. |
| N. Traffic Noise | ● | Increases in traffic noise could occur from potential increases in traffic volumes or the decrease in proximity between vehicular traffic and sensitive receptors within the highway expansion project. Effects of nearby residents located to the southeast of US 41 as well as those along North Rifle Range Road and Appleton Alliance Church located on Grand Chute Boulevard would be of most concern. A traffic noise study will be needed to assess the need for noise mitigation near the residential property and Appleton Alliance Church. |
| **CULTURAL ENVIRONMENT FACTORS** | | |
| O. Section 4(f) and 6(f) | ● | Grand Chute Trail currently crosses over US 41 at County A. The trail uses the existing County A bridge structure to cross the highway. Future expansion of US 41 could potentially involve extending the existing bridge and require a Section 4(f) analysis and coordination with the Town of Grand Chute. The provided impact rating assumes that the trail connection would remain after highway improvements are complete.  Prairie Hill Park is also located adjacent to US 41 and is located in the northeast quadrant of the WIS 15 interchange, however conceptual design indicates that improvements would not encroach upon park property. There are no identified Section 6(f) (LAWCON properties)vi uses along the existing US 41 mainline within this segment. |
| P. Historic Resources | ● | No national register listed sites exist in the project area.vi Initial analysis indicates the potential for eligible historic sites in the area is low, however the Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for history. |
| Q. Archaeological Resources | ● | No known archaeological sites and no national register listed sites exist in the project area. An archaeological survey was completed along the existing US 41 corridor within Outagamie County in June of 1960, but no archaeological finds were recorded along this segment.x Initial analysis indicates the potential for archaeological sites in the area is low, however the Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for archaeology. |
| R. Hazardous Substances or UST’s | ● | Preliminary review of the WDNR’s Bureau of Remediation and Redevelopment Tracking System (BRRTS) indicates one hazardous materials site located on property adjacent to the US 41 highway right-of-way between WIS 15 and WIS 47. The site is closed and is categorized by the WDNR as an environmental repair site that resulted in soil contamination.viii  Review of EPA’s EnviroMapper shows no discharges to water, superfund sites, toxic releases, or hazardous waste handlers located adjacent to US 41 mainline.ix Further study of hazardous materials may need to be completed. |
| S. Aesthetics | ○ | Expansion of US 41 is not expected to create any new negative aesthetic effects. Following a CSD process could be considered if the nearby residential communities are affected. |
| T. Coastal Zone | ○ | The interchange is not in a Coastal Zone County. |
| U. Airport | ● | Outagamie County Regional Airport, the closest airport to the segment, is approximately two miles away from this segment of US 41. Future improvements to the mainline must follow height limitations set forth by local ordinance and coordination with WisDOT’s Bureau of Aeronautics will likely be needed. |

### US 41 Mainline: WIS 47 – County E

#### Pre-NEPA Summary of Qualitative Environmental Impacts

|  | **Impact Rating** |
| --- | --- |
| **SOCIO-ECONOMIC FACTORS** | |
| A. General Economics | ● |
| B. Community and Residential | ● |
| C. Economic Development and Business | ● |
| D. Agriculture | ○ |
| E. Environmental Justice | ● |
| **NATURAL ENVIRONMENT FACTORS** | |
| F. Wetlands | ○ |
| G. Streams and Floodplains | ● |
| H. Lakes or Other Open Water | ● |
| I. Upland Habitat | ● |
| J. Erosion Control | ● |
| K. Storm Water Management | ● |
| **PHYSICAL ENVIRONMENT FACTORS** | |
| L. Air Quality | ● |
| M. Construction Noise | ● |
| N. Traffic Noise | ● |
| **CULTURAL ENVIRONMENT FACTORS** | |
| O. Section 4(f) and 6(f) | ● |
| P. Historic Resources | ● |
| Q. Archaeological Resources | ● |
| R. Hazardous Substances or UST’s | ○ |
| S. Aesthetics | ○ |
| T. Coastal Zone | ○ |
| U. Airport | ○ |

#### Pre-NEPA Qualitative Impact Analysis

|  | **Impact Rating** | **Comments** |
| --- | --- | --- |
| **SOCIO-ECONOMIC FACTORS** | | |
| A. General Economics | ● | When purchase of right-of-way is necessary, there may be property acquisition costs to DOT and a related drop in tax revenue for the local community. It is anticipated that expansion of US 41 in this segment would require additional right-of-way from the residential and commercial properties located to the north and south of US 41 to accommodate for the future roadway footprint and clear zones. However, relocations are not likely.  Expenditures would be made during construction (potential local purchase of goods and services), and there would be construction related employment opportunities. |
| B. Community and Residential | ● | The land immediately adjacent to the US 41 mainline are mostly developed and consists of residential neighborhoods located south of US 41 between WIS 47 and County E and to the north of US 41 between WIS 47 and N. Meade Street. Both neighborhoods consist mainly of single family homes with some duplexes/single-story multifamily housing. Land on the north side of US 41 between N. Meade Street and County E is used for commercial and agricultural purposes.  It is possible that expansion of US 41 in this segment would require additional right-of-way from the residential properties located to the north and south of US 41 to accommodate for the future roadway footprint and clear zones. However, relocations are not likely. |
| C. Economic Development and Business | ● | The land immediately adjacent to and north of US 41 between N. Meade Street and County E are partially developed and consists of commercial and agricultural uses while the remainder of the property has been kept as grassland. The entire stretch of land between N. Meade Street and County E is made up of two parcels that are both owned by Thrivent Financial.  It is anticipated that expansion of US 41 in this segment would require additional right-of-way from the Thrivent Financial property to accommodate for the future roadway footprint. Impacts to the business are anticipated to be minimal as the land adjacent to US 41 is mainly undeveloped grassland. |
| D. Agriculture | ○ | Some agricultural land exists north of US 41 between N. Meade Street and County E, however the cultivated land is greater than 450 feet from the proposed edge of pavement. Impacts to agricultural land are not anticipated. |
| E. Environmental Justice | ● | High level analysis of Census (2000) data indicates higher percentages of minorities and those in poverty to be living in the neighborhoods south of US 41 along this segment. The characteristics of the housing in the southwest quadrant of the County E interchange also suggest possible lower income populations near the interchange. Impacts to EJ populations should be examined and appropriate public involvement and CSD efforts should be made during future design and construction phases. |
| **NATURAL ENVIRONMENT FACTORS** | | |
| F. Wetlands | ○ | Based on examination of aerial photography and WDNR mapping, there are no identified wetlands of concern along this segment.i |
| G. Streams and Floodplains | ● | One unnamed stream crosses under the US 41 mainline three separate times between WIS 47 and County E. Future expansion of US 41 may require improvements to, or replacement of existing stream crossings.ii  Floodplains exist north and south of US 41 between N. Meade Street and County E and are located adjacent to US 41. Future expansion of US 41 presents potential impacts to these floodplains.ii  Migratory bird nests may exist on bridges and fish habitat in the stream. Impacts to streams, floodplains, and habitat should be assessed in coordination with the WDNR, USACE, and the U.S. Fish & Wildlife Service. |
| H. Lakes or Other Open Water | ● | A chain of man-made ponds is located north of US 41 near the County E interchange.ii Impacts to these ponds should be assessed in coordination with the WDNR and the USACE. |
| I. Upland Habitat | ● | Aerial photography indicates possible grassland habitat areas near Thrivent Financial north of US 41. Impacts to habitat should be assessed in coordination with the WDNR and the U.S. Fish & Wildlife Service. |
| J. Erosion Control | ● | Soils in the segment area include Briggsville silt loam with 0 to 2 and 2 to 6 percent slopes (BtA/BtB), Hebron loam with 2 to 6 percent slopes (HeB), Hortonville silt loam with 2 to 6 percent slopes (HrB), Kewaunee silt loam with 2 to 6 percent slopes (KhB), Manawa silty clay loam with 1 to 3 percent slopes (McA) and Winneconne silty clay loam with 0 to 2 percent slopes (WnA).iii  It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control sediment and other pollutants on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These erosion control measures should be documented in the project plan. All required permits for erosion control should be acquired prior to, and implemented during construction. |
| K. Storm Water Management | ● | Storm water management will be required, and may impact the nearby ponds if not properly managed. It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control storm water on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These storm water control measures should be documented in the project plan. All required permits for storm water runoff should be acquired prior to, and implemented during construction. |
| **PHYSICAL ENVIRONMENT FACTORS** | | |
| L. Air Quality | ● | The United States Environmental Protection Agency (USEPA) has identified six air pollutants of nationwide concern (criteria pollutants): CO, NO2, ozone, PM-10, sulfur oxides (SOx, measured as SO2), and lead. The National Ambient Air Quality Standards (NAAQS) are published in the Code of Federal Regulations (40 CFR 50.4 to 50.12). All states are required to submit to the USEPA a list identifying those air quality control regions or portions thereof, which meet or exceed the NAAQS or cannot be classified because of insufficient data. Portions of air quality control regions that are shown by monitored data or air quality modeling to exceed the NAAQS for any criteria pollutant are designated “nonattainment” areas for that pollutant.  Outagamie County is classified as in attainment for all criteria pollutants as reported by the USEPAiv and therefore a determination of transportation conformity would not be needed under the Code of Federal Regulation (40 CFR 93).v However, the project area is within an MSA and so any project that will create a 10-year projected increase in peak hour traffic over 1,200 vehicles may be subject to Air Quality Permits. |
| M. Construction Noise | ● | Construction areas closest to residential uses or other sensitive receptors would be of most concern. Residential land is located to the north of US 41 between WIS 47 and N. Meade Street and to the south of US 41 between WIS 47 and County E. Pathways Church, a sensitive receptor, is also located North of US 41 and just east of the WIS 47 interchange. |
| N. Traffic Noise | ● | Increases in traffic noise could occur from potential increases in traffic volumes or the decrease in proximity between vehicular traffic and sensitive receptors within the highway expansion project. Effects of nearby residents to the north and south of US 41 as well as Pathways Church located in the northeast quadrant of WIS 47 interchange would be of most concern. A noise wall exists on the south side of US 41 between WIS 47 and N. Meade Street. Initial plans do not indicate the need for adjustments or replacement of the existing noise wall. A traffic noise study will be needed to assess the need for additional noise mitigation. |
| **CULTURAL ENVIRONMENT FACTORS** | | |
| O. Section 4(f) and 6(f) | ● | Apple Creek Trail, a multi-use path, is located just north of US 41 between N. Meade Street and County E. Expansion of US 41 would impact the horizontal alignment of the trail and require the realignment of the trail.  A historic Native American archaeological site exists on the west side of the County E interchange and spans across US 41. Eligibility for the National Register of Historic Places (NRHP) needs to be confirmed.  Section 4(f) may apply to this segment if right-of-way is acquired from the Apple Creek Trail as indicated in conceptual design plans. Section 4(f) may also apply if work is done outside existing right-of-way and within the archaeological site’s established limits and is found eligible for the NRHP. Impacts to LAWCON funded properties subject to the Section 6(f) process are not anticipated.vi |
| P. Historic Resources | ● | No national register listed sites exist in the project area.vi Initial analysis indicates the potential for eligible historic sites in the area is low, however, the Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for history. |
| Q. Archaeological Resources | ● | A historic Native American archaeological site exists on the west side of the County E interchange and spans across US 41.[[13]](#endnote-13) WisDOT has more detailed records of the archaeological site related to the reconstruction of the County E interchange. An archaeological review should be completed for any work outside the established right of way or previously surveyed area. The Section 106 process will also have to be completed. |
| R. Hazardous Substances or UST’s | ○ | Preliminary review of the WDNR’s Bureau of Remediation and Redevelopment Tracking System (BRRTS) indicate no hazardous materials sites located adjacent to the US 41 highway right-of-way between WIS 47 and County E.viii  Review of EPA’s EnviroMapper shows no nearby discharges to water, superfund sites or toxic releases. There is one hazardous waste handler and no hazardous waste generators adjacent to US 41 mainline.ix Further study of hazardous materials may need to be completed. |
| S. Aesthetics | ○ | Expansion of US 41 is not expected to create any new negative aesthetic effects. Following a CSD process could be considered if the nearby residential communities are affected. |
| T. Coastal Zone | ○ | The interchange is not in a Coastal Zone County. |
| U. Airport | ○ | Outagamie County Regional Airport, the closest airport to the segment, is nearly 5 miles away. |

