APPENDIX U

Corridor Sustainability and Context Sensitive Solutions Technical Report

Prepared For:
Illinois Department of Transportation
Indiana Department of Transportation

Prepared By:
Parsons Brinckerhoff

August 2014
# Table of Contents

1.0 OVERVIEW .................................................................................................................. 1

2.0 CORRIDOR CONTEXT ................................................................................................... 4
   2.1 I-55 east to IL-53 ........................................................................................................ 5
   2.2 IL-53 east to Wilton Center Road ............................................................................... 7
   2.3 Wilton Center Road east to State Line ....................................................................... 8
   2.4 State Line east to I-65 .............................................................................................. 9

3.0 CORRIDOR THEME ....................................................................................................... 11
   3.1 Landscape .................................................................................................................. 12
   3.2 Bridge Structures ...................................................................................................... 13

4.0 FUNCTIONAL COMPONENTS ..................................................................................... 14
   4.1 Alignment .................................................................................................................. 14
   4.2 Earthwork .................................................................................................................. 15
   4.3 Drainage ...................................................................................................................... 15
   4.4 Vegetation .................................................................................................................. 15
   4.5 Lighting ...................................................................................................................... 16
   4.6 Bicycle and Pedestrian Connections ......................................................................... 17
   4.7 Wayfinding ................................................................................................................ 19

5.0 MITIGATION STRATEGIES ....................................................................................... 20
   5.1 Landscape Buffers ...................................................................................................... 20
   5.2 Reforestation ............................................................................................................. 22
   5.3 Stormwater Quality Facilities .................................................................................... 22
   5.4 Wildlife Under-Crossings .......................................................................................... 23

6.0 CORRIDOR ENHANCEMENTS .................................................................................... 24
   6.1 Bridge Aesthetics ....................................................................................................... 25
   6.2 Gateway Signage ....................................................................................................... 27
   6.3 Gateway Landscape .................................................................................................. 29
   6.4 Feature Plantings ...................................................................................................... 30
   6.5 Public Art and Sculpture ............................................................................................ 31

7.0 SUSTAINABILITY AND CONTEXT SENSITIVE SOLUTIONS PLAN .................. 32
REFERENCES

List of Appendices

APPENDIX A  CONTEXT SENSITIVE SOLUTIONS PLANS
APPENDIX B  PLANT LISTS

List of Figures

Figure 2-1.  View looking west at the Illiana Corridor crossing of the Kankakee River .... 5
Figure 2-2.  View east of the alignment route to IL-53 (far left side)................................. 6
Figure 2-3.  View east on North River Road toward IL-53 (Illiana Corridor along right portion of image)................................................................. 6
Figure 2-4.  Commonwealth Edison distribution network parallel to south edge of Illiana Corridor (residential development beyond) ......................... 7
Figure 2-5.  View northeast of Illiana Corridor toward Old Chicago Road .................... 8
Figure 2-6.  Open views of agricultural landscape southeast along the Illiana Corridor at 104th Avenue .............................................................. 8
Figure 2-7.  View east from Wilton Center toward 128th Avenue.  Broad, open, seasonal views and vistas ................................................................. 9
Figure 2-8.  View northeast from Drecksler Road with Wauponsee Glacial Trail windrow and ComEd power distribution network at horizon .................. 9
Figure 2-9.  View east from Holtz Road illustrates more hilly and glacial landforms .... 10
Figure 2-10.  View east along 165th Avenue; exurban developments are common in this area ....................................................................................... 10
Figure 2-11.  View east from Mississippi Street to future I-65 interchange location; woodlots are prevalent in this portion of the corridor as seen along the horizon .................................................................................. 11
Figure 3-1.  Native Tallgrass prairie and occasional wooded view edge ...................... 12
Figure 3-2.  Native Tallgrass Prairie and Tree Massing ................................................. 13
Figure 3-3.  Native Wildflowers ................................................................. 13
Figure 4-1.  Meandering planted drainage swale .......................................................... 15
Figure 4-2.  Example of Road Name Sign on Overpass ........................................... 19
Figure 5-1.  View Edge Buffer between Diverging Ramps ........................................ 21
Figure 5-2.  Basic Wildlife Under-Crossing Example .............................................. 23
Figure 5-3.  Tight Box Culvert with High Water Crossing Ledge ............................ 23
Figure 6-1.  Architectural Column Forms, Fencing and Precast Concrete Sign Panel provide Ornamentation ......................................................... 26
Figure 6-2.  1950s Style Rail Exterior on Modern Crash Rated Bridge Rail ............. 26
Figure 6-3.  IL-53/Alternate Route 66 Bridge and Wall Concept ............................... 27
Figure 6-4.  Glacial stone texture applied to bridge barrier is compatible with the natural prairie and woodland surroundings ................................ 27
Figure 6-5. Themed/Corridor Decorative Gateway Sign Examples........................................... 29
Figure 6-6. Supplemental Guidance Sign Example ...................................................................... 29
Figure 6-7. Naturalized Massing of Shrubs and Tallgrass Prairie.............................................. 30
Figure 6-8. Bison Herd on the Prairie Sculpture Example......................................................... 31
Figure 6-9. Butterfly Wings on the Prairie Sculpture Example..................................................... 32
Figure 6-10. Coneflower Stem on the Prairie Sculpture Example .............................................. 32
Figure 7-1. Quality View of Rolling Hills and Woodland along Corridor................................. 33

**List of Tables**

Table 4-1. Overpasses for Wide Shoulder Bicycle Facilities Consideration ......................... 18
1.0 Overview

This Corridor Sustainability and Context Sensitive Solutions (CSS) Technical Report is a companion to the Sustainable Opportunity Areas Technical Memorandum. Each report contains components of the complete CSS approach for the Illiana Corridor project.

The Sustainable Opportunity Areas Technical Memorandum covers:

- The general qualities of ground-plane storm drainage facilities design,
- General approach for groundcover, wetland and woodland repair, replacement and enhancements, and
- Locations of recommended BMP features and wildlife crossings on associated plan sheets (Christopher B. Burke Engineering, Ltd., 2014).

This CSS Technical Report:

- Identifies the primary sustainable design goals,
- Lists the CSS criteria,
- Proposes additional design mitigations and enhancements, and
- Identifies locations of recommended CSS mitigations and enhancements on 18 associated plan sheets. Refer to Section 7.0

The policy framework to provide Sustainable and CSS is found in the governing policies and design procedures for both the Illinois Department of Transportation (IDOT) and the Indiana Department of Transportation (INDOT). In the State of Illinois Statute 605 ILCS 5/4-219 Context Sensitivity, the Illinois General Assembly intends to ensure that highway projects “meet the State’s transportation needs, exist in harmony with their surroundings and add lasting value to the communities they serve.” The design process is to include “early and ongoing collaboration with affected citizens, elected officials, interest groups, and other stakeholders to ensure that the values and needs of the affected communities are identified and carefully considered in the development of transportation projects.” Further, the CSS process and design “shall promote the exploration of innovative solutions, commensurate with the scope of each project that can effectively balance safety, mobility, community and environmental objectives in a manner that will enhance the relationship of the transportation facility with its setting” (State of Illinois General Assembly-a, 2013).

Similarly, INDOT has a written policy “to incorporate Context Sensitive Solutions (CSS) into the planning, development, construction and maintenance process for improvement to the state jurisdictional transportation system.” The Indiana Procedural Manual for Preparing Environmental Documents 2008, (Indiana, 2008), includes section II.B.3.f Context Sensitive Solutions, which highlights that CSS seeks to benefit the community by:
• Incorporating feedback from the locals affected by the proposed project;
• Encouraging collaboration between neighborhoods and local, state and federal officials;
• Enhancing roadway and transit communities;
• Considering bicycle and pedestrian access needs;
• Assisting the development of strategies for smart growth; and
• Encouraging assessments and design of alternatives consistent with local needs.

While the CSS process works to identify both broad and detailed impacts of a project and proposes appropriate mitigation and enhancements, the process must also accomplish the prime goal of the project and be sustainable over the long term.