### US 41 and WIS 441 System Interchange Area US 41 between County E and County N and WIS 441 between the north Fox River Bridge abutment and US 41 *This segment includes analysis of the US 41 and WIS 441 system interchange.*

#### Pre-NEPA Summary of Qualitative Environmental Impacts

|  | **Impact Rating** |
| --- | --- |
| **SOCIO-ECONOMIC FACTORS** | |
| A. General Economics | ● |
| B. Community and Residential | ● |
| C. Economic Development and Business | ● |
| D. Agriculture | ● |
| E. Environmental Justice | ● |
| **NATURAL ENVIRONMENT FACTORS** | |
| F. Wetlands | ● |
| G. Streams and Floodplains | ● |
| H. Lakes or Other Open Water | ● |
| I. Upland Habitat | ○ |
| J. Erosion Control | ● |
| K. Storm Water Management | ● |
| **PHYSICAL ENVIRONMENT FACTORS** | |
| L. Air Quality | ● |
| M. Construction Noise | ● |
| N. Traffic Noise | ● |
| **CULTURAL ENVIRONMENT FACTORS** | |
| O. Section 4(f) and 6(f) | ● |
| P. Historic Resources | ● |
| Q. Archaeological Resources | ● |
| R. Hazardous Substances or UST’s | ● |
| S. Aesthetics | ○ |
| T. Coastal Zone | ○ |
| U. Airport | ○ |

#### Pre-NEPA Qualitative Impact Analysis

|  | **Impact Rating** | **Comments** |
| --- | --- | --- |
| **SOCIO-ECONOMIC FACTORS** | | |
| A. General Economics | ● | When purchase of right-of-way is necessary, there may be property acquisition costs to DOT and a related drop in tax revenue for the local community. Expansion of US 41 in this segment may require additional right-of-way from the residential, commercial, industrial, and agricultural properties located to the north and south of US 41 and to the east of WIS 441 to accommodate for the future roadway footprint and clear zones. Conceptual design indicates the need for retaining walls along the southern US 41 and WIS 441 interchange ramps to avoid business relocations.  Expenditures would be made during construction (potential local purchase of goods and services), and there would be construction related employment opportunities. |
| B. Community and Residential | ● | Land adjacent to US 41 and WIS 441 in this segment is partially developed, however it mainly consists of commercial property with some residential land use. It is possible that the improvements to WIS 441 between US 41 and County OO may require the acquisition of additional right-of-way from residential properties located east of WIS 441 to accommodate for the future roadway footprint and clear zones. It should also be noted that access to residences along French Road near the County OO and WIS 441 interchange will change as a result of the realignment of French Road. French Road is planned to be realigned to maintain adequate intersection spacing along County OO.  Residential neighborhoods do exist south of US 41 between Holland Road and County N, however they are not located adjacent to US 41 and therefore impacts are not likely. Residential relocations are not anticipated. |
| C. Economic Development and Business | ● | Land adjacent to US 41 and WIS 441 in this segment is partially developed and mainly consists of commercial and industrial properties. Expansion of US 41 may require the acquisition of strips of right-of-way from the businesses located to the north and south of US 41. Conceptual design also indicates the need for retaining walls along the southern US 41 and WIS 441 interchange ramps to avoid business relocations. |
| D. Agriculture | ● | Agricultural land is located to the north of US 41 between WIS 441 and Vandenbroek Road and to the east side of the WIS 441 and County OO interchange. Expansion of US 41 may require the acquisition of strips of right-of-way from the farms located to the north and south of US 41. Preliminary design of the County OO interchange indicates that acquisition of farm land will be needed to accommodate the interchange improvements and the resulting realignment French Road. |
| E. Environmental Justice | ● | High level analysis of Census (2000) data infers that a higher percentage of people living in poverty and minorities live in the neighborhood south of US 41 between Holland Road and Vandenbroek Road. Impacts to EJ populations should be examined and appropriate public involvement and CSD efforts should be made during future design and construction phases. |
| **NATURAL ENVIRONMENT FACTORS** | | |
| F. Wetlands | ● | Based on examination of aerial photography and WDNR mapping one designated wetland exists in the northeast quadrant of the US 41 and WIS 441 interchange. The wetland is in close proximity to the WIS 441 southbound on-ramps and US 41 mainline, however conceptual design indicates that the wetland would not be physically altered. An unnamed stream that flows to the wetland and is located to the north of the interchange would likely need to be rerouted or the interchange design would need to provide improvements that would enable the stream to flow beneath the interchange.i Effects to the streams due to construction of potential improvements should be minimized not only to protect the quality of the stream but to also protect the quality of the wetlands that it flows to.  Impacts to wetland habitat should be assessed in coordination with the WDNR and the U.S. Fish & Wildlife Service. The acquisition of designated wetland property due to mainline expansion is not anticipated along this segment. |
| G. Streams and Floodplains | ● | One unnamed stream crosses under the US 41 mainline five separate times between County E and County N. Conceptual design of the US 41 and WIS 441 interchange indicates the need to realign the stream bed of this unnamed stream which currently flows just north of the interchange. One other unnamed stream crosses under WIS 441 between County OO and US 41. Future expansion of US 41 may require improvements to or replacement of existing stream crossings. This segment of US 41 does not fall within a floodplain.ii  Migratory bird nests may exist on bridges and fish habitat may be present in the stream. Impacts to streams, floodplains, and habitat should be assessed in coordination with the WDNR, USACE, and the U.S. Fish & Wildlife Service. |
| H. Lakes or Other Open Water | ● | An open water pond, that is also designated as a wetland (see section F: Wetlands) is located in the northeast quadrant of the US 41 and WIS 441 interchange and one man-made drainage pond is located in the southwest quadrant of the County OO interchange.ii Conceptual design of the County OO Interchange indicates the potential need to alter the drainage pond to accommodate the future footprint of the southbound on-ramp. Alterations to the ramp design or additional improvements such as retaining walls could likely be used to minimize or avoid impacts to the drainage pond if it is determined that impacts to the drainage pond should be mitigated. Impacts to these ponds should be assessed in coordination with the DNR, USACE, and the U.S. Fish & Wildlife Service. |
| I. Upland Habitat | ○ | Aerial photography indicates the property adjacent to US 41 within this segment is mostly developed or has been tilled and that little upland habitat exists. |
| J. Erosion Control | ● | Soils in the segment area mainly include Briggsville silt loam with 2 to 6 percent slopes (BtB), Manawa silty clay loam with 1 to 3 percent slopes (McA), Winneconne silty clay loam with 0 to 2 percent slopes (WnA), and Winneconne silty clay loam with 2 to 6 percent slopes (WnB).iii  It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control sediment and other pollutants on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These erosion control measures should be documented in the project plan. All required permits for erosion control should be acquired prior to, and implemented during construction. |
| K. Storm Water Management | ● | Storm water management will be required, and may impact the nearby stream if not properly managed. It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control storm water on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These storm water control measures should be documented in the project plan. All required permits for storm water runoff should be acquired prior to, and implemented during construction. |
| **PHYSICAL ENVIRONMENT FACTORS** | | |
| L. Air Quality | ● | The United States Environmental Protection Agency (USEPA) has identified six air pollutants of nationwide concern (criteria pollutants): CO, NO2, ozone, PM-10, sulfur oxides (SOx, measured as SO2), and lead. The National Ambient Air Quality Standards (NAAQS) are published in the Code of Federal Regulations (40 CFR 50.4 to 50.12). All states are required to submit to the USEPA a list identifying those air quality control regions or portions thereof, which meet or exceed the NAAQS or cannot be classified because of insufficient data. Portions of air quality control regions that are shown by monitored data or air quality modeling to exceed the NAAQS for any criteria pollutant are designated “nonattainment” areas for that pollutant.  Outagamie County is classified as in attainment for all criteria pollutants as reported by the USEPAiv and therefore a determination of transportation conformity would not be needed under the Code of Federal Regulation (40 CFR 93).v However, the project area is within an MSA and so any project that will create a 10-year projected increase in peak hour traffic over 1,200 vehicles may be subject to Air Quality Permits. |
| M. Construction Noise | ● | Construction areas closest to residential uses or other sensitive receptors would be of most concern. The land uses adjacent to US 41 and WIS 441 primarily consist of commercial and agricultural land, however residential land does exist along the east side of WIS 441 where conceptual design plans indicate the highway would be realigned between US 41 and County OO. Residential neighborhoods do exist south of US 41 between Holland Road and County N, however they are not located adjacent to US 41. Impacts to residences and sensitive receptors near the construction area may last throughout the construction schedule. |
| N. Traffic Noise | ● | Increases in traffic noise could occur from potential increases in traffic volumes or the decrease in proximity between vehicular traffic and sensitive receptors within the highway expansion project. Effects of nearby residents to the south of US 41 and east of WIS 441 would be of most concern. A traffic noise study will be needed to assess the need for noise mitigation |
| **CULTURAL ENVIRONMENT FACTORS** | | |
| O. Section 4(f) and 6(f) | ● | Conceptual design plans indicate the need realign French Road at County OO to maintain adequate intersection spacing, however the current design for the realignment of the roadway would encroach on the Outagamie Pet Exercise Area. The Outagamie Pet Exercise Area is a designated park that may require Section 4(f) consultation and coordination with the Town of Grand Chute.  There are no identified Section 6(f) (LAWCON properties)vi uses along the existing US 41 mainline within this segment. |
| P. Historic Resources | ● | No national register listed sites exist in the project area.vi Initial analysis indicates the potential for eligible historic sites in the area is low, however the Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for history. |
| Q. Archaeological Resources | ● | No known archaeological sites and no national register listed sites exist in the project area. An archaeological survey was completed along the existing US 41 corridor within Outagamie County in June of 1960, however it was recorded that the section of US 41 within the Towns of Kaukauna and Vandenbroek were not adequately field checked.x Initial analysis indicates the potential for archaeological sites in the area is low due to previous construction, however the Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for archaeology. |
| R. Hazardous Substances or UST’s | ● | Preliminary review of the WDNR’s Bureau of Remediation and Redevelopment Tracking System (BRRTS) indicate two hazardous materials sites located on property adjacent to the US 41 highway right-of-way between County E and County N. Both sites are closed and are categorized by the WDNR as a leaking underground storage tanks that resulted in soil contamination. No hazardous materials sites were recorded along WIS 441 between US 41 and County OO.viii  Review of EPA’s EnviroMapper shows no nearby discharges to water, superfund sites or toxic releases. There are three hazardous waste handlers located adjacent to US 41 and WIS 441 mainline.ix Further study of hazardous materials may need to be completed. |
| S. Aesthetics | ○ | Expansion of US 41 is not expected to create any new negative aesthetic effects. Following a CSD process could be considered if the nearby residential communities are affected. |
| T. Coastal Zone | ○ | The interchange is not in a Coastal Zone County. |
| U. Airport | ○ | Outagamie County Regional Airport, the closest airport to the segment, is approximately seven miles away from this segment of US 41. |

### US 41 Mainline: County N to WIS 55

#### Pre-NEPA Summary of Qualitative Environmental Impacts

|  | **Impact Rating** |
| --- | --- |
| **SOCIO-ECONOMIC FACTORS** | |
| A. General Economics | ● |
| B. Community and Residential | ● |
| C. Economic Development and Business | ● |
| D. Agriculture | ● |
| E. Environmental Justice | ● |
| **NATURAL ENVIRONMENT FACTORS** | |
| F. Wetlands | ○ |
| G. Streams and Floodplains | ● |
| H. Lakes or Other Open Water | ● |
| I. Upland Habitat | ○ |
| J. Erosion Control | ● |
| K. Storm Water Management | ● |
| **PHYSICAL ENVIRONMENT FACTORS** | |
| L. Air Quality | ● |
| M. Construction Noise | ● |
| N. Traffic Noise | ● |
| **CULTURAL ENVIRONMENT FACTORS** | |
| O. Section 4(f) and 6(f) | ○ |
| P. Historic Resources | ● |
| Q. Archaeological Resources | ● |
| R. Hazardous Substances or UST’s | ● |
| S. Aesthetics | ○ |
| T. Coastal Zone | ○ |
| U. Airport | ○ |

#### Pre-NEPA Qualitative Impact Analysis

|  | **Impact Rating** | **Comments** |
| --- | --- | --- |
| **SOCIO-ECONOMIC FACTORS** | | |
| A. General Economics | ● | When purchase of right-of-way is necessary, there may be property acquisition costs to DOT and a related drop in tax revenue for the local community. Expansion of US 41 in this segment may require additional right-of-way from the commercial, industrial, and agricultural properties located to the north and south of US 41 to accommodate for the future roadway footprint and clear zones. However, relocations are not likely.  Expenditures would be made during construction (potential local purchase of goods and services), and there would be construction related employment opportunities. |
| B. Community and Residential | ● | Land adjacent to US 41 is partially developed, however it mainly consists of commercial and industrial properties. One residence is located adjacent to US 41 along Ebben Road. It is possible that expansion of US 41 in this segment may require the acquisition of additional right-of-way from this residential property to accommodate for the future roadway footprint and clear zones.  Residential relocations are not anticipated. |
| C. Economic Development and Business | ● | Commercial and industrial property is located to the north of US 41 between County N and Buchanan Street and to the south of US 41 between County N and Rose Hill Road. Expansion of US 41 may require the acquisition of strips of right-of-way from the businesses located to the south of US 41. Business relocations are not anticipated. |
| D. Agriculture | ● | Agricultural land is located to the north and south of US 41 between Buchanan Street and WIS 55. Expansion of US 41 may require the acquisition of strips of right-of-way from the farms located to the north and south of US 41. Relocations are not anticipated. |
| E. Environmental Justice | ● | High level analysis of aerial imagery and Census (2000) data does not indicate the presence of EJ populations near the US 41 corridor along this segment. Impacts to EJ populations should be examined and appropriate public involvement and CSD efforts should be made during future design and construction phases. |
| **NATURAL ENVIRONMENT FACTORS** | | |
| F. Wetlands | ○ | Based on examination of aerial photography and WDNR mapping, there are no identified wetlands of concern along this segment.i |
| G. Streams and Floodplains | ● | One unnamed stream crosses under US 41 between County N and WIS 55. Future expansion of US 41 may require improvements to or replacement of the existing stream crossing. This segment of US 41 does not fall within a floodplain.ii  Migratory bird nests may exist on bridges and fish habitat may be present in the stream. Impacts to streams, floodplains, and habitat should be assessed in coordination with the WDNR, USACE, and the U.S. Fish & Wildlife Service. |
| H. Lakes or Other Open Water | ● | A man-made retaining pond is located in the southwest quadrant of the WIS 55 interchange near an abandoned dog track.ii Conceptual design indicates the potential need to alter the pond nearest to the US 41 mainline to accommodate the highway expansion. |
| I. Upland Habitat | ○ | The majority of land adjacent to US 41 has either been developed or cultivated for farming purposes. Little upland habitat exists along this segment and therefore no impacts to upland habitat is anticipated. |
| J. Erosion Control | ● | Soils in the segment area mainly include Grays silt loam with 2 to 6 percent slopes (GrB), Kaukauna silty clay loam with 1 to 3 percent slopes (KaA), Manawa silty clay loam with 0 to 3 percent slopes (McA), and Winneconne silty clay loam with 2 to 6 percent slopes (WnB).iii  It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control sediment and other pollutants on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These erosion control measures should be documented in the project plan. All required permits for erosion control should be acquired prior to, and implemented during construction. |
| K. Storm Water Management | ● | Storm water management will be required, and may impact the nearby stream if not properly managed. It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control storm water on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These storm water control measures should be documented in the project plan. All required permits for storm water runoff should be acquired prior to, and implemented during construction. |
| **PHYSICAL ENVIRONMENT FACTORS** | | |
| L. Air Quality | ● | The United States Environmental Protection Agency (USEPA) has identified six air pollutants of nationwide concern (criteria pollutants): CO, NO2, ozone, PM-10, sulfur oxides (SOx, measured as SO2), and lead. The National Ambient Air Quality Standards (NAAQS) are published in the Code of Federal Regulations (40 CFR 50.4 to 50.12). All states are required to submit to the USEPA a list identifying those air quality control regions or portions thereof, which meet or exceed the NAAQS or cannot be classified because of insufficient data. Portions of air quality control regions that are shown by monitored data or air quality modeling to exceed the NAAQS for any criteria pollutant are designated “nonattainment” areas for that pollutant.  Outagamie County is classified as in attainment for all criteria pollutants as reported by the USEPAiv and therefore a determination of transportation conformity would not be needed under the Code of Federal Regulation (40 CFR 93).v However, the project area is within an MSA and so any project that will create a 10-year projected increase in peak hour traffic over 1,200 vehicles may be subject to Air Quality Permits. |
| M. Construction Noise | ● | Construction areas closest to residential uses or other sensitive receptors would be of most concern. The adjacent land uses primarily consist of commercial, industrial, and agriculture. One residence is located adjacent to US 41, however multiple residences are located between 400 and 1,000 feet from the existing highway with little interference in between. Impacts to residences and sensitive receptors near the construction area may last throughout the construction schedule. |
| N. Traffic Noise | ● | Increases in traffic noise could occur from potential increases in traffic volumes or the decrease in proximity between vehicular traffic and sensitive receptors within the highway expansion project. Effects of nearby residents to the north and south of US 41 would be of most concern. A traffic noise study will be needed to assess the need for noise mitigation |
| **CULTURAL ENVIRONMENT FACTORS** | | |
| O. Section 4(f) and 6(f) | ○ | There are no identified Section 4(f) or 6(f) (LAWCON properties)vi uses along the existing US 41 mainline within this segment. |
| P. Historic Resources | ● | No national register listed sites exist in the project area.vi Initial analysis indicates the potential for eligible historic sites in the area is low, however the Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for history. |
| Q. Archaeological Resources | ● | No known archaeological sites and no national register listed sites exist in the project area. An archaeological survey was completed along the existing US 41 corridor within Outagamie County in June of 1960, however it was recorded that the section of US 41 within the Towns of Kaukauna and Vandenbroek were not adequately field checked.x Initial analysis indicates the potential for archaeological sites in the area is low due to previous construction, however the Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for archaeology. |
| R. Hazardous Substances or UST’s | ● | Preliminary review of the WDNR’s Bureau of Remediation and Redevelopment Tracking System (BRRTS) indicate seven hazardous materials sites located on property adjacent to the US 41 highway right-of-way between County N and WIS 55. All seven sites are closed and are categorized by the WDNR as leaking underground storage tanks that resulted in soil contamination.viii  Review of EPA’s EnviroMapper shows no nearby discharges to water, superfund sites or toxic releases. There are six hazardous waste handlers located adjacent to US 41 mainline.ix Further study of hazardous materials may need to be completed. |
| S. Aesthetics | ○ | Expansion of US 41 is not expected to create any new negative aesthetic effects. Following a CSD process could be considered if the nearby residential communities are affected. |
| T. Coastal Zone | ○ | The interchange is not in a Coastal Zone County. |
| U. Airport | ○ | Outagamie County Regional Airport, the closest airport to the interchange, is over eight miles away. |

### US 41 Mainline: WIS 55 to County J

#### Pre-NEPA Summary of Qualitative Environmental Impacts

|  | **Impact Rating** |
| --- | --- |
| **SOCIO-ECONOMIC FACTORS** | |
| A. General Economics | ● |
| B. Community and Residential | ○ |
| C. Economic Development and Business | ● |
| D. Agriculture | ○ |
| E. Environmental Justice | ● |
| **NATURAL ENVIRONMENT FACTORS** | |
| F. Wetlands | ○ |
| G. Streams and Floodplains | ● |
| H. Lakes or Other Open Water | ○ |
| I. Upland Habitat | ○ |
| J. Erosion Control | ● |
| K. Storm Water Management | ● |
| **PHYSICAL ENVIRONMENT FACTORS** | |
| L. Air Quality | ● |
| M. Construction Noise | ● |
| N. Traffic Noise | ● |
| **CULTURAL ENVIRONMENT FACTORS** | |
| O. Section 4(f) and 6(f) | ○ |
| P. Historic Resources | ● |
| Q. Archaeological Resources | ● |
| R. Hazardous Substances or UST’s | ● |
| S. Aesthetics | ○ |
| T. Coastal Zone | ○ |
| U. Airport | ○ |

#### Pre-NEPA Qualitative Impact Analysis

|  | **Impact Rating** | **Comments** |
| --- | --- | --- |
| **SOCIO-ECONOMIC FACTORS** | | |
| A. General Economics | ● | When purchase of right-of-way is necessary, there may be property acquisition costs to DOT and a related drop in tax revenue for the local community. Expansion of US 41 in this segment may require additional right-of-way from the commercial, industrial, and agricultural properties located to the north and south of US 41 to accommodate for the future roadway footprint and clear zones. However, relocations are not likely.  Expenditures would be made during construction (potential local purchase of goods and services), and there would be construction related employment opportunities. |
| B. Community and Residential | ○ | Land adjacent to US 41 is partially developed, however it mainly consists of commercial and industrial properties. Two residences are located adjacent to US 41 and are located on Maloney Road.  Residential relocations and the acquisition of residential property are not anticipated along this segment. |
| C. Economic Development and Business | ● | Commercial and industrial property is located to the north and south of US 41 throughout the segment. Expansion of US 41 may require the acquisition of strips of right-of-way from the businesses located to the north of US 41. Business relocations are not anticipated. |
| D. Agriculture | ○ | Agricultural land is located to the north of US 41 near the WIS 55 interchange. Farm relocations and the acquisition of agricultural property are not anticipated along this segment. |
| E. Environmental Justice | ● | High level analysis of aerial imagery and Census (2000) data does not indicate the presence of EJ populations near the US 41 corridor along this segment. Impacts to EJ populations should be examined and appropriate public involvement and CSD efforts should be made during future design and construction phases. |
| **NATURAL ENVIRONMENT FACTORS** | | |
| F. Wetlands | ○ | Based on examination of aerial photography and WDNR mapping, there are no identified wetlands of concern along this segment.i |
| G. Streams and Floodplains | ● | One unnamed stream crosses under US 41 between WIS 55 and County J. Future expansion of US 41 may require improvements to, or replacement of the existing stream crossing. This segment of US 41 does not fall within a floodplain.ii  Migratory bird nests may exist on bridges and fish habitat may be present in the stream. Impacts to streams, floodplains, and habitat should be assessed in coordination with the WDNR, USACE, and the U.S. Fish & Wildlife Service. |
| H. Lakes or Other Open Water | ○ | A man-made retaining pond is located in the southwest quadrant of the County J interchange.ii Conceptual design indicates that impacts to the pond are not anticipated. |
| I. Upland Habitat | ○ | The majority of land adjacent to US 41 has either been developed or cultivated for farming purposes. Little upland habitat exists along this segment and therefore no impacts to upland habitat is anticipated. |
| J. Erosion Control | ● | Soils in the segment area mainly include Grays silt loam with 2 to 6 percent slopes (GrB), Manawa silty clay loam with 0 to 3 percent slopes (McA), and Winneconne silty clay loam with 2 to 6 percent slopes (WnB).iii  It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control sediment and other pollutants on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These erosion control measures should be documented in the project plan. All required permits for erosion control should be acquired prior to, and implemented during construction. |
| K. Storm Water Management | ● | Storm water management will be required, and may impact the nearby stream if not properly managed. It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control storm water on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These storm water control measures should be documented in the project plan. All required permits for storm water runoff should be acquired prior to, and implemented during construction. |
| **PHYSICAL ENVIRONMENT FACTORS** | | |
| L. Air Quality | ● | The United States Environmental Protection Agency (USEPA) has identified six air pollutants of nationwide concern (criteria pollutants): CO, NO2, ozone, PM-10, sulfur oxides (SOx, measured as SO2), and lead. The National Ambient Air Quality Standards (NAAQS) are published in the Code of Federal Regulations (40 CFR 50.4 to 50.12). All states are required to submit to the USEPA a list identifying those air quality control regions or portions thereof, which meet or exceed the NAAQS or cannot be classified because of insufficient data. Portions of air quality control regions that are shown by monitored data or air quality modeling to exceed the NAAQS for any criteria pollutant are designated “nonattainment” areas for that pollutant.  Outagamie County is classified as in attainment for all criteria pollutants as reported by the USEPAiv and therefore a determination of transportation conformity would not be needed under the Code of Federal Regulation (40 CFR 93).v However, the project area is within an MSA and so any project that will create a 10-year projected increase in peak hour traffic over 1,200 vehicles may be subject to Air Quality Permits. |
| M. Construction Noise | ● | Construction areas closest to residential uses or other sensitive receptors would be of most concern. The adjacent land uses primarily consist of commercial, industrial, and agriculture, however two residences are located adjacent to US 41. Impacts to residences and sensitive receptors near the construction area may last throughout the construction schedule. |
| N. Traffic Noise | ● | Increases in traffic noise could occur from potential increases in traffic volumes or the decrease in proximity between vehicular traffic and sensitive receptors within the highway expansion project. Effects of nearby residents to the north and south of US 41 would be of most concern. A traffic noise study will be needed to assess the need for noise mitigation |
| **CULTURAL ENVIRONMENT FACTORS** | | |
| O. Section 4(f) and 6(f) | ○ | There are no identified Section 4(f) or 6(f) (LAWCON properties)vi uses along the existing US 41 mainline within this segment. |
| P. Historic Resources | ● | No national register listed sites exist in the project area.vi Initial analysis indicates the potential for eligible historic sites in the area is low, however the Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for history. |
| Q. Archaeological Resources | ● | No known archaeological sites and no national register listed sites exist in the project area. An archaeological survey was completed along the existing US 41 corridor within Outagamie County in June of 1960, however it was recorded that the section of US 41 within the Towns of Kaukauna and Vandenbroek were not adequately field checked.x Initial analysis indicates the potential for archaeological sites in the area is low due to previous construction, however the Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for archaeology. |
| R. Hazardous Substances or UST’s | ● | Preliminary review of the WDNR’s Bureau of Remediation and Redevelopment Tracking System (BRRTS) indicate three hazardous materials sites located on property adjacent to the US 41 highway right-of-way between WIS 55 and County J. All three sites are closed and two are categorized by the WDNR as a leaking underground storage tanks and the third as an environmental repair site. Each incident resulted in soil contamination.viii  Review of EPA’s EnviroMapper shows one toxic release site adjacent to US 41 highway right-of-way and no nearby discharges to water, or superfund sites. There are eight hazardous waste handlers located adjacent to US 41 mainline.ix Further study of hazardous materials may need to be completed. |
| S. Aesthetics | ○ | Expansion of US 41 is not expected to create any new negative aesthetic effects. Following a CSD process could be considered if the nearby residential communities are affected. |
| T. Coastal Zone | ○ | The interchange is not in a Coastal Zone County. |
| U. Airport | ○ | Outagamie County Regional Airport and Austin Straubel International Airport are the closest airport to the segment and both are located approximately 12 miles away. |