Sustainable design in the design-build environment seeks to balance environmental, functional and financial needs and impacts. All can be accomplished through thoughtful and efficient design that seeks to do no harm, minimize its footprint and strives to incorporate dynamic functional solutions. Ideal sustainable design solutions should accomplish their intended function, be aesthetically pleasing, endure and improve over time, and reduce future costs and impacts. The plan for the Illiana Corridor alignment achieves a high degree of sustainability through a highly vetted and calculated recommended alignment.

IDOT and INDOT have made a commitment during the development of the Tier One Environmental Impact Statement (EIS) to utilize the Federal Highway Administration’s (FHWA) Infrastructure Voluntary Evaluation Sustainability Tool (INVEST). This tool facilitates the development and tracking of sustainability measures throughout a project’s life, including overall planning, project development, and operations and maintenance. In the Tier Two EIS, the INVEST “Project Development” module was updated with the most applicable items for incorporation of sustainable measures. A project is measured for “triple bottom line” Social, Environmental, and Economic accomplishments with the INVEST scorecard; for example, the Rural Extended Project Development module lists 25 weighted items on which the project can score. A “Platinum” rating is achieved when 60 percent or more of the possible sustainability rating points are achieved. More information on FHWA’s INVEST tool is available at the website https://www.sustainablehighways.org.

To the greatest extent possible, Illiana Corridor B3 (Corridor) avoids clustered residential properties, wetland and woodland environments, and closely follows existing topography. This design approach keeps residential areas and sensitive environmental areas intact, avoiding costly mitigation. As a balance for the environment, stream course, wetland, and wildlife crossing locations are bridged by the alignment to keep their function and qualities intact and to reduce impacts of construction and cost of mitigation.
The Illiana Corridor planning and design team of landscape architects, civil engineers and environmental engineer/planning specialists have collaborated to create a functional and sustainable corridor plan. The plan proposes to use the highway alignment, grading, right-of-way storm drainage flow, and native grass and wetland plant species to create areas of micro-riparian habitat. This vegetative stormwater conveyance will benefit wildlife and also filter, absorb, and cleanse stormwater prior to its release back to the adjacent natural water courses.

Among the unavoidable consequences of any new highway corridor project is the permanent intrusion of the highway corridor through residential areas and native plant and animal habitats. The goal of CSS is to incorporate highway infrastructure into the surrounding landscape and environment, blending them together functionally and through various mitigations and enhancements. The CSS research and analysis process identifies the primary impacts and proposes appropriate mitigation and enhancement design to preserve, restore, and enhance the historic environmental systems, physical connections, and scenic qualities along the highway corridor. Recommended mitigations and enhancements within the Corridor right-of-way include habitat restoration and expansion, and screening and buffering views of the highway infrastructure from residential areas and at wildlife crossing locations.

One unintentional and undesirable consequence of new highway corridor construction is the introduction of advertising billboards on private property along the corridor. Billboards are not part of the current context of the corridor and are not considered to be a benefit to the health, safety, or welfare of the public or the aesthetics, environment, wildlife, or overall driving experience of the new Illiana Corridor. A new section of highway brings new opportunities for outdoor advertising companies to pay private landowners for the privilege to locate billboard structures on their property, as allowed by State DOT's, municipalities, and their zoning ordinances. After billboard approvals are given, the billboard management companies work to clear plant material that could potentially grow to block views of their billboards, which reduces the diversity of the landscape, the quantity and quality of landscape scenic beauty, shade, and wildlife habitat.

Lighted billboards can contribute to pollution of the night sky, can reduce the quality of animal habitats, and reduce the quantity of wildlife habitat areas that only function with long periods of evening darkness. Other negative impacts of billboards include blocking of desirable views of the landscape context; causing distracted driving due to billboard size, text and graphic image subject matter, message, colors, and composition; being obstacles to bird and bat flight paths; poor views of un-maintained billboard structures; causing driver aggravation of having to view dated information and non-applicable advertising messages. It is recommended that, along with IDOT and INDOT enforcing their outdoor sign polices, the surrounding counties and municipalities consider restricting billboards from any zoning districts within 3,000 feet of the Illiana Corridor.

The CSS process involved field surveys, inventories and analysis from design team landscape architects, environmental engineers, planners and civil engineers. In
addition, through public outreach efforts, the concerns of affected landowners and residents from the immediate surrounding communities have also been documented.

The context of the Corridor includes those that live and work along the recommended corridor and those that use and travel throughout the Corridor on a daily basis. Permanent impacts to existing vehicular routes, residential areas and native plant and animal communities are inevitable with any new highway expansion project. The highway construction process and duration creates a heightened level of stress and disruption for the adjacent human, plant and animal populations. People can be affected by the visual construction activity and associated noise, dust, construction vehicle traffic, temporary lane closures and permanent road closures. While people are generally able to adapt more quickly to changed conditions compared to the plant and animal communities, the latter often rely heavily on design mitigations and enhancements in their recovery.

Plant communities can be altered by construction excavations, compaction and removal of tree canopy that suddenly exposes shade plant communities to more sun than can be tolerated. Excavation and sun exposure can promote the growth of invasive, noxious, and exotic weed seed species that can spread and displace desirable native plant and grass communities.

Terrestrial animals, birds, and insects typically leave the construction area immediately and may not return until adequate vegetative mass is available for habitat, cover, and food. Their return could take years or may not happen at all. Depending on the habitat size, amount of disruption, and duration of disruption, a mass wildlife migration from one location to another could cause territorial fighting, stress, and ripple effect of further migrations from one adjacent habitat to the next.

The Corridor crosses many north-south natural wildlife corridors primarily associated with stream channels and wooded swales. The recommended roadway alignment bridges over these sensitive areas to reduce disturbance and restore their function more quickly after the construction process. Mitigation and habitat enhancements are recommended to help guide wildlife to and through the crossing points to reduce animal-vehicle collisions.

### 2.0 Corridor Context

Context for the purposes of the Illiana Corridor project is defined as the qualities and influences of the immediate and surrounding visual, physical, functional, built, natural, and social environments. The goal of the context analysis was to incorporate the functional Illiana Corridor ribbon of highway and its associated interchanges and structures into the surrounding landscape. Analysis of Corridor B3 included many observation hours of driving roads parallel to the alignment as well as their cross streets, noting and photographing existing conditions, along with a review of aerial photography. Discussions with affected property owners, state and local environmental and engineering staffs, and interested local stakeholders provided the design team with
a solid understanding of existing conditions, impacts of the recommended corridor alignment, acceptable mitigations, and ideas for enhancements.

Corridor context features are important as they provide designers cues for research needs, mitigation needs, and functional design and enhancement opportunities. Through analysis of the recommended Corridor, four distinct context condition areas were observed. These conditions are based on prominent context features such as tree cover, land-use, and physical topography differences. The boundaries, general characteristics, and context considerations of the four areas are provided in the subsequent narrative and illustrated subsections.

### 2.1 I-55 east to IL-53

Heading east from the interchange with I-55, the Kankakee River is a striking feature with broad floodplain and heavily wooded eastern bluff. A wooded residential area continues east to IL-53 where the view opens up to farmland and the Midewin National Tallgrass Prairie to the north. Along the south edge of the Corridor is a primary electric transmission network of towers with multiple levels of overhead wires, and to the south is a densely developed residential lake community. See Figure 2-1 through Figure 2-4.

![Figure 2-1. View looking west at the Illiana Corridor crossing of the Kankakee River](image-url)
Figure 2-2. View east of the alignment route to IL-53 (far left side)

Figure 2-3. View east on North River Road toward IL-53 (Illiana Corridor along right portion of image)
2.2 **IL-53 east to Wilton Center Road**

IL-53 is an alternate Route 66 historic highway, two lanes running north-south where it crosses the proposed Illiana Corridor and widening to four lanes at South Arsenal Road north of the crossing. East of IL-53, the Corridor has open farm field and inconsistent tree/shrub windrow landscape with gentle rolling glacial landforms. Broad views and vistas to and from the Corridor are possible. The area contains extensive agricultural land use with pockets of exurban developments occurring along the Corridor. See Figure 2-5 and Figure 2-6.

*Figure 2-4. Commonwealth Edison distribution network parallel to south edge of Illiana Corridor (residential development beyond)*
Figure 2-5. View northeast of Illiana Corridor toward Old Chicago Road

Figure 2-6. Open views of agricultural landscape southeast along the Illiana Corridor at 104th Avenue

2.3 Wilton Center Road east to State Line

Moving east, the open landscape with gentle rolling glacial landforms continues. Sparse and irregular placement of residential and farmstead properties surrounded by significant stretches of farmland are prevalent. Broad views and vistas are possible to
and from the corridor. Masses of dense vegetation limit off-corridor views at some locations. See Figure 2-7 and Figure 2-8.

Figure 2-7. View east from Wilton Center toward 128th Avenue. Broad, open, seasonal views and vistas

Figure 2-8. View northeast from Drecksler Road with Wauponsee Glacial Trail windrow and ComEd power distribution network at horizon

2.4 State Line east to I-65

This section of the Corridor is characterized by less agricultural cropland development compared to the west end of the Corridor. Larger areas of remnant woodlands exist on rolling hillsides, steeper sloped areas and along riparian corridors. Visible wetland areas and streams are prevalent. The communities of Cedar Lake and Lake Dalecarlia
are nestled around lakes and woodland north of the alignment. The Town of Lowell is located south of the alignment. See Figure 2-9 through Figure 2-11.

Figure 2-9. View east from Holtz Road illustrates more hilly and glacial landforms

Figure 2-10. View east along 165th Avenue; exurban developments are common in this area
Figure 2-11. View east from Mississippi Street to future I-65 interchange location; woodlots are prevalent in this portion of the corridor as seen along the horizon

3.0 Corridor Theme

The recommended theme for the Illiana Corridor Sustainability and CSS design is “Growing Together”. The Illiana Corridor was created because of the long-standing and growing demand from various stakeholders in the area to allow and enhance community development and the growth of fiscal and transportation resources in this portion of Illinois and Indiana. The motto “Partnering for Progress” describes the efforts of the landowners, community stakeholders, local officials, State and Federal officials, and various agencies to develop the concept and design of the overall Corridor. Growing Together is the desired next step after construction of the Illiana Corridor.

Growing Together speaks to the new roadway connections provided by the Corridor, both north-south and east-west, as well as potential new commercial and residential development growth that may happen along the convenient roadway connections. Growing Together also describes the vegetative and other environmental systems to be restored, supplemented, and created along the Corridor and its numerous north-south connecting roads.

The landscape plan envisions a strong, interwoven tapestry of native grass and tree mass ribbons growing parallel to the east-west Illiana Corridor highway and along its north-south cross-connecting roads. The ribbon metaphor is used for the Illiana Corridor highway and its recommended linear right-of-way to be planted as a tallgrass prairie since the Corridor project strengthens the physical traffic connections between Illinois and Indiana and their two main north-south highway corridors of I-55 and I-65.
Similarly, the prairie ribbon that will parallel the Illiana Corridor strengthens the native plant and wildlife habitat connections.

The north-south road connections that existed before the Illiana Corridor are the common paved fabric; they are the employment, commerce exchange, and services life lines for a number of communities and will be complemented with the addition of interchange connections to the Illiana Corridor and elevated bridge sections that overpass the Illiana Corridor. It is recommended that these north-south connectors are identified by name and celebrated for their historic function and service with signage, aesthetic enhancements to their bridge structures, and through naturalized landscape feature plantings.

The concept of the prairie ribbon stems from the historic tallgrass prairie that once covered the area, the grasses along field and woodland edges and from the influence of the massive Midewin National Tallgrass Prairie on the west end of the corridor that seeks to restore a portion of that heritage. Within that context, the CSS plan proposes to extend a tallgrass prairie groundcover throughout the Illiana Corridor (Figure 3-1). The recommended prairie grasses and wildflowers are native to the area and are beneficial to the environment and to the function of the project. Native grasses and wildflowers provide an important source of food, cover and habitat for indigenous species and create a permanent groundcover that has seasonal interest. Their use is essential to the project for soil erosion protection, for stormwater quantity and quality control and, once established, they create a durable groundcover that requires little future or ongoing maintenance.

![Figure 3-1. Native Tallgrass prairie and occasional wooded view edge](image)

### 3.1 Landscape

Native Illinois and Indiana grasses and forbs are recommended as the primary groundcover within the Corridor right-of-way. They will create a continuous ribbon of
interesting prairie forms, textures and colors connecting the wooded areas along the Kankakee River and the Midewin National Tallgrass Prairie in Illinois to the woodlands at the interchange of I-65 in Indiana. North-south crossing roads are recommended to be highlighted with naturalized masses of native plants that provide vertical accent and framed views of overpass bridge structures, while accentuating the north-south axis of the crossing road. The featured plantings would consist of a combination of native trees, shrubs, grasses, and wildflowers (Figure 3-2 and Figure 3-3).

![Figure 3-2. Native Tallgrass Prairie and Tree Massing](image)

![Figure 3-3. Native Wildflowers](image)

### 3.2 Bridge Structures

The bridge structures that connect residents and communities along the Illiana Corridor are recommended to include subtle architectural design treatments on bridge and abutment components. The treatments would generally be formed or cast into concrete rails, abutments, piers or bents, and further enhance by a surface applied color coating. The ultimate aesthetic theme, appearance, and details will need to be developed in collaboration with the community residents. It is envisioned that all bridged structures would have a similar appearance with one possible exception being the bridge over IL-53 (Alternate Route 66). IL-53 is on the National Register of Historic Places and historic treatments of the overhead crossing were discussed with the Illinois State Historic Preservation Office (SHPO) as part of the National Environmental Policy Act (NEPA) coordination for this crossing.

Traditionally, in more urban core settings, the bridge, abutment, and wall structures take on very strong characteristics of prominent, memorable, adjacent architecture to
add context and harmonize the bridge into the immediate surrounding urban fabric. Communities along the Corridor are generally located a half mile away from the alignment, so any architectural context that is recommended to be applied to the bridge aesthetic design will likely strengthen as development and streetscape amenities expand along the connecting roads toward the Corridor. In these instances, the treatment of the bridge surfaces as viewed from the cross street user may be reflective of community context, while the treatment of bridge surfaces and elements as viewed from the Illiana Corridor may tend to reflect the corridor theme. Refer to Section 6.1 Bridge Aesthetics for further description of recommended enhancements for new bridge and wall structures along the Corridor.

The new interchange and overpass bridge structures that will connect adjacent communities to the Illiana Corridor are, in context, now part of the gateway and entrance sequence to those communities. It is recommended that they convey a unique visual quality that represents each town or community through architectural appearance, landscape, and signage identification. An architectural opportunity to promote the identities of adjacent communities in bridge and wall structures may exist in common elements of the main street architecture of Wilmington, Peotone, Beecher, and Lowell. It is recommended that this opportunity be studied by the communities in developing a common architectural treatment and color scheme for the bridge structures of the Illiana Corridor.

Roadway entrance identity to the cities from the Corridor can be further strengthened and formalized by each community by providing naturalized native landscape massing and directional signage at exit ramps.

4.0 Functional Components

Functional design components of the Illiana Corridor project satisfy a myriad of client, user and community purposes and needs as discussed in the Tier One EIS and Tier Two DEIS documents prepared for the Illiana Corridor (Tier One EIS, January 2013) (Tier Two DEIS, January 2014). These functional design components must be installed to accomplish the minimum objectives and requirements of the Corridor project. Sustainable and CSS are included as objectives and requirements of the corridor design. The recommended functional components of the alignment as they relate to Sustainability and CSS are described in the subsequent subsections.

4.1 Alignment

Corridor B3 was selected, in part, to minimize impacts to wetlands, woodlands, residential properties, and planned future land use developments, while accomplishing the primary transportation improvement objectives. The CSS plan proposes that the alignment infrastructure improvements gently touch the land and appear integrated into the landscape. The corridor should be designed to hug the topography as close as possible and to minimize drastic cut and fill slopes. The alignment should highlight and frame views of unique visual aspects of the corridor, such as topography, land forms,
vegetation and hydrologic systems. It is recommended that broad expansive views from the travel lanes will be buffered with vegetation in order maintain driver focus on the road ahead and the immediate surrounding landscape. The right-of-way landscape should be developed to the extent that the highway infrastructure is not the dominant element in the view-shed, except at specific locations such as elevated cross streets, interchange ramps and lane merges.