### US 41 Mainline: County J to County U

#### Pre-NEPA Summary of Qualitative Environmental Impacts

|  | **Impact Rating** |
| --- | --- |
| **SOCIO-ECONOMIC FACTORS** | |
| A. General Economics | ○ |
| B. Community and Residential | ○ |
| C. Economic Development and Business | ○ |
| D. Agriculture | ○ |
| E. Environmental Justice | ● |
| **NATURAL ENVIRONMENT FACTORS** | |
| F. Wetlands | ○ |
| G. Streams and Floodplains | ○ |
| H. Lakes or Other Open Water | ● |
| I. Upland Habitat | ○ |
| J. Erosion Control | ● |
| K. Storm Water Management | ● |
| **PHYSICAL ENVIRONMENT FACTORS** | |
| L. Air Quality | ● |
| M. Construction Noise | ● |
| N. Traffic Noise | ● |
| **CULTURAL ENVIRONMENT FACTORS** | |
| O. Section 4(f) and 6(f) | ● |
| P. Historic Resources | ● |
| Q. Archaeological Resources | ● |
| R. Hazardous Substances or UST’s | ● |
| S. Aesthetics | ○ |
| T. Coastal Zone | ○ |
| U. Airport | ○ |

#### Pre-NEPA Qualitative Impact Analysis

|  | **Impact Rating** | **Comments** |
| --- | --- | --- |
| **SOCIO-ECONOMIC FACTORS** | | |
| A. General Economics | ○ | When the purchase of right-of-way is necessary, there may be property acquisition costs to DOT and a related drop in tax revenue for the local community. However, conceptual design indicates that right-of-way acquisition and relocations are not anticipated along this segment.  Expenditures would be made during construction (potential local purchase of goods and services), and there would be construction related employment opportunities. |
| B. Community and Residential | ○ | The land along this segment of US 41 is partially developed and residential land does exist in the area of the highway, however only three residences are located on property that is adjacent to WisDOT right-of-way. Residential property in the area of the highway mainly consists of single-family homes.  No relocations or right-of-way acquisition from residential property or community facilities is anticipated. |
| C. Economic Development and Business | ○ | Land east and west of US 41 is partially developed, but mainly consists of agricultural land uses. Commercial and industrial property is mainly located between County J and Wrightstown Road and Royal St. Patrick’s Golf Course is located east of US 41 between Wrightstown Road and County Line Road. It is not anticipated that expansion of US 41 in this segment would require business relocations or additional right-of-way from commercial or industrial properties. |
| D. Agriculture | ○ | Agricultural land is located to the east and west of US 41 and is mixed among the commercial, industrial, and residential land uses. It is not anticipated that expansion of US 41 in this segment would require farm relocations or additional right-of-way from agricultural properties. |
| E. Environmental Justice | ● | High level analysis of aerial photography and Census (2000) data does not indicate the presence of EJ populations near the US 41 corridor along this segment. Impacts to EJ populations should be examined and appropriate public involvement and CSD efforts should be made during future design and construction phases. |
| **NATURAL ENVIRONMENT FACTORS** | | |
| F. Wetlands | ○ | Based on examination of aerial photography and WDNR mapping, there are no identified wetlands of concern along this segment.i |
| G. Streams and Floodplains | ○ | Based on examination of aerial photography and WDNR mapping, there are no streams that cross US 41 in this segment.ii |
| H. Lakes or Other Open Water | ● | A flooded excavation is located adjacent to the East US 41 Frontage Road south of Wrightstown Road.ii Impacts to the pond should be assessed in coordination with the WDNR and the USACE. |
| I. Upland Habitat | ○ | Aerial photography indicates that wooded habitat does exist along this segment and is mainly located to the west of US 41 and between Wrightstown Road and County U. However, impacts to upland habitat is not anticipated along this segment. |
| J. Erosion Control | ● | Soils in the segment area mainly include Kewaunee silt loam with 2 to 6 percent slopes (KhB), Kewaunee silt loam with 6 to 12 percent slopes (KhC2), Manawa silty clay loam with 0 to 3 percent slopes (McA), Manistee loamy fine sand with 6 to 12 percent slopes (MeC2), Manistee fine sandy loam with 2 to 6 percent slopes (MfB), Poygan silty clay loam (Po), Rousseau loamy fine sand with 2 to 6 percent slopes (RoB), Shawano fine sand (SeC), Suamico muck (Su), Winneconne silty clay loam with 2 to 6 percent slopes (WnB), and Winneconne silty clay loam with 6 to 12 percent slopes (WnC2).iii  It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control sediment and other pollutants on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These erosion control measures should be documented in the project plan. All required permits for erosion control should be acquired prior to, and implemented during construction. |
| K. Storm Water Management | ● | Storm water management will be required, and may impact the nearby stream if not properly managed. It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control storm water on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These storm water control measures should be documented in the project plan. All required permits for storm water runoff should be acquired prior to, and implemented during construction. |
| **PHYSICAL ENVIRONMENT FACTORS** | | |
| L. Air Quality | ● | The United States Environmental Protection Agency (USEPA) has identified six air pollutants of nationwide concern (criteria pollutants): CO, NO2, ozone, PM-10, sulfur oxides (SOx, measured as SO2), and lead. The National Ambient Air Quality Standards (NAAQS) are published in the Code of Federal Regulations (40 CFR 50.4 to 50.12). All states are required to submit to the USEPA a list identifying those air quality control regions or portions thereof, which meet or exceed the NAAQS or cannot be classified because of insufficient data. Portions of air quality control regions that are shown by monitored data or air quality modeling to exceed the NAAQS for any criteria pollutant are designated “nonattainment” areas for that pollutant.  Outagamie County is classified as in attainment for all criteria pollutants as reported by the USEPAiv and therefore a determination of transportation conformity would not be needed under the Code of Federal Regulation (40 CFR 93).v However, the project area is within an MSA and so any project that will create a 10-year projected increase in peak hour traffic over 1,200 vehicles may be subject to Air Quality Permits. |
| M. Construction Noise | ● | Construction areas closest to residential uses or other sensitive receptors would be of most concern. Residential land uses are located north of Wrightstown Road and along WIS 96 which runs parallel with US 41 between County J and just north of Edgewood Drive. Impacts to residences and sensitive receptors near the construction area may last throughout the construction schedule. |
| N. Traffic Noise | ● | Increases in traffic noise could occur from potential increases in traffic volumes or the decrease in proximity between vehicular traffic and sensitive receptors within the highway expansion project. Effects of nearby residents located adjacent to US 41 near Wrightstown Road would be of most concern. A traffic noise study will be needed to assess the need for noise mitigation |
| **CULTURAL ENVIRONMENT FACTORS** | | |
| O. Section 4(f) and 6(f) | ● | Analysis of conceptual highway design indicates the potential to encroach upon St. Patrick’s Cemetery. Work within the cemeteries should be avoided as they are protected under Wis. Stats. 157.70 and would constitute a Section 4(f) use.  There are no identified Section 6(f) (LAWCON properties)vi uses along the existing US 41 mainline along this segment. |
| P. Historic Resources | ● | No national register listed sites exist in the project areavi, however the presence of St. Patrick’s Cemetery provide the potential for sites that may be eligible for the national register.  The Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for history. |
| Q. Archaeological Resources | ● | Analysis of conceptual highway design indicates the potential to encroach upon St. Patrick’s Cemetery, located between US 41 and the East US 41 Frontage Road. Burial sites are protected under Wis. Stats. 157.70 and will need to be taken into consideration during the design and construction phases to avoid the disturbance of human burials.  No known designated archaeological sites and no national register listed sites exist in the project area. An archaeological survey was completed along the existing US 41 corridor within Outagamie County in June of 1960, however it was recorded that the section of US 41 within the Towns of Kaukauna and Vandenbroek were not adequately field checked.x The Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for archaeology. |
| R. Hazardous Substances or UST’s | ● | Preliminary review of the WDNR’s Bureau of Remediation and Redevelopment Tracking System (BRRTS) indicates one hazardous materials site located on property adjacent to the US 41 highway right-of-way between County J and County U. The site is closed and is categorized by the WDNR as a leaking underground storage tank that resulted in soil contamination.viii  Review of EPA’s EnviroMapper shows one toxic release site, water discharger, and hazardous materials handler located adjacent to US 41 and no nearby superfund sites.ix Further study of hazardous materials may need to be completed. |
| S. Aesthetics | ○ | Expansion of US 41 is not expected to create any new negative aesthetic effects. Following a CSD process could be considered if the nearby residential communities are affected. |
| T. Coastal Zone | ○ | The interchange is not in a Coastal Zone County. |
| U. Airport | ○ | Austin Straubel International Airport, the closest airport to the segment, is approximately eight miles away. |