4.2 Earthwork

The existing landscape is characterized by glaciated topography exhibiting broad rolling hills. It is recommended that to the greatest extent possible, the grading within the corridor right-of-way mimic the natural environment and create interesting and functional habitat areas, limiting unnaturally abrupt and steep slopes. It is recommended that side-slopes from elevated cross streets over the Illiana Corridor and at all ramps be stretched out and gently undulate or terrace to replicate natural landforms.

4.3 Drainage

In coordination with the proposed grading and functional design requirements, the drainage system has been designed to effectively convey proposed roadway runoff through shallow planted swales that connect to stormwater quality ponds. The planted swales should include meanders and have cross-sections, soils and plant material that work to reduce drainage velocity, promote absorption, infiltration, and establish riparian habitat (Figure 4-1). It is recommended that any stormwater ponds have a natural shape and cross section at the perimeter to promote vegetation establishment.

4.4 Vegetation

Trees, shrubs, plants and flowers are allowed to be planted within the rights-of-way in Illinois, via permit, according to State Statute 605 ILCS 5/9-118 (State of Illinois General...
Further, the Illinois Statute 605 ILCS 5/4-201.15 (State of Illinois General Assembly-c, 2013) includes the directives; “provide for the preservation of the natural beauty of areas through which State highways are constructed” and “in cooperation with the Department of Natural Resources, to provide for the forestation or reforestation of any of these areas that are Department-controlled lands, where appropriate.” The selected Corridor alignment will pass through or adjacent to farmland, grassland, woodland, riparian, and wetland areas that are recommended to be preserved and mitigated through the use of native trees and plant material.

The following recommendations have been made with regards to proposed vegetation within the Illiana Corridor and its right-of-way:

- Establishment of a native tallgrass prairie and wildflower community is recommended as the primary revegetation method for the corridor.
- To achieve the vegetative recommendations, the native plant species mix of the prairie plant community would vary to cover the wet, dry, sloped, sun, and shaded conditions that will exist along the corridor.
- Native canopy and understory trees and shrubs would be added to the Corridor to achieve reforestation of wooded areas disturbed by construction and to link adjacent wooded wildlife habitat.
- Similarly, native trees and shrubs added to the Corridor would buffer views between the Corridor and residential properties to provide a safety buffer between terminated residential roads and the Illiana Corridor right-of-way.
- It is recommended that a combination of live plants, whips, and cuttings be installed within drainage channels, wetland areas, and around the perimeter of streams and ponds in order to provide immediate stabilization. The remaining groundcover would be seeded with appropriate annual cover crop.

Refer to the proposed plant lists in Appendix B for the primary native plant mix for groundcover, as well as a list of shrub and tree species for buffer locations (Appendix B, Tables B-1 to B-4), (United States, et al., 1996).

### 4.5 Lighting

The goals of the recommended lighting scheme for the Corridor are to follow federal and state highway lighting standards for safety, to limit light spill off the roadway and up into the sky, and to consider using light-emitting diode (LED) and solar technologies when it makes sense aesthetically and financially. Lighting should generally be limited to that required by highway safety standards in an effort to reduce light glare and intrusion into residential areas and wildlife habitat areas; an analysis of applicable IDOT and INDOT standards indicates that continuous roadway lighting is not warranted, and that lighting will be restricted primarily to interchanges and toll collection locations. To further reduce the need for lighting, the use of reflective lettering and graphics should be considered in the fabrication of all signage features.
It is recommended to limit high-mast poles (80 feet and taller) to the vicinity of the I-55/Lorenzo Road, I-55/IL-129, I-57 and I-65 interchanges. Standard mast arm lighting is anticipated at the remaining local road interchanges and at toll plazas. Directional lighting is proposed in the environmentally sensitive areas from I-55 to Symerton Road in proximity to the Des Plaines Fish and Wildlife Conservation Area, and the Midewin National Tallgrass Prairie (Parsons Brinckerhoff, 2014). In these areas, poles around the perimeter roads and ramps will be located to better focus the lighting on the roadway and reduce light spill out into the vegetative habitat areas. Recommended lighting fixtures would be contemporary and sculptural in nature, and would be painted black in order to highlight them as sculptural vertical elements and visually pleasing contrasting elements within the surrounding Prairie Ribbon landscape.

4.6 Bicycle and Pedestrian Connections

Preservation of bicycle and pedestrian connection opportunities across the Illiana Corridor is a key CSS functional component. It is recommended that the bridge overpasses be sized to accommodate a four-foot wide, minimum, shoulder on both sides to accommodate safe pedestrian and bicycle movements across the Illiana Corridor. Higher use bridge overpasses should have wider shoulders. The surrounding cities would be responsible for completing the connections as sidewalks or mixed use paths to their communities as desired.

The Illinois General Assembly provides for bicycle and pedestrian ways in Statute 605 ILCS 5/ Illinois Highway Code, Section 4-220 Bicycle and Pedestrian Ways. This statute states that, “(a) Bicycle and pedestrian ways shall be given full consideration in the planning and development of transportation facilities, including the incorporation of such ways into State plans and programs. (b) In or within one mile of an urban area, bicycle and pedestrian ways shall be established in conjunction with the construction, reconstruction, or other change of any State transportation facility except: (1) in pavement resurfacing projects that do not widen the existing traveled way or do not provide stabilized shoulders; or (2) where approved by the Secretary of Transportation based upon documented safety issues, excessive cost or absence of need. (c) Bicycle and pedestrian ways may be included in pavement resurfacing projects when local support is evident or bicycling and walking accommodations can be added within the overall scope of the original work” (State of Illinois General Assembly-d, 2013).

Chapter 17 of the Illinois Bureau of Design and Environment Manual defines the need assessment and design parameters for Bicycle and Pedestrian Accommodations. Section 17-1.03 Bikeway Warrants – Needs Assessment identifies the following situations that qualify the north-south roads that cross the Illiana Corridor for consideration of bridge widening for bicycle and pedestrian facilities (Bureau, February 2013):

- These north-south roads provide primary access to nearby town and community destinations, and
- These north-south roads provide a unique access across the Illiana Corridor highway.
Each road that overpasses the Illiana Corridor satisfies the unique access warrant and should be provided a four-foot wide minimum shoulder on each side of the bridge. A few of these overpasses serve larger communities and may warrant wider shoulders. The complete shoulder width review also considers road type, speed limit, and vehicle and bicycle average daily traffic counts to determine the shoulder width design. The majority of north-south roads across the Illiana Corridor are classified as rural roads with less than 2,000 trips per day. However, there are a number of roads more highly used that will require further study in order to determine whether their bicycle facility shoulder width should be four feet, six feet, or eight feet wide.

The road crossings recommended for further review are listed in the table below, along with their key connections or destinations that can draw bicycle or pedestrian traffic across the Illiana Corridor (Table 4-1).

**Table 4-1. Overpasses for Wide Shoulder Bicycle Facilities Consideration**

<table>
<thead>
<tr>
<th>Bridged Overpass Road</th>
<th>Connections or Destinations Served</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riley Road (Illinois)</td>
<td>Potential interchange for the City of Wilmington (population 5,735), Midewin National Tallgrass Prairie preserve, future Peotone Road bicycle trail to IL-53</td>
</tr>
<tr>
<td>Old Chicago Road (Illinois)</td>
<td>Creates a reasonable bike loop for Wilmington (pop. 5,735) and Symerton (pop. 87) via future Peotone Road bicycle trail to IL-53, Wauponsee Glacial Trail and W. Arsenal Road shared roadway</td>
</tr>
<tr>
<td>Parrish Avenue (Indiana)</td>
<td>Connects Cedar Lake (pop. 11,564) and Lake Dalecarlia (1,355) north of the Illiana Corridor, with the Lowell community (9,279) south of the Illiana Corridor</td>
</tr>
<tr>
<td>Cline Avenue (Indiana)</td>
<td>See Parrish Avenue above</td>
</tr>
<tr>
<td>Holtz Road (Indiana)</td>
<td>See Parrish Avenue above</td>
</tr>
</tbody>
</table>

The analysis and stakeholder input to date has not identified that a high level of demand currently exists for extending bicycle or pedestrian facilities along all of the north-south connecting roads over the Illiana Corridor. However, the future value of the north-south road connections to the residents and communities along the Illiana Corridor will be enhanced if they are designed to accommodate future bicycle and pedestrian traffic safely. It is reasonable to expect that bicycle and pedestrian travel needs will grow in the area and the new bridges over the Illiana Corridor should be built to accommodate this future need.

In addition, a majority of the current Tier Two footprint includes potential space accommodation for a linear multi-use trail. There are some discontinuities in the space accommodation, particularly in the Indiana portion, and west of IL-53. A sponsoring agency, such as Forest Preserve District of Will County or Lake County Parks, could further develop the linear corridor in each state, with the understanding that it may be
more economical to go off-route in certain locations where adequate space inside the Illiana Corridor footprint is not available.

4.7 Wayfinding

Once constructed, the Illiana Corridor and its interchanges will become part of the community context through providing connections and gateways to communities north and south of its right-of-way. In order to strengthen these connections, it is recommended that the Illiana Corridor highlight the existence of the surrounding towns and the roads that serve them through standard highway signs announcing their exits, directional signage at the end of exit ramps, and road name panels attached to bridge structures.

Many of the existing north-south road connections between communities will be elevated over the Illiana Corridor. These roads are well known and traveled by the community and have been their life-lines. It is recommended that these valued connecting roads be highlighted and identified with signage on the overpasses. The signs would be decorative metal highway panel signs mounted to the new overpass bridge structures (Figure 4-2).

![Figure 4-2. Example of Road Name Sign on Overpass](image)

An upgrade to the exit ramp directional signage is recommended under enhancements in Section 6.2 Gateway Signage. The traditional directional signage would be upgraded
Design mitigations are recommended to repair damages and impacts that are caused by the construction of the Illiana Corridor. Many of the impacts on habitat and the environment were discussed in the overview section of this report. There are other situations that have to be mitigated for quality of life, quality of the driving experience and safety issues. These other situations are recommended to be mitigated using landscape buffers, various stormwater quality facilities and through development of wildlife under-crossing locations. A corridor mitigation plan for Sustainability and CSS is provided in Appendix A and further described in Section 7.0 to show the location of landscape buffers and wildlife buffers, as well as corridor enhancement features. Stormwater quality mitigation plans are provided in the BMP Opportunity Areas Technical Report (Christopher B. Burke Engineering, Ltd., 2014).

5.1 Landscape Buffers

While the Illiana Corridor alignment avoids residential properties and woodlands to a great extent, there are a few locations where the Illiana Corridor right-of-way would benefit from visual buffer mitigation. These locations are:

- Areas where the alignment passes residential property within a few hundred feet;
- Areas where the alignment passes residential property within a thousand feet;
- Where a north-south residential road will dead-end at the Illiana Corridor right-of-way; and
- Where the corridor will pass through either a woodland or wide open near-flat farmland.

It is recommended that landscape buffers in the form of a mix of native large canopy trees, understory trees and large shrubs be added to the right-of-way to provide the various buffer mitigations.

The recommended landscape buffers described in this section are recommended to be between 100 feet and 200 feet wide (where practical) and between 200 feet and 1,000 feet long. The buffers are further recommended to be a mix of planted trees between one half-inch caliper and two-inch caliper, shrubs at three gallon to 15 gallon, shrub whips, and groundcover tallgrass prairie and wildflower seeds mixed with tree nuts and shrub seeds. Trees, shrubs and whips would be planted between 10-foot and 40-foot on center spacing. One of the recommended buffers below, the wildlife buffer, has a very different buffer function and is recommended to be planted much denser with an on-center plant and tree spacing of eight-feet to 20-feet.
The recommended locations of the landscape buffers are shown on the 18 Sustainability and CSS plan sheets provided in Appendix A and described in Section 7.0 of this report. While the buffers are similar in their components, they are recommended to perform a number of specific and diverse functions. A discussion of the landscape buffers and their intended functions are described in the subsequent paragraphs.

**Residential Buffers** are recommended to be placed between residential properties and the Illiana Corridor to buffer views and reduce highway sound, glare and light trespass. The buffers serve to protect property values and the residential quality of life along the corridor. The tree buffer would be used for residential properties within the 1,000 foot clear view influence of the Illiana Corridor. Residential buffers vary between 100-feet and 200-feet wide and extend at least twice the width of the residential lot or lots that they are to buffer.

**View Edge Buffers** are recommended where the corridor alignment will focus on or pass though long stretches of wide open near-flat farmland that have only a hint of trees at the horizon line, one or two miles away. The flat, open, monotonous views contribute to heightened driver fatigue, which is a safety concern for designers. View edge buffers will create visual interest close to the road, but not enough to distract drivers. The tree and shrub masses will actually serve to frame and focus the driver on the road ahead. Along the Illiana Corridor, view edge buffers combine with north-south bridge overpasses, farm hedgerows, near and distant natural woodland, wetland areas and interchanges to create visual interest, visual progress markers and milestones along the corridor (Figure 5-1). The CSS design works to ensure that structures, vegetation or a framed view of interest exists at maximum half-mile interval. These elements work to keep drivers stimulated and, more alert and able to focus the road ahead, while making the drive more pleasurable, memorable and likely safer. View edge buffers are generally between 100 feet and 200 feet wide and between 200 to 2,000 feet long.

![Figure 5-1. View Edge Buffer between Diverging Ramps](image)
**Safety Buffers** are needed where former north-south residential roads are terminated in cul-de-sacs or hammer head dead-ends at the Illiana Corridor right-of-way line. The planted buffers provide a physical barrier to keep residential road drivers from crossing onto the highway and also prevent headlight glare from alarming or disorienting drivers.

**Wildlife Buffers** are recommended to include a combination of dense wooded cover, desirable food source plants and shrub mass cover in order to draw deer and other animals to the wildlife under-crossing locations. Native desirable food and hiding/bedding plant masses are recommended to be added to the typical buffer planting mix to encourage animals to relax and notice the comfortable path under the roadway with views of more food and favored habitat on the other side of each wildlife under-crossing. Refer to Tables B-5 to B-7 in Appendix B for the recommended deer diet plant list.

Wildlife buffers are recommended to be denser than other landscape buffers in order to provide desirable habitat. Wildlife buffers should extend between 200 feet and 400 feet in length, east and west, from the top of stream bank on each side of the under-crossing. The wildlife buffer width is recommended to extend to the north-south right-of-way limits. The short combined 400-foot to 800-foot long buffer length along the highway is intentional in order to focus the desirable vegetative habitat north and south along the stream at wildlife crossings and not provide desirable dense wooded habitat parallel to the highway that could lead deer and animals to cross the highway away from the under-crossing.

### 5.2 Reforestation

Existing wooded areas that are removed or disturbed by construction are recommended to be reforested and supplemented within the Corridor right-of-way. The plant material should match what existed previously, while introducing other native plant material that will increase diversity and be beneficial to that plant community.

### 5.3 Stormwater Quality Facilities

The east-west oriented Corridor cuts across a landform that generally drains from north to south and could trap some drainage flow along the Corridor. It is recommended that this intercepted natural surface flow, along with drainage from the Illiana Corridor pavement, be collected and directed to existing streams through naturalized channels. The naturalized channels would be graded as meandering planted swales that narrow and widen through undulating topography. These forms would create diverse micro-riparian habitat areas where drainage can be absorbed by the surrounding landscape and filtered before being released into the adjacent streams. These swales are one of a number of stormwater quality features recommended along the corridor. The complete drainage system recommendations are indicated on the master drainage opportunity area plans provided in the BMP Opportunity Areas Technical Report (Christopher B. Burke Engineering, Ltd., 2014).
5.4 Wildlife Under-Crossings

This section is supplemental to the wildlife corridor analysis for the Tier Two Illiana Corridor EIS (Huff & Huff, Inc., 2014). The wildlife corridor analysis provides specific details of the location and habitat qualities of existing potential wildlife corridors that are recommended to be preserved and enhanced. Mitigation options are also provided along with specific design standard requirements for bridged crossings, culvert crossings and wildlife crossings along the Kankakee River (Figure 5-2 and Figure 5-3). This report describes the CSS considerations for animal crossings, expounds on the development of vegetated wildlife buffers at the wildlife crossing locations and provides a recommended plant schedule designed to attract deer to the crossing locations.