### US 41 Mainline: County U to North of County S (Orange Lane)

#### Pre-NEPA Summary of Qualitative Environmental Impacts

|  | **Impact Rating** |
| --- | --- |
| **SOCIO-ECONOMIC FACTORS** | |
| A. General Economics | ○ |
| B. Community and Residential | ● |
| C. Economic Development and Business | ● |
| D. Agriculture | ● |
| E. Environmental Justice | ● |
| **NATURAL ENVIRONMENT FACTORS** | |
| F. Wetlands | ● |
| G. Streams and Floodplains | ● |
| H. Lakes or Other Open Water | ○ |
| I. Upland Habitat | ○ |
| J. Erosion Control | ○ |
| K. Storm Water Management | ● |
| **PHYSICAL ENVIRONMENT FACTORS** | |
| L. Air Quality | ● |
| M. Construction Noise | ● |
| N. Traffic Noise | ● |
| **CULTURAL ENVIRONMENT FACTORS** | |
| O. Section 4(f) and 6(f) | ● |
| P. Historic Resources | ● |
| Q. Archaeological Resources | ● |
| R. Hazardous Substances or UST’s | ● |
| S. Aesthetics | ○ |
| T. Coastal Zone | ○ |
| U. Airport | ● |

#### Pre-NEPA Qualitative Impact Analysis

|  | **Impact Rating** | **Comments** |
| --- | --- | --- |
| **SOCIO-ECONOMIC FACTORS** | | |
| A. General Economics | ○ | When the purchase of right-of-way is necessary, there may be property acquisition costs to DOT and a related drop in tax revenue for the local community. However, conceptual design indicates that right-of-way acquisition and relocations are not anticipated along this segment.  Expenditures would be made during construction (potential local purchase of goods and services), and there would be construction related employment opportunities. |
| B. Community and Residential | ● | The land adjacent to US 41 is partially developed and includes pockets of residential property that mainly consists of single-family homes. Many of the residences that are adjacent to WisDOT right-of-way have access from the frontage roads (Mid Valley Drive and French Road) that run along US 41. Realignment of Mid Valley Drive and French Road as proposed would require the alteration of access to residences in the northeast and northwest quadrants of the County S interchange.  No relocations or right-of-way acquisition from residential property or community facilities is anticipated. |
| C. Economic Development and Business | ● | Land east and west of US 41 is partially developed and mainly consists of agricultural land uses with some commercial or industrial property. Commercial and industrial property is located between Golden Glow Road and County S and near Creamery Road. Mid Valley Golf Course and Apple Creek Campground are located to the west of US 41 along County Line Road. It is not anticipated that expansion of US 41 in this segment would require business relocations or additional right-of-way from commercial or industrial properties however, conceptual design of the County S interchange indicates the relocation of a gas station access from County S to the realigned Mid Valley Drive. |
| D. Agriculture | ● | Agricultural land is most common land use located along US 41 in this segment. It is not anticipated that expansion of US 41 in this segment would require farm relocations however, additional right-of-way from agricultural properties will be needed for the proposed realignment of Mid Valley Drive and French Road just south of County S.. |
| E. Environmental Justice | ● | High level analysis of Census (2000) data does not indicate the presence of EJ populations near the US 41 corridor along this segment. However, analysis of aerial photography indicates that a potential mobile home park exists just north of the County U interchange, an indicator of a potential EJ population. Impacts to EJ populations should be examined and appropriate public involvement and CSD efforts should be made during future design and construction phases. |
| **NATURAL ENVIRONMENT FACTORS** | | |
| F. Wetlands | ● | Based on examination of aerial photography and WDNR mapping wetlands exist to the east and west of US 41 along many of streams that flow near this segment. Some of the wetland areas are located adjacent to WisDOT right-of-way and the streams that cross under US 41 connect to the wetlands.i Effects to the stream due to construction of potential improvements at the stream crossings should be minimized not only to protect the quality of the stream but to also protect the quality of the wetlands that it flows to.  Impacts to wetland habitat should be assessed in coordination with the WDNR and the U.S. Fish & Wildlife Service. The acquisition of designated wetland property due to mainline expansion is not anticipated along this segment. |
| G. Streams and Floodplains | ● | Five separate streams cross under US 41 between County U and Orange Lane to the north of County S including, Apple Creek, Ashwaubenon Creek, South Branch Ashwaubenon Creek, and two unnamed streams.ii The proposed realignment of French Road and Mid Valley Drive would require two new stream crossings over the Ashwaubenon Creek in the northeast and southwest quadrants of the County S interchange.  This segment of US 41 also passes through a floodplain that follows the South Branch Ashwaubenon Creek and is adjacent to WisDOT highway right-of-way.ii  Migratory bird nests may exist on bridges and fish habitat may be present in the stream. Impacts to streams, floodplains, and habitat should be assessed in coordination with the WDNR, USACE, and the U.S. Fish & Wildlife Service. |
| H. Lakes or Other Open Water | ○ | No lakes or open water exist in the immediate area.ii |
| I. Upland Habitat | ○ | Much of the land adjacent to US 41 has been developed or tilled for agriculture. However, based on analysis of aerial photography, upland habitat exists between County S and Little Rapids Road and south of Quarry Park Drive. Impacts to upland habitat are not anticipated along this segment. |
| J. Erosion Control | ○ | The majority of soils in the segment consist of Manistee loamy fine sand with 2 to 6 percent slopes (MeB), Manistee fine sandy loam with 2 to 6 percent slope (MfB), and Shawano loamy fine sand with 2 to 6 percent slopes (SfB).iii  It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control sediment and other pollutants on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These erosion control measures should be documented in the project plan. All required permits for erosion control should be acquired prior to, and implemented during construction. |
| K. Storm Water Management | ● | Storm water management will be required, and may impact the nearby stream if not properly managed. It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control storm water on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These storm water control measures should be documented in the project plan. All required permits for storm water runoff should be acquired prior to, and implemented during construction. |
| **PHYSICAL ENVIRONMENT FACTORS** | | |
| L. Air Quality | ● | The United States Environmental Protection Agency (USEPA) has identified six air pollutants of nationwide concern (criteria pollutants): CO, NO2, ozone, PM-10, sulfur oxides (SOx, measured as SO2), and lead. The National Ambient Air Quality Standards (NAAQS) are published in the Code of Federal Regulations (40 CFR 50.4 to 50.12). All states are required to submit to the USEPA a list identifying those air quality control regions or portions thereof, which meet or exceed the NAAQS or cannot be classified because of insufficient data. Portions of air quality control regions that are shown by monitored data or air quality modeling to exceed the NAAQS for any criteria pollutant are designated “nonattainment” areas for that pollutant.  Brown County is classified as in attainment for all criteria pollutants as reported by the USEPAiv and therefore a determination of transportation conformity would not be needed under the Code of Federal Regulation (40 CFR 93).v However, the project area is within an MSA and so any project that will create a 10-year projected increase in peak hour traffic over 1,200 vehicles may be subject to Air Quality Permits. |
| M. Construction Noise | ● | Construction areas closest to residential uses or other sensitive receptors would be of most concern. Residential land uses are located sporadically along US 41 throughout the segment. Many of the residences that are adjacent to WisDOT right-of-way have access from the frontage roads (Mid-Valley Drive and French Road) that run along US 41. Impacts to residences and sensitive receptors near the construction area may last throughout the construction schedule. |
| N. Traffic Noise | ● | Increases in traffic noise could occur from potential increases in traffic volumes or the decrease in proximity between vehicular traffic and sensitive receptors within the highway expansion project. Effects of nearby residents located along the US 41 frontage roads (Mid-Valley Drive and French Road) would be of most concern. A traffic noise study will be needed to assess the need for noise mitigation |
| **CULTURAL ENVIRONMENT FACTORS** | | |
| O. Section 4(f) and 6(f) | ● | Analysis of conceptual highway design indicates the potential to encroach upon South Lawrence Cemetery. Work within the cemeteries should be avoided as they are protected under Wis. Stats. 157.70 and would constitute a Section 4(f) use.  There are no identified Section 4(f) or 6(f) (LAWCON properties)vi uses along the existing US 41 mainline within this segment. |
| P. Historic Resources | ● | No national register listed sites exist in the project area.vi Initial analysis indicates the potential for eligible historic sites in the area is low, however the Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for history. |
| Q. Archaeological Resources | ● | Analysis of conceptual highway design indicates the potential to encroach upon South Lawrence Cemetery, located between US 41 and French Road. Burial sites are protected under Wis. Stats. 157.70. Conceptual design of the mainline expansion has taken the cemetery under consideration to avoid any potential work within the cemetery.  No known designated archaeological sites and no national register listed sites exist in the project area.[[14]](#endnote-14) Initial analysis indicates the potential for archaeological sites in the area is low due to previous construction, however the Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for archaeology. |
| R. Hazardous Substances or UST’s | ● | Preliminary review of the WDNR’s Bureau of Remediation and Redevelopment Tracking System (BRRTS) indicate five hazardous materials sites located on property adjacent to the US 41 highway right-of-way between County U and County S. Four of the five sites are closed and are categorized by the WDNR as a leaking underground storage tanks that resulted in soil contamination. One site remains an open environmental repair site where the incident contaminated soils with industrial chemicals and volatile organic compounds (VOC).viii  Review of EPA’s EnviroMapper shows no nearby discharges to water, superfund sites or toxic releases. There are three hazardous waste handlers located adjacent to US 41 mainline.ix Further study of hazardous materials may need to be completed. |
| S. Aesthetics | ○ | Expansion of US 41 is not expected to create any new negative aesthetic effects. Following a CSD process could be considered if the nearby residential communities are affected. |
| T. Coastal Zone | ○ | The interchange is not in a Coastal Zone County. |
| U. Airport | ● | Austin Strauble international Airport, the closest airport to the segment, is approximately 3.5 miles away from this segment of US 41. Future improvements to the mainline must follow height limitations set forth by local ordinance and coordination with WisDOT’s Bureau of Aeronautics will likely be needed. |

### WIS 441 Mainline: East of US 10 to County KK (Calumet Street)

#### Pre-NEPA Summary of Qualitative Environmental Impacts

|  | **Impact Rating** |
| --- | --- |
| **SOCIO-ECONOMIC FACTORS** | |
| A. General Economics | ● |
| B. Community and Residential | ● |
| C. Economic Development and Business | ○ |
| D. Agriculture | ○ |
| E. Environmental Justice | ● |
| **NATURAL ENVIRONMENT FACTORS** | |
| F. Wetlands | ● |
| G. Streams and Floodplains | ● |
| H. Lakes or Other Open Water | ● |
| I. Upland Habitat | ○ |
| J. Erosion Control | ● |
| K. Storm Water Management | ● |
| **PHYSICAL ENVIRONMENT FACTORS** | |
| L. Air Quality | ● |
| M. Construction Noise | ● |
| N. Traffic Noise | ● |
| **CULTURAL ENVIRONMENT FACTORS** | |
| O. Section 4(f) and 6(f) | ● |
| P. Historic Resources | ● |
| Q. Archaeological Resources | ○ |
| R. Hazardous Substances or UST’s | ○ |
| S. Aesthetics | ○ |
| T. Coastal Zone | ○ |
| U. Airport | ○ |