Wildlife along the Illiana Corridor is likely to be affected most by the new roadway. North-south wildlife travel routes will be impacted and the wildlife will seek the most comfortable places to cross. The safest crossing points are where new Illiana Corridor bridges cross stream courses, drainage channels, or wetlands. The CSS plan works to:

- Provide an adequate quantity and consistent spacing of potential wildlife crossing locations, approximately one crossing every mile along the corridor and including features to draw wildlife to the crossing points; and
- Avoid creating a dense woodland cover elsewhere in the right-of-way that might draw wildlife away from safe under-crossing locations.

Natural stream courses, drainage channels and wetland areas are plentiful with 32 bridged locations across the 46 miles of the Illiana Corridor and are fairly evenly spaced. The recommended alignment will bridge over existing stream courses and drainage channels to keep them fairly undisturbed and familiar to wildlife after construction.
Mitigation required to create the wildlife crossings involves heavy tree, shrub and groundcover planting. Refer to the wildlife buffer description in Section 5.1 above.

White-tailed deer is the largest animal that will be using the wildlife under-crossings and can cause the greatest damage to vehicles and human fatalities if hit while crossing over the Illiana Corridor. It is recommended that wildlife buffer plantings at wildlife under-crossing locations be properly designed to attract and accommodate deer in order to encourage use of the under-crossings. Favorite food sources and vegetative cover are key elements for attracting and accommodating deer. See the deer diet plant list tables in Appendix B for recommended favorite browse and forb plants for the wildlife buffer plantings (Tables B-5 to B-7). (Billingsley, E. 2006), (MacGowan, B., Osborne, D., 2004), (Robertson, K., 2008).

6.0 Corridor Enhancements

Corridor enhancements are recommended aesthetic treatments that are included beyond the standard design to create a corridor-wide theme which is compatible with and supportive of the community context in which the corridor is to be developed. The recommended enhancements are tempered with knowledge of the functional and budgetary directives and FHWA/DOT standing policy regarding non-standard objects being placed in highway right-of-way. Additionally, a few of the enhancements will only be possible to achieve through agreements with local agencies to participate in the initial cost (construction) and the ongoing maintenance of these enhancements.

Bridges and their associated abutment walls, retaining walls and noise walls will be prominent features of the Illiana Corridor landscape. Standard DOT bridge and wall construction details do not generally respond to the specific architectural, historical, or natural context in which the structures are constructed. The Illiana Corridor provides a unique opportunity for design of these facilities to respond to the surrounding context of the land and local communities. The design of the structures can support both the corridor theme as viewed by the Illiana Corridor main lane travelers and to the local community context as viewed by the cross street traveler. These contextual influences can be recognized through intentional non-structural enhancements to surface finishes, textures and color providing a distinct appearance to these elements in the corridor. A CSS design recommendation for the Corridor is to develop a corridor-wide aesthetic plan for bridge and wall structures in order to integrate them into their surroundings and also be compatible with the historical significance of the IL-53/Alternate Route 66 corridor that the Illiana Corridor crosses.

From an historic perspective, unique, oversized and unexpected architecture, art, and sculpture helped define and popularize historic Route 66. The art or sculpture was typically close to the Route 66 right-of-way to attract travelers to lodging, dining and other commercial enterprises. These larger than life elements became the essence of the travel experience along Route 66 for many decades. In a similar spirit, the addition of sculpture is recommended for the Illiana Corridor, especially in proximity to the
IL-53/Alternate Route 66 overpass and nearest interchange as a way to highlight the point of access to this historic route.

Sculptural enhancements would be more dramatic and have a stronger relationship to the Illiana Corridor if they were a part of the interchange experience and located in the off-ramp infields. These areas tend to be large, the adjacent traffic speeds are low, traffic is directed away from these areas, and adequate space exists outside the safety zone to accommodate such enhancements. Placement of aesthetic elements of this nature would require a change in policy to allow structures to be built in the right-of-way, within the low-speed circular access ramp infields, between and before the full-speed merging on-ramps, and/or at the intersections of low-speed exit ramp right-of-way and north-south local cross-roads. The recommended enhancement components are detailed in the subsequent Section 6.5.

### 6.1 Bridge Aesthetics

As mentioned previously, bridge structures and their associated abutments and retaining walls will be prominent features of the Corridor and standard DOT structure detailing places little emphasis on surface finishes related to the context in which they are located. For this reason, it is recommended that an aesthetic plan for bridge and wall architectural enhancements be developed to create a cohesive corridor aesthetic which is compatible with its context. This plan should consider the corridor theme, landscape, topography, geology, land uses and character of the communities adjacent to the corridor. This plan should be developed with participation and input from the affected corridor communities.

The goals of the aesthetic plan are:

- To define a corridor architectural style, forms, materials, textures, colors, and ornamentation for prototypical structure types and conditions.
- Through the application of design and aesthetic treatments visually integrate the new corridor structures into the surrounding landscape.
- To heighten the compatibilities, convey the local context, express community character and create opportunities for community identity.
- The aesthetics plan would provide specific design detailing and specifications concerning, but not limited to, span configuration, pier/bent details, and architectural details, texture, and color and coatings/sealers for parapet, fencing, sub-structure piers, abutments, and painted steel surfaces (Figure 6-1).
Due to the historic designation of IL-53 in the National Register of Historic Places, it is appropriate that specific architectural design and landscape conditions be placed on the design and construction of Illiana Corridor facilities proximate to the location of this historic route. Potential structural aesthetic features have been previously discussed with the SHPO as part of the NEPA process.

It is recommended that all new facilities constructed proximate to the IL-53 corridor be designed to support the historic character of IL-53. The predominant historic period for the area was the 1940s-50’s, when IL-53 was a prominent commercial transit corridor for the region as well as part of the greater Midwest to West Coast cross country transportation route. During this period, Art Deco style was a prominent influence in design of the bridges and many commercial establishments within the corridor.

Contextually, it is recommended that the surface finishes of the new Illiana Corridor Bridge over IL-53/Alternate Route 66 be influenced by the Art Deco style. This would be achieved through non-structural surface embellishments to the exterior of modern crash rated bridge rails and barriers. (Figure 6-2). Similarly the wing walls, abutments and adjacent retaining walls would also reflect the Art Deco style.
visually reduce the mass of the structure. Landscape will be provided on slopes above and in front of the walls to further integrate the bridge into the surrounding landscape, to screen views of the Illiana Corridor highway, and to highlight the historic route and minimize the mass of the highway.

![Figure 6-3. IL-53/Alternate Route 66 Bridge and Wall Concept](image)

Bridge forms, textures and colors at Riley Road, Old Chicago Road, Symerton Road, and beyond are recommended to reflect the native tallgrass prairie and natural landscape. Stone texture would be prominent, but graphic representation of the prairie or landscape could also be incorporated (Figure 6-4). Simple architectural forms, material composition and colors of new bridges throughout the corridor are proposed to have a timeless yet memorable appearance.

![Figure 6-4. Glacial stone texture applied to bridge barrier is compatible with the natural prairie and woodland surroundings](image)

### 6.2 Gateway Signage

Standard green highway signs will provide the primary directional information along the corridor. In addition, it is recommended that free-standing decorative gateway signs be installed at the east and west entry onto the Illiana Corridor and at exit ramp connections with north-south cross-roads that provide access to the surrounding communities.
Illiana Corridor gateway signs would be located at the ramp merges onto the Illiana Corridor from I-55 on the west end and I-65 on the east end. These signs should be two-sided, designed to highlight the Corridor with a logo and text, plus a welcoming statement for those entering the Illiana Corridor. On the back side that faces the ramps exiting the Illiana Corridor, a second sign panel would be provided for those leaving the Illiana Corridor that includes an existing statement such as “Come back soon”, “Enjoy the rest of your day”, “Drive safely”, “Illinois/Indiana welcomes you”, “Explore Illinois/Indiana”, etc.

City and town gateway signs would be located at interchanges along the Corridor, across from off-ramp intersections with north-south crossing roads. These gateway signs would announce the name or names of the towns, cities and other key destinations that are nearby and include a directional arrow with miles to the destination. In the case of an exit ramp with multiple destinations to the north and south, two signs may be appropriate. The local community gateway signage system could be another element supportive of the overall corridor aesthetic plan. The sign system would be comprised of common elements while the sign panels would be reserved for custom local community identity and messaging, such as welcome messages, community slogans, and logos.

Recommended locations of the gateway signs are provided on the Sustainability and CSS plan sheets in Section 7.0.

The gateway signs would be modified highway signs on painted breakaway poles with common color scheme and custom decorative silkscreened graphics (Figure 6-5). Cities would participate in the development of the corridor design style and messaging/content and funding of the custom signage for their community. Decorative native landscaping would be arranged around the signs to complete the gateway feature.
In addition to gateway signage, supplemental guidance signs are recommended for key tourism, historical and cultural locations that can be immediately accessed from the Illiana Corridor. The City of Wilmington, IL-53/Alternate Route 66, and the Midewin National Tallgrass Prairie, are examples of locations that should be identified with supplemental guidance signs. The signs would be standard IDOT and INDOT form and fabrication, placed in advance of the appropriate corresponding highway exit (Figure 6-6). Sign placement should maximize traveler benefit, yet be coordinated with the local community gateway signs so as to not cause signage clutter at the gateway interchanges.

![Figure 6-5. Themed/Corridor Decorative Gateway Sign Examples](image)

6.3 Gateway Landscape

In addition to the functional landscape design described above, gateway landscape features that are used to celebrate and define the highway entry-exit experience. They aid motorists in wayfinding in that they confirm entry, exit, and identify place with
further directional information. Gateways can be simple or extravagant, but they are important as they give a first impression of the quality and character of the sponsoring town, city or district.

Gateways typically consist of a combination of landscape plant material, signage and iconic structures. Many DOT entities do not allow iconic structures within the right-of-way, but simple decorative metal signage in combination with landscape plant material, are adequate to accomplish a proper gateway experience.

It is recommended that a combination of decorative signage and landscape plant material be used to create gateways to announce entrance onto the Illiana Corridor and entrance access to towns, cities and destinations north and south of the Illiana Corridor.

Recommended signage content and placement is discussed in Section 6.1 above. The recommended landscape includes a naturalized massing of native flowering and evergreen shrubs around the base of the signs along with a hierarchy massing of small flowering trees and large canopy shade trees to the sides and as background, where appropriate (Figure 6-7). At the access ramps to the Illiana Corridor, the landscape planting would be provided on each side of the access ramps to provide symmetry, interesting vertical massing, shade, plus view and glare buffering to enhance the pass-through gateway effect.

![Figure 6-7. Naturalized Massing of Shrubs and Tallgrass Prairie](image)

Off-corridor landscape enhancements should be considered by towns and communities along community access roads that connect to the Illiana Corridor. Recommended components to consider include ornamental landscape beds, hedges, architectural column gateway structures, sign walls, decorative fencing, decorative streetscape lighting, decorative paving at primary intersections, sidewalks or multi-use trails and double-row street tree plantings.

### 6.4 Feature Plantings

Identifying and highlighting the north-south roads that provide access to/from the surrounding communities is a strong way to physically and emotionally connect the
Illiana Corridor into the region. The identifying and highlighting is recommended to be accomplished through signage and architectural bridge treatments that were discussed earlier, as well as through feature plantings.

The recommended feature plantings are naturalized masses of native grasses, wildflowers, shrubs and trees that provide a base and framing around gateway signs, frame views of the north-south crossing road overpasses, accent entrance and exit of interchange facilities and also parallel and accent the north-south axis of connecting roads. The locations of recommended feature plantings are shown on the Sustainability and CSS plans provided in Section 1.6 below.

6.5 Public Art and Sculpture

Community pride and character can be expressed along the Illiana Corridor with large scale public art and sculpture. The artwork can become an identifying icon for the corridor and can further strengthen the corridor theme. It is recommended that public art and sculpture be considered for installation immediately outside of the Illiana Corridor right-of-way. The artwork should support the corridor theme of Celebrating Connections across the Prairie Ribbon. Communities that desire to place sculpture outside of the Illiana Corridor right-of-way will need to coordinate with land owners and project sponsors prior to developing the artwork. Possible landscape scale sculpture ideas for a prairie theme are provided below (Figure 6-8 through Figure 6-10).

![Figure 6-8. Bison Herd on the Prairie Sculpture Example](image)

Twice life-size Bison sculptures of reinforced concrete or metal construction to provide synergy with the future Midewin National Tallgrass Prairie bison herd.
Butterfly wing sculptures 15 feet to 25 feet tall of steel frame construction with colorful infill on wings, internally lighted.

Coneflower stem sculptures 15 feet to 30 feet tall with butterflies and bees. Steel frame construction with steel and fabric wings, internally lighted.

7.0 Sustainability and Context Sensitive Solutions Plan

Corridor mitigation and enhancements are identified and located on the Sustainability and CSS Plans (pages 1 through 18), located in Appendix A. Reference the CSS text above regarding landscape buffers, wildlife crossings, gateways, and feature plantings for description of those plan items. Quality views are subjective, but are defined by the designers as views of a composition of objects, vegetative forms and masses within the landscape or on the horizon line that are visually dramatic, interesting, balanced, or
framed. Quality views within the Illiana Corridor contained rolling farm fields with masses of tall trees in the landscape or on the horizon, farmsteads with tall silos and trees, streams with associated vegetation, and river bluffs (Figure 7-1). Quality views were identified during the driving tours of the corridor and were considered when placing buffers that would screen or frame the views.

Figure 7-1. Quality View of Rolling Hills and Woodland along Corridor
References


The Indiana Procedural Manual for Preparing Environmental Documents, Section II.B.3.f Context Sensitive Solutions, Indiana Department of Transportation (Bloomington, IN: Indiana Department of Transportation, 2008).

Tier One EIS - Illiana Corridor Study, (Chicago, IL: Parsons Brinckerhoff, January 2013).

Tier Two DEIS - Illiana Corridor Study, (Chicago, IL: Parsons Brinckerhoff, January 2014).


Billingsley, E., “White-tailed Deer Food Plot Considerations,” brochure (Jackson County, IL: University of Illinois Extension, 2006).

MacGowan, B., Osborne, D., “Food Plots for White-Tailed Deer, FNR-194,” brochure (West Lafayette, IN: Purdue University Forestry and Natural Resources and Purdue University Cooperative Extension Service, 2004).


Appendix A

Sustainability and Context Sensitive Solutions Plans
Appendix A  Sustainability and Context Sensitive Solutions Plans

The attached Sustainability and CSS Plans (pages 1 through 18) are provided to show the locations of the recommended improvements that are described in the text sections above. Refer to Sections 5.1, 5.3, and 7.0 for further description of the plan information.
Appendix B

Plant Lists
Section 4.4 Vegetation describes the functional landscape planting for the Corridor. The following plant lists are recommended as the primary native groundcover, plus shrub and tree species plant mix for buffer locations (Table B-1 through Table B-4), (United States, et al., 1996), (Robertson, K., 2008).