#### Pre-NEPA Qualitative Impact Analysis

|  | **Impact Rating** | **Comments** |
| --- | --- | --- |
| **SOCIO-ECONOMIC FACTORS** | | |
| A. General Economics | ● | When the purchase of right-of-way is necessary, there may be property acquisition costs to DOT and a related drop in tax revenue for the local community. Based on the project’s study area, residential property located to the west of Telulah Avenue falls within the area of potential effect. However, conceptual highway design indicates that the expansion of WIS 441 in this area will occur within the highway median, and therefore there will be no need to expand the roadway outward towards the residential property. For this reason, impacts to privately owned property and relocations are not anticipated.  Expenditures would be made during construction (potential local purchase of goods and services), and there would be construction related employment opportunities. |
| B. Community and Residential | ● | Land to the north and west of WIS 441 is mostly developed and consists of residential and some commercial property. Land to the south and east of WIS 441 are less developed but consist of multiple land uses such as residential, commercial, and agricultural. Identified community resources near the project’s study area include Woodland Park, Horizons Elementary School, and Rasmussen College-Appleton Campus, however direct impacts to these resources are not anticipated as they are located outside of the project’s study area.  Just west of Telulah Avenue to County KK, conceptual highway design indicates that the expansion of WIS 441 will occur within the highway median, and therefore there will be no need to expand the roadway outward towards privately owned property. For this reason, residential relocations and impacts to residential property is not anticipated. |
| C. Economic Development and Business | ○ | Commercial land use is predominately located around the County KK interchange and is mainly comprised of big box retail stores surrounded by complimentary commercial uses such as restaurants, smaller retail stores and service oriented businesses. A few other businesses are located south of WIS 441 near the intersection of Lake Park Road and Plank Road.  No relocations or right-of-way acquisition from commercial or industrial property is anticipated. |
| D. Agriculture | ○ | Agricultural land along this section is mainly located south and east of WIS 441 and mixed with commercial and residential development. Acquisition of agricultural land is not anticipated along this section of WIS 441. |
| E. Environmental Justice | ● | High level analysis of aerial imagery and Census (2000[[15]](#footnote-1)) data indicates a higher percentage of minorities living in the residential area to the north of WIS 441 and between the south WIS 441 project terminus and Lake Park Road. Impacts to EJ populations should be examined and appropriate mitigation, public involvement and CSD efforts should be considered prior to and during design and construction phases. |
| **NATURAL ENVIRONMENT FACTORS** | | |
| F. Wetlands | ● | Based on examination of aerial photography and WDNR mapping, no delineated wetlands exist within the project’s study area. One wetland located south of WIS 441 is connected to Garners Creek which flows beneath the County KK interchange.i Effects to the stream due to construction of potential improvements at the stream crossing should be minimized not only to protect the quality of the stream but to also protect the quality of the wetlands that it flows to. Special considerations will have to be made to address drainage in a way that would minimize impacts to the nearby Garners Creek.  Impacts to wetland habitat should be assessed in coordination with the WDNR and the U.S. Fish & Wildlife Service. The acquisition of delineated wetland property due to mainline expansion is not anticipated along this section. |
| G. Streams and Floodplains | ● | Garners Creek crosses under WIS 441 at the County KK interchange. The WDNR characterizes Garners Creek as an “impaired water” due to the presence of pollutants greater than criteria standards and associated quality impacts. Pollutants include Total Phosphorus and Sediment.ii Future expansion of WIS 441 will likely require the replacement of the existing box culvert structure at the stream crossings. Reconstruction of the box culverts would result in the local re-channelization or realignment of the streams. This section of WIS 441 does not fall within a floodplain.ii  Migratory bird nests may exist on bridges and fish habitat may be present in the stream. Impacts to streams, floodplains, and habitat should be assessed in coordination with the WDNR, USACE, and the U.S. Fish & Wildlife Service. |
| H. Lakes or Other Open Water | ● | No lakes or open water exist within the project’s study area. However, Garners Creek which crosses under the County KK interchange flows to an open water wetland. Effects to the stream due to construction of potential improvements at the stream crossing should be minimized not only to protect the quality of the stream but to also protect the quality of the open water pond to which it flows.ii  Impacts to open water habitat should be assessed in coordination with the WDNR and the U.S. Fish & Wildlife Service. |
| I. Upland Habitat | ○ | Aerial photography indicates the property adjacent to WIS 441 within this section is mostly developed or has been tilled for farming and that little natural upland habitat exists. A small forested area is located adjacent to WIS 441 on the north side of the right-of-way near Brentwood Court. Clearing of trees in this area is not anticipated as preliminary plans indicate expansion of WIS 441within the existing median in this area. |
| J. Erosion Control | ● | Soils in the section area mainly include Briggsville silt loam with 2 to 6 percent slopes (BtB), Cosad loamy fine sand with 0 to 3 percent slopes (CoA), Kewaunee loam with 2 to 6 percent slopes (KnB), and Manawa silt loam with 0 to 3 percent slopes (MbA).iii  It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control sediment and other pollutants on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These erosion control measures should be documented in the project plan. All required permits for erosion control should be acquired prior to, and implemented during construction. |
| K. Storm Water Management | ● | Storm water management will be required, and may impact the nearby Garners Creek if not properly managed. It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control storm water on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These storm water control measures should be documented in the project plan. All required permits for storm water runoff should be acquired prior to, and implemented during construction. |
| **PHYSICAL ENVIRONMENT FACTORS** | | |
| L. Air Quality | ● | The United States Environmental Protection Agency (USEPA) has identified six air pollutants of nationwide concern (criteria pollutants): CO, NO2, ozone, PM-10, sulfur oxides (SOx, measured as SO2), and lead. The National Ambient Air Quality Standards (NAAQS) are published in the Code of Federal Regulations (40 CFR 50.4 to 50.12). All states are required to submit to the USEPA a list identifying those air quality control regions or portions thereof, which meet or exceed the NAAQS or cannot be classified because of insufficient data. Portions of air quality control regions that are shown by monitored data or air quality modeling to exceed the NAAQS for any criteria pollutant are designated “nonattainment” areas for that pollutant.  Calumet County is classified as in attainment for all criteria pollutants as reported by the USEPAiv and therefore a determination of transportation conformity would not be needed under the Code of Federal Regulation (40 CFR 93).v However, the project area is within an MSA and so any project that will create a 10-year projected increase in peak hour traffic over 1,200 vehicles may be subject to Air Quality Permits. |
| M. Construction Noise | ● | Construction areas closest to residential uses or other sensitive receptors would be of most concern. Residential property is located adjacent to WIS 441on the north and south sides of the right-of-way and between the south WIS 441 project terminus and Lake Park Road. It should also be noted that Horizons Elementary School is located north of WIS 441 on Schaefer Circle and Rasmussen College-Appleton Campus is located just south/east of WIS 441 along County AP (Plank Road) and could be considered a sensitive receptor. |
| N. Traffic Noise | ● | Increases in traffic noise could occur from potential increases in traffic volumes or the decrease in proximity between vehicular traffic and sensitive receptors within the highway expansion project. Effects to nearby residents and potential sensitive receptors such as Horizons Elementary School and Rasmussen College-Appleton Campus would be of most concern. A traffic noise study will be needed to assess the need for noise mitigation near these properties. |
| **CULTURAL ENVIRONMENT FACTORS** | | |
| O. Section 4(f) and 6(f) | ● | A paved trail that runs parallel to Lake Park Road between Calumet Street and County AP (Plank Road) crosses under WIS 441. Reconstruction of the WIS 441 bridge may create short term construction impacts on the Section 4(f) resource and require a Section 4(f) analysis and coordination with the City of Appleton. The provided impact rating assumes that the trail connection would remain after highway improvements are complete.  There are no 6(f) (LAWCON properties)vi uses along this section of WIS 441. |
| P. Historic Resources | ● | No sites listed on the National Register of Historic Places exist in the project’s study area.vii Initial analysis indicates the potential for eligible historic sites in the area is low, however the Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for history. |
| Q. Archaeological Resources | ○ | No known archaeological sites and no national register listed sites exist in the project area.Initial analysis indicates the potential for archaeological sites in the area is low due to previous construction and lack of previous archaeological finds. |
| R. Hazardous Substances or UST’s | ○ | Preliminary review of the WDNR’s Bureau of Remediation and Redevelopment Tracking System (BRRTS) indicate no hazardous materials sites located adjacent to the WIS 441 highway right-of-way between the south WIS 441 project terminus and County KK.ix  Review of EPA’s EnviroMapper shows no discharges to water, superfund sites, toxic releases, or hazardous waste handlers located adjacent to WIS 441 mainline.x Further study to verify the lack of hazardous materials contamination will need to be completed. |
| S. Aesthetics | ○ | Expansion of WIS 441 is not expected to create any new negative aesthetic effects. Following a CSD process could be considered if the nearby residential communities are affected. |
| T. Coastal Zone | ○ | The interchange is not in a Coastal Zone County. |
| U. Airport | ○ | Outagamie County Regional Airport, the closest airport to the section, is over six miles away from this section of WIS 441. |

### WIS 441 Mainline: County KK (Calumet Street) to County CE (College Avenue)

#### Pre-NEPA Summary of Qualitative Environmental Impacts

|  | **Impact Rating** |
| --- | --- |
| **SOCIO-ECONOMIC FACTORS** | |
| A. General Economics | ● |
| B. Community and Residential | ● |
| C. Economic Development and Business | ● |
| D. Agriculture | ○ |
| E. Environmental Justice | ● |
| **NATURAL ENVIRONMENT FACTORS** | |
| F. Wetlands | ● |
| G. Streams and Floodplains | ● |
| H. Lakes or Other Open Water | ● |
| I. Upland Habitat | ○ |
| J. Erosion Control | ● |
| K. Storm Water Management | ● |
| **PHYSICAL ENVIRONMENT FACTORS** | |
| L. Air Quality | ● |
| M. Construction Noise | ● |
| N. Traffic Noise | ● |
| **CULTURAL ENVIRONMENT FACTORS** | |
| O. Section 4(f) and 6(f) | ● |
| P. Historic Resources | ● |
| Q. Archaeological Resources | ● |
| R. Hazardous Substances or UST’s | ● |
| S. Aesthetics | ○ |
| T. Coastal Zone | ○ |
| U. Airport | ○ |

#### Pre-NEPA Qualitative Impact Analysis

|  | **Impact Rating** | **Comments** |
| --- | --- | --- |
| **SOCIO-ECONOMIC FACTORS** | | |
| A. General Economics | ● | When the purchase of right-of-way is necessary, there may be property acquisition costs to DOT and a related drop in tax revenue for the local community. Based on the project’s study area, commercial property located on the east side of WIS 441 County KK and Creek View Lane falls within the study area. However, conceptual highway design indicates that the expansion of WIS 441 in this area will occur within the highway median, and therefore there will be no need to expand the roadway outward towards the commercial property. For this reason, impacts to privately owned property and relocations are not anticipated.  Expenditures would be made during construction (potential local purchase of goods and services), and there would be construction related employment opportunities. |
| B. Community and Residential | ● | Land to the east and west of WIS 441 is mostly developed and consists of commercial with some residential property. Residential property adjacent to WIS 441 is mainly located in the southwest quadrant of the County CE interchange and along Speel School Road near Creek View Lane and Heartland Court.  Conceptual highway design indicates that the expansion of WIS 441 will occur within the highway median between County KK and County CE, and therefore there will be no need to expand the roadway outward towards privately owned property. However, interchange improvements at County CE could encroach on residential land in the southwest quadrant of the interchange to accommodate for the future interchange ramp footprint and clear zones. Residential relocations are not anticipated. |
| C. Economic Development and Business | ● | Commercial land use is predominately located around the County KK and County CE interchanges and along the east side of WIS 441. Commercial development in this area is mainly comprised of big box retail stores surrounded by complimentary commercial uses such as restaurants, smaller retail stores and service oriented businesses. Some low density industrial development is also located on the east WIS 441.  Based on the project’s study area, commercial property located on the east side of WIS 441 County KK and Creek View Lane falls within the study area. However, conceptual highway design indicates that the expansion of WIS 441 in this area will occur within the highway median, and therefore there will be no need to expand the roadway outward towards the commercial property. Interchange improvements at County CE could encroach on commercial land in the southeast quadrant of the interchange to accommodate for the future interchange ramp footprint and clear zones. Business relocations are not anticipated. |
| D. Agriculture | ○ | Agricultural land is located on the west side of WIS 441, however conceptual design of the highway expansion indicates that acquisition of agricultural land is not anticipated along this section of WIS 441. |
| E. Environmental Justice | ● | High level analysis of aerial imagery and Census (2000[[16]](#footnote-2)) data indicates higher percentages of poverty and minorities living in the residential areas to the west of WIS 441. Impacts to EJ populations should be examined and appropriate mitigation, public involvement and CSD efforts should be considered prior to and during design and construction phases. |
| **NATURAL ENVIRONMENT FACTORS** | | |
| F. Wetlands | ● | Based on examination of aerial photography and WDNR mapping, one delineated wetland is located adjacent to WIS 441 right-of-way. The WDNR classifies the wetland as an emergent/wet meadow. One other wetland located south of WIS 441 is connected to Garners Creek which flows beneath the County KK interchange.i Special considerations will have to be made to address drainage in a way that would minimize impacts on nearby wetlands and streams. Effects to the Garners Creek crossing due to construction of potential improvements at the stream crossing should be minimized not only to protect the quality of the stream but to also protect the quality of the wetlands to which it flows.  Despite the proximity of wetlands to the WIS 441 right-of-way, the acquisition of delineated wetland property due to mainline expansion is not anticipated along this section as conceptual highway design indicates expansion of the highway will occur in the existing median. Impacts to wetland habitat should be assessed in coordination with the WDNR and the U.S. Fish & Wildlife Service. |
| G. Streams and Floodplains | ● | An unnamed stream and Garners Creek cross under WIS 441 between County KK and County CE. The WDNR characterizes Garners Creek as an “impaired water” due to the presence of pollutants greater than criteria standards and associated quality impacts. Pollutants include Total Phosphorus and Sediment.ii Future expansion of WIS 441 will likely require the replacement of the existing box culvert structure at the stream crossings. Reconstruction of the box culverts would result in the local re-channelization or realignment of the streams.  This section of WIS 441 is located adjacent to a floodplain that follows Garners Creek and the associated unnamed stream that crosses under WIS 441.ii  Migratory bird nests may exist on bridges and fish habitat may be present in the stream. Impacts to streams, floodplains, and habitat should be assessed in coordination with the WDNR, USACE, and the U.S. Fish & Wildlife Service. |
| H. Lakes or Other Open Water | ● | One man-made drainage pond is located on the west side of WIS 441. Additionally, Garners Creek which crosses under the County KK interchange flows to an open water wetland. Effects to the stream due to construction of potential improvements at the stream crossing should be minimized not only to protect the quality of the stream but to also protect the quality of the open water pond that it flows to.ii  Impacts to open water habitat should be assessed in coordination with the WDNR and the U.S. Fish & Wildlife Service. |
| I. Upland Habitat | ○ | Aerial photography indicates the property adjacent to WIS 441 within this section is mostly developed or has been tilled for farming and that little natural upland habitat exists. A small forested area is located adjacent to WIS 441 on the west side of the right-of-way just north of the County KK interchange. Clearing of trees in this area is not anticipated as preliminary plans indicate expansion of WIS 441within the existing median in this area. |
| J. Erosion Control | ● | Soils in the section area mainly include Briggsville silt loam with 2 to 6 percent slopes (BtB), Hebron loam with 2 to 6 percent slopes (HeB), Manawa silty clay loam with 1 to 3 percent slopes (McA), Poygan silty clay loam (Po), Winneconne silty clay loam with 0 to 2 percent slopes (WnA), Winneconne silty clay loam with 2 to 6 percent slopes (WnB).iii  It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control sediment and other pollutants on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These erosion control measures should be documented in the project plan. All required permits for erosion control should be acquired prior to, and implemented during construction. |
| K. Storm Water Management | ● | Storm water management will be required, and may impact the nearby stream if not properly managed. It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control storm water on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These storm water control measures should be documented in the project plan. All required permits for storm water runoff should be acquired prior to, and implemented during construction. |

|  |  |  |
| --- | --- | --- |
| **PHYSICAL ENVIRONMENT FACTORS** | | |
| L. Air Quality | ● | The United States Environmental Protection Agency (USEPA) has identified six air pollutants of nationwide concern (criteria pollutants): CO, NO2, ozone, PM-10, sulfur oxides (SOx, measured as SO2), and lead. The National Ambient Air Quality Standards (NAAQS) are published in the Code of Federal Regulations (40 CFR 50.4 to 50.12). All states are required to submit to the USEPA a list identifying those air quality control regions or portions thereof, which meet or exceed the NAAQS or cannot be classified because of insufficient data. Portions of air quality control regions that are shown by monitored data or air quality modeling to exceed the NAAQS for any criteria pollutant are designated “nonattainment” areas for that pollutant.  Outagamie County is classified as in attainment for all criteria pollutants as reported by the USEPAiv and therefore a determination of transportation conformity would not be needed under the Code of Federal Regulation (40 CFR 93).v However, the project area is within an MSA and so any project that will create a 10-year projected increase in peak hour traffic over 1,200 vehicles may be subject to Air Quality Permits. |
| M. Construction Noise | ● | Construction areas closest to residential uses or other sensitive receptors would be of most concern. Residential property is located adjacent to WIS 441 in the southwest quadrant of the County CE interchange and along Speel School Road near Creek View Land and Heartland Court. |
| N. Traffic Noise | ● | Increases in traffic noise could occur from potential increases in traffic volumes or the decrease in proximity between vehicular traffic and sensitive receptors within the highway expansion project. Effects to nearby residents along the entire segment would be of most concern. A traffic noise study will be needed to assess the need for noise mitigation near the residential property. |
| **CULTURAL ENVIRONMENT FACTORS** | | |
| O. Section 4(f) and 6(f) | ● | A paved trail that connects the Newberry Trail to the Konkapot Creek Trail runs parallel to County CE and crosses under WIS 441. Conceptual highway design plans indicate the trail will be maintained, but will be altered to accommodate proposed improvements to the County CE interchange and adjacent intersections at Kensington Drive and Eisenhower Drive. Construction of these proposed improvements may create short term construction impacts on the Section 4(f) resource and require a Section 4(f) analysis and coordination with Outagamie County, the City of Appleton, and the City of Kimberly. The provided impact rating assumes that the trail connection would remain after highway improvements are complete.  There are no 6(f) (LAWCON properties)vi uses along this section of WIS 441. |
| P. Historic Resources | ● | No sites listed on the National Register of Historic Places exist in the project’s study area.vii Initial analysis indicates the potential for eligible historic sites in the area is low, however the Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for history. |
| Q. Archaeological Resources | ● | An unknown historic archaeological site exists in the northwest quadrant of the County KK and WIS 441 interchange. The current status of the site is unknown and additional investigations may need to be completed.[[17]](#endnote-15) WisDOT may have more detailed records of the archaeological site related to the original construction of the interchange. An archaeological review should be completed for any work outside the established right of way or previously surveyed area.  Initial analysis indicates the potential for archaeological sites in the area due previous archaeological finds near WIS 441. The Section 106 process would be fulfilled under the screening list process. |
| R. Hazardous Substances or UST’s | ● | Preliminary review of the WDNR’s Bureau of Remediation and Redevelopment Tracking System (BRRTS) indicate one hazardous materials site located on property adjacent to the WIS 441 highway right-of-way between County KK and County CE. The one site is a closed environmental repair site where the incident contaminated soils with petroleum substances.ix  Review of EPA’s EnviroMapper shows no discharges to water, superfund sites, or toxic releases, and one hazardous waste handler located adjacent to WIS 441 mainline.x Further study of hazardous materials would need to be completed. |
| S. Aesthetics | ○ | Expansion of WIS 441 is not expected to create any new negative aesthetic effects. Following a CSD process could be considered if the nearby residential communities are affected. |
| T. Coastal Zone | ○ | The interchange is not in a Coastal Zone County. |
| U. Airport | ○ | Outagamie County Regional Airport, the closest airport to the section, is over seven miles away from this section of WIS 441. |

### WIS 441 Mainline: County CE (College Avenue) to the north Fox River bridge abutment

#### Pre-NEPA Summary of Qualitative Environmental Impacts

|  | **Impact Rating** |
| --- | --- |
| **SOCIO-ECONOMIC FACTORS** | |
| A. General Economics | ● |
| B. Community and Residential | ● |
| C. Economic Development and Business | ● |
| D. Agriculture | ○ |
| E. Environmental Justice | ● |
| **NATURAL ENVIRONMENT FACTORS** | |
| F. Wetlands | ● |
| G. Streams and Floodplains | ● |
| H. Lakes or Other Open Water | ○ |
| I. Upland Habitat | ● |
| J. Erosion Control | ● |
| K. Storm Water Management | ● |
| **PHYSICAL ENVIRONMENT FACTORS** | |
| L. Air Quality | ● |
| M. Construction Noise | ● |
| N. Traffic Noise | ● |
| **CULTURAL ENVIRONMENT FACTORS** | |
| O. Section 4(f) and 6(f) | ● |
| P. Historic Resources | ● |
| Q. Archaeological Resources | ● |
| R. Hazardous Substances or UST’s | ● |
| S. Aesthetics | ● |
| T. Coastal Zone | ○ |
| U. Airport | ○ |

#### Pre-NEPA Qualitative Impact Analysis

|  | **Impact Rating** | **Comments** |
| --- | --- | --- |
| **SOCIO-ECONOMIC FACTORS** | | |
| A. General Economics | ● | When the purchase of right-of-way is necessary, there may be property acquisition costs to DOT and a related drop in tax revenue for the local community. Conceptual highway design plans indicate the need for additional right-of-way between the County CE interchange and the north Fox River bridge abutment to accommodate the proposed expansion of WIS 441 in this area. Acquisition of privately owned property and residential relocations are anticipated.  Expenditures would be made during construction (potential local purchase of goods and services), and there would be construction related employment opportunities. |
| B. Community and Residential | ● | Land to the east and west of WIS 441 is mostly developed and consists of commercial, light industrial and residential property. Residential property adjacent to WIS 441 is primarily located east and west of WIS 441 between W. 4th Street and WIS 96. Appleton Church of Christ is the only identified community resource adjacent to the project’s study area.  Conceptual design of the proposed WIS 441 expansion through this area suggests a design that would likely require the acquisition of 52 residences. Strip acquisition of property from three other residential properties would also be needed to accommodate the future highway footprint and clear zones. Added infrastructure improvements such as retaining walls could be used to minimize impacts to residential property and should be considered in later stages of design.  The removal of houses on either side of WIS 441 will also have an impact on the neighborhoods located adjacent to the highway. Removing the homes will create new views of a major highway that were not previously there for homes that are located on the west side of N. Bay Ridge Road and on the east side of N. Wellhouse Drive. These types of impacts could be mitigated with the construction of walls or other improvements that would block views to the highway. It is recommended that the local public within the impacted neighborhoods be involved in the development of solutions to mitigate the impacts on the neighborhood.  Additionally, the Canadian National Railway bridge over WIS 441 just south of W. 4th Street will have to be reconstructed and lengthened to span across the proposed highway width. Any potential shifts in the railroad alignment that would require additional right-of-way as a result of the bridge reconstruction could impact residences to the north of the railroad.  In the event of having to acquire residential property, WisDOT will have to adhere to the residential relocation process described in Sec. 32.185 – 32.27 of the Wisconsin Statutes. |
| C. Economic Development and Business | ● | Commercial and industrial land use is predominately located around the County CE interchange. Commercial development in this area ranges from big box retail stores, to private offices with surrounding restaurants and smaller retail stores and service oriented businesses. Industrial business in the area is generally low to medium density and is mixed in with commercial land uses.  Conceptual highway design indicates that the expansion of WIS 441 in this area may require the acquisition of commercial and industrial land. Interchange improvements at County CE could encroach on commercial land in the northeast quadrant of the interchange to accommodate for the future interchange ramp footprint and clear zones.  Additionally, the Canadian National Railway bridge over WIS 441 just south of W. 4th Street will have to be reconstructed to span across the proposed highway footprint. Any potential shifts in the railroad alignment that would require additional right-of-way as a result of the bridge reconstruction could impact businesses to the south of the railroad.  Business relocations are not anticipated. |
| D. Agriculture | ○ | No agricultural land is located adjacent to US 41 along this segment. No agricultural impacts are anticipated. |
| E. Environmental Justice | ● | High level analysis of aerial imagery and Census (2000[[18]](#footnote-3)) data indicates higher percentages of minorities living in the residential areas to the west of WIS 441.  Additionally, the potential reconstruction of the Canadian National Railway bridge over WIS 441may impact residences to the north of the railroad depending on whether any potential alignment shifts would require acquisition of right of way. High level analysis of the physical characteristics of the properties that could be affected suggests the presence of EJ populations.  Impacts to EJ populations should be examined and appropriate mitigation, public involvement and CSD efforts should be considered prior to and during design and construction phases. |

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| **NATURAL ENVIRONMENT FACTORS** | | |
| F. Wetlands | ● | Based on examination of aerial photography and WDNR mapping, one delineated wetland is located in the northwest quadrant of the County CE interchange. The WDNR classifies the wetland as a forested wetland.i Analysis of aerial imagery indicates that this wetland may have degraded over time as development has encroached and much of the forested area that used to exist in this area has been removed.  Conceptual design of the proposed reconfiguration of the County CE interchange indicates a potential impact to the identified wetland. It is likely that impacts to the wetland could be minimized if not avoided with alterations to the ramp design or the inclusion of improvements that can minimize the interchange footprint, such as retaining walls. Special considerations will have to be made to address drainage in a way that would minimize impacts on nearby wetlands and streams. Impacts to wetland habitat should be assessed in coordination with the WDNR and the U.S. Fish & Wildlife Service. |
| G. Streams and Floodplains | ● | The Fox River crosses under WIS 441 between County CE and the north Fox River bridge abutment.ii Conceptual highway design indicates that the bridge across the Fox River will have to be expanded to accommodate six lanes. A Section 404 permit will be required for any work done within the Fox River. Preliminary analysis of the bridge design concludes that the navigable channel within the Fox River will not be impacted by the bridge expansion.  Migratory bird nests may exist on bridges and fish habitat may be present in the bridge. Impacts to streams, floodplains, and habitat should be assessed in coordination with the WDNR, USACE, and the U.S. Fish & Wildlife Service.  This section of WIS 441 does not fall within a floodplain.ii |
| H. Lakes or Other Open Water | ○ | No lakes or open water resources exist within this section of WIS 441, therefore no impacts to these resources are anticipated. |
| I. Upland Habitat | ● | Aerial photography indicates the property adjacent to WIS 441 within this section is mostly developed or has been tilled for farming and that little natural upland habitat exists. A small forested area is located adjacent to WIS 441 on the north bank of the Fox River. Impacts to the forested area are likely due to the expansion of the bridge across the Fox River. |
| J. Erosion Control | ● | Soils in the section area mainly include Bellevue silt loam (Bc), Briggsville silt loam with 2 to 6 percent slopes (BtB), Kaukauna silty clay loam with 0 to 3 percent slopes (KaA), Kewaunee soils with 20 to 45 percent slopes (KkE3), Manawa silty clay loam with 1 to 3 percent slopes (McA), Udorthents (Uo), Winneconne silty clay loam with 0 to 2 percent slopes (WnA), Winneconne silty clay loam with 2 to 6 percent slopes (WnB).iii  It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control sediment and other pollutants on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These erosion control measures should be documented in the project plan. All required permits for erosion control should be acquired prior to, and implemented during construction. |
| K. Storm Water Management | ● | Storm water management will be required, and may impact the nearby stream if not properly managed. It is anticipated that WisDOT will comply with the DOT/DNR Cooperative Agreement, specifically the Memorandum of Understanding on Erosion Control and Storm Water Management. WisDOT should implement its policies on how to control storm water on the construction site and coordinate with the DNR when environmentally sensitive areas are present. These storm water control measures should be documented in the project plan. All required permits for storm water runoff should be acquired prior to, and implemented during construction. |
| **PHYSICAL ENVIRONMENT FACTORS** | | |
| L. Air Quality | ● | The United States Environmental Protection Agency (USEPA) has identified six air pollutants of nationwide concern (criteria pollutants): CO, NO2, ozone, PM-10, sulfur oxides (SOx, measured as SO2), and lead. The National Ambient Air Quality Standards (NAAQS) are published in the Code of Federal Regulations (40 CFR 50.4 to 50.12). All states are required to submit to the USEPA a list identifying those air quality control regions or portions thereof, which meet or exceed the NAAQS or cannot be classified because of insufficient data. Portions of air quality control regions that are shown by monitored data or air quality modeling to exceed the NAAQS for any criteria pollutant are designated “nonattainment” areas for that pollutant.  Outagamie County is classified as in attainment for all criteria pollutants as reported by the USEPAiv and therefore a determination of transportation conformity would not be needed under the Code of Federal Regulation (40 CFR 93).v However, the project area is within an MSA and so any project that will create a 10-year projected increase in peak hour traffic over 1,200 vehicles may be subject to Air Quality Permits. |
| M. Construction Noise | ● | Construction areas closest to residential uses or other sensitive receptors would be of most concern. Residential property is located adjacent to WIS 441on the east and west sides of the right-of-way and between W. 4th Street and WIS 96. It should also be noted that Appleton Church of Christ is located west of WIS 441 along Newberry Street and could be considered a sensitive receptor. |
| N. Traffic Noise | ● | Increases in traffic noise could occur from potential increases in traffic volumes or the decrease in proximity between vehicular traffic and sensitive receptors within the highway expansion project. Effects to nearby residents and potential sensitive receptors such as Appleton Church of Christ would be of most concern. A traffic noise study will be needed to assess the need for noise mitigation near these properties. |
| **CULTURAL ENVIRONMENT FACTORS** | | |
| O. Section 4(f) and 6(f) | ● | The multipurpose CE Trail that connects the Newberry Trail in Appleton to the Konkapot Creek Trail in Kaukauna runs parallel to County CE crosses under WIS 441. Conceptual highway design plans indicate the trail will be maintained, but will be altered to accommodate proposed improvements to the County CE interchange and adjacent intersections at Kensington Drive and Eisenhower Drive. Construction of these proposed improvements may create short term construction impacts on the Section 4(f) resource and require a Section 4(f) analysis and coordination with Outagamie County. The provided impact rating assumes that the trail connection would remain after highway improvements are complete. The project may also present an opportunity to enhance trail access in the area.  There are currently no 6(f) (LAWCON properties)vi uses along this section of WIS 441. |
| P. Historic Resources | ● | No sites listed on the National Register of Historic Places exist in the project’s study area.vii Initial analysis indicates the potential for eligible historic sites in the area is low, however the homes located adjacent to WIS 441 in this area are believed to be approaching 50 years in age and may need to be surveyed for eligibility for the National Register of Historic Places. The Section 106 process will have to be completed unless it is eligible for WisDOT’s screening list for history. |
| Q. Archaeological Resources | ● | A prehistoric village site exists on the north bank of the Fox River and is adjacently located to WIS 441 on the east and west sides. The current status of the site is unknown.[[19]](#endnote-16) WisDOT may have more detailed records of the archaeological site related to the original construction of WIS 441. An archaeological review should be completed for any work outside the established right of way or previously surveyed area.  Initial analysis indicates the potential for archaeological sites in the area due previous archaeological finds near WIS 441. The Section 106 process would be fulfilled under the screening list process. |
| R. Hazardous Substances or UST’s | ● | Preliminary review of the WDNR’s Bureau of Remediation and Redevelopment Tracking System (BRRTS) indicate two hazardous materials sites located on property adjacent to the WIS 441 highway right-of-way between County CE and the north Fox River bridge abutment. Both sites are closed leaking underground storage tank sites that resulted in contaminated soils.ix  Review of EPA’s EnviroMapper shows no discharges to water, superfund sites, or toxic releases, and four hazardous waste handler located adjacent to WIS 441 mainline.x Further study of hazardous materials would need to be completed. |
| S. Aesthetics | ● | Expanding the bridge over the Fox River and the removal of homes along WIS 441 between 4th Street and WIS 96 would alter the built environment significantly. The proposed project would directly impact those who would have a view of the bridge from their homes along the Fox River. Additionally, removing homes that are currently adjacent to WIS 441 will create new views of a major highway for homes that are located on the on the west side of N. Bay Ridge Road and on the east side of N. Wellhouse Drive. It is recommended that a CSD process be implemented that includes participation from the local public within the impacted neighborhoods to develop solutions to mitigate the impacts on the neighborhood. |
| T. Coastal Zone | ○ | The interchange is not in a Coastal Zone County. |
| U. Airport | ○ | Outagamie County Regional Airport, the closest airport to the section, is over seven miles away from this section of WIS 441. |

1. Wisconsin Department of Natural Resources. Surface Water Data Viewer – Wetlands & Wetland Indicators. http://dnrmaps.wi.gov/imf/imf.jsp?site=SurfaceWaterViewer.wetlands, Accessed October 22, 2012, August 30, 2013. [↑](#endnote-ref-1)
2. Wisconsin Department of Natural Resources. Surface Water Data Viewer. http://dnrmaps.wi.gov/imf/imf.jsp?site=SurfaceWaterViewer, Accessed October 22, 2012, August 30, 2013. [↑](#endnote-ref-2)
3. United State Department of Agriculture Natural Resources Conservation Service. Web Soil Survey/National Cooperative Soil Survey. February 17, 2012. http://websoilsurvey.nrcs.usda.gov/app/, Accessed October 22, 2012, August 30, 2013. [↑](#endnote-ref-3)
4. United States Environmental Protection Agency, *Green Book: Nonattainment Status for Each County by Year for Wisconsin.* March 30, 2012. http://www.epa.gov/oaqps001/greenbk/anay\_wi.html, Accessed July 10, 2012, August 30, 2013. [↑](#endnote-ref-4)
5. Code of Federal Regulations, *Title 40: Protection of Environment, Part 93.126 – Determining Conformity of Federal Actions to State or Federal Implementation Plans; Exempt Projects.* [↑](#endnote-ref-5)
6. National Park Service, State Land and Water Conservation Fund. www.nps.gov/ncrc/programs/lwcf/history.html. Accessed October 22, 2012, August 30,2013. [↑](#endnote-ref-6)
7. National Park Service, National Register of Historic Places. National Register of Historic Places Database. http://nrhp.focus.nps.gov/natreghome.do?searchtype=natreghome. Accessed October 23, 2012, August 30, 2013. [↑](#endnote-ref-7)
8. Wisconsin Historical Society, Division of Historic Preservation. Wisconsin Historic Preservation Database, ASI# 22341. May 20, 2008. [↑](#endnote-ref-8)
9. Wisconsin Department of Natural Resources. Bureau for Remediation and Redevelopment Tracking System (BRRTS) on the Web. July 6, 2012. http://dnr.wi.gov/topic/brownfields/botw.html, Accessed October 23, 2012, August 30, 2013. [↑](#endnote-ref-9)
10. United States Environmental Protection Agency. EnviroMapper for Envirofacts. http://www.epa.gov/emefdata/em4ef.home, Accessed October 23, 2012, August 30, 2013. [↑](#endnote-ref-10)
11. Penman, John T., State Historical Society of Wisconsin. *Archaeological Survey of U.S. Highway 41, Eastern Wisconsin*. January, 1978. [↑](#endnote-ref-11)
12. Wisconsin Historical Society, Division of Historic Preservation. Wisconsin Historic Preservation Database, ASI # 59385. Accessed May 20, 2008. [↑](#endnote-ref-12)
13. Wisconsin Historical Society, Division of Historic Preservation. Wisconsin Historic Preservation Database, ASI # 4156. Accessed February 4, 2009. [↑](#endnote-ref-13)
14. Wisconsin Historical Society, Division of Historic Preservation. Wisconsin Historic Preservation Database. Accessed October 20, 2012. [↑](#endnote-ref-14)
15. Year 2000 Census data was used to stay consistent with the analysis along the US 41 corridor and reported in this appendix. The US 41 analysis was completed prior to the release of relevant 2010 Environmental Justice data at the Census block group level. [↑](#footnote-ref-1)
16. Year 2000 Census data was used to stay consistent with the analysis along the US 41 corridor and reported in this appendix. The US 41 analysis was completed prior to the release of relevant 2010 Environmental Justice data at the Census block group level. [↑](#footnote-ref-2)
17. Wisconsin Historical Society, Division of Historic Preservation. Wisconsin Historic Preservation Database, ASI # 4184. Accessed May 20, 2008. [↑](#endnote-ref-15)
18. Year 2000 Census data was used to stay consistent with the analysis along the US 41 corridor and reported in this appendix. The US 41 analysis was completed prior to the release of relevant 2010 Environmental Justice data at the Census block group level. [↑](#footnote-ref-3)
19. Wisconsin Historical Society, Division of Historic Preservation. Wisconsin Historic Preservation Database, ASI # 4171. Accessed May 20, 2008. [↑](#endnote-ref-16)