Table B-1. Primary Groundcover Grasses

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Botanical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Bluestem</td>
<td>Andropogon gerardii</td>
</tr>
<tr>
<td>Indian Grass</td>
<td>Sorghastrum nutans</td>
</tr>
<tr>
<td>Little Bluestem</td>
<td>Andropogon scoparius</td>
</tr>
<tr>
<td>Prairie Cord Grass</td>
<td>Spartina pectinata</td>
</tr>
<tr>
<td>Prairie Dropseed</td>
<td>Sporobolus heterolepis</td>
</tr>
<tr>
<td>Switch Grass</td>
<td>Panicum virgatum</td>
</tr>
<tr>
<td>Canada Wild Rye</td>
<td>Elymus canadensis</td>
</tr>
<tr>
<td>Porcupine Grass</td>
<td>Stipa spartea</td>
</tr>
<tr>
<td>Side-Oats Grama</td>
<td>Bouteloua curtipendula</td>
</tr>
<tr>
<td>Tufted Hair Grass</td>
<td>Deschampsia caespitosa</td>
</tr>
</tbody>
</table>

Table B-2. Primary Groundcover Wildflowers

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Botanical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blackeyed Susan</td>
<td>Rudbeckia hirta</td>
</tr>
<tr>
<td>Culver’s Root</td>
<td>Veronicastrum virginicum</td>
</tr>
<tr>
<td>Lead Plant</td>
<td>Amorpha Canescens</td>
</tr>
<tr>
<td>Marsh Phlox</td>
<td>Phlox glaberrima</td>
</tr>
<tr>
<td>New England Aster</td>
<td>Aster novae-angliae</td>
</tr>
<tr>
<td>Nodding Wild Onion</td>
<td>Allium cernuum</td>
</tr>
<tr>
<td>Pale Lobelia</td>
<td>Lobelia spicata</td>
</tr>
<tr>
<td>Pale Purple Coneflower</td>
<td>Echinacea pallida</td>
</tr>
<tr>
<td>Partridge Pea</td>
<td>Chamaecrista fasciculata</td>
</tr>
<tr>
<td>Prairie Blazing Star</td>
<td>Liatris pycnostachya</td>
</tr>
<tr>
<td>Prairie Dock</td>
<td>Silphium terebinthineum</td>
</tr>
<tr>
<td>Prairie Milkweed</td>
<td>Asclepias sullivantii</td>
</tr>
<tr>
<td>Common Name</td>
<td>Botanical Name</td>
</tr>
<tr>
<td>--------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>Prairie Sunflower</td>
<td>Helianthus rigidus</td>
</tr>
<tr>
<td>Purple Prairie Clover</td>
<td>Dalea purpurea</td>
</tr>
<tr>
<td>Rattlesnake-Master</td>
<td>Eryngium yuccifolium</td>
</tr>
<tr>
<td>Rough Blazing Star</td>
<td>Liatris aspera</td>
</tr>
<tr>
<td>Smooth Blue Aster</td>
<td>Aster laevis</td>
</tr>
<tr>
<td>Tall Coreopsis</td>
<td>Coreopsis tripteris</td>
</tr>
<tr>
<td>White Prairie Clover</td>
<td>Dalea candida</td>
</tr>
<tr>
<td>White Wild Indigo</td>
<td>Baptisia leucantha</td>
</tr>
<tr>
<td>Wild Bergamot</td>
<td>Monarda fistulosa</td>
</tr>
<tr>
<td>Wild Quinine</td>
<td>Parthenium integrifolium</td>
</tr>
<tr>
<td>Yellow Coneflower</td>
<td>Ratibida pinnata</td>
</tr>
</tbody>
</table>

Table B-3. Primary Buffer Shrubs

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Botanical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Beautyberry</td>
<td>Callicarpa americana</td>
</tr>
<tr>
<td>American Elderberry</td>
<td>Sambucus canadensis</td>
</tr>
<tr>
<td>American Hazelnut</td>
<td>Corylus americana</td>
</tr>
<tr>
<td>American Plum</td>
<td>Prunus americana</td>
</tr>
<tr>
<td>Black Chokeberry</td>
<td>Aronia melanocarpa</td>
</tr>
<tr>
<td>Common Winterberry</td>
<td>Ilex verticillata</td>
</tr>
<tr>
<td>Coralberry</td>
<td>Symphoricarpous orbiculatus</td>
</tr>
<tr>
<td>Dogwood</td>
<td>Cornus species</td>
</tr>
<tr>
<td>Greenbrier</td>
<td>Smilax rotundifolia</td>
</tr>
<tr>
<td>Western Snowberry</td>
<td>Symphoricarpous occidentalis</td>
</tr>
<tr>
<td>Black Chokeberry</td>
<td>Aronia melanocarpa</td>
</tr>
</tbody>
</table>
Table B-4. Primary Buffer Trees

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Botanical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple</td>
<td>Malus domestica</td>
</tr>
<tr>
<td>Chokeberry</td>
<td>Prunus virginiana</td>
</tr>
<tr>
<td>Crabapple</td>
<td>Malus species</td>
</tr>
<tr>
<td>Dogwood</td>
<td>Cornus species</td>
</tr>
<tr>
<td>Elm</td>
<td>Ulmus species</td>
</tr>
<tr>
<td>Hackberry</td>
<td>Celtis species</td>
</tr>
<tr>
<td>Hawthorn</td>
<td>Crataegus species</td>
</tr>
<tr>
<td>Mulberry</td>
<td>Morus species</td>
</tr>
<tr>
<td>Oak</td>
<td>Quercus species</td>
</tr>
<tr>
<td>Persimmon</td>
<td>Diospyros virginiana</td>
</tr>
<tr>
<td>Serviceberry</td>
<td>Amelanchier species</td>
</tr>
<tr>
<td>Sumac</td>
<td>Rhus species</td>
</tr>
</tbody>
</table>

Section 5.1 Landscape Buffers (Wildlife Buffers), and Section 5.4 Wildlife Under-Crossings describe recommended landscape plantings for wildlife along the Corridor. The following plant lists are recommended as the supplemental native tree, shrub, forb and grass species plant mix for deer browse at wildlife buffer crossing locations (Table 5 through Table 7). (Billingsley, E. 2006), (MacGowan, B., Osborne, D., 2004), (Robertson, K., 2008).

Table B-5. Deer Diet Tree List

<table>
<thead>
<tr>
<th>Deer Diet - Trees (Leaves, berries and acorns)</th>
<th>Common Name</th>
<th>Botanical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Name</td>
<td>Botanical Name</td>
<td></td>
</tr>
<tr>
<td>Apple</td>
<td>Malus domestica</td>
<td></td>
</tr>
<tr>
<td>Chokeberry</td>
<td>Prunus virginiana</td>
<td></td>
</tr>
<tr>
<td>Crabapple</td>
<td>Malus species</td>
<td></td>
</tr>
<tr>
<td>Dogwood</td>
<td>Cornus species</td>
<td></td>
</tr>
<tr>
<td>Eastern Redbud</td>
<td>Cercis canadensis</td>
<td></td>
</tr>
<tr>
<td>Eastern Redcedar</td>
<td>Juniperus virginiana</td>
<td></td>
</tr>
<tr>
<td>Eastern White Pine</td>
<td>Pinus strobus</td>
<td></td>
</tr>
<tr>
<td>Elm</td>
<td>Ulmus species</td>
<td></td>
</tr>
<tr>
<td>Hackberry</td>
<td>Celtis species</td>
<td></td>
</tr>
<tr>
<td>Hawthorn</td>
<td>Crataegus species</td>
<td></td>
</tr>
</tbody>
</table>
### Table B-6. Deer Diet Shrub List

<table>
<thead>
<tr>
<th>Deer Diet - Shrubs</th>
<th>(Leaves, berries and acorns)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Name</td>
<td>Botanical Name</td>
</tr>
<tr>
<td>Allegheny Serviceberry</td>
<td>Amelanchier laevis</td>
</tr>
<tr>
<td>American Beautyberry</td>
<td>Callicarpa americana</td>
</tr>
<tr>
<td>Dogwood</td>
<td>Cornus species</td>
</tr>
<tr>
<td>Downy Arrowwood</td>
<td>Viburnum rafinesquianum</td>
</tr>
<tr>
<td>Fragrant Sumac</td>
<td>Rhus aromatica</td>
</tr>
<tr>
<td>Greenbrier</td>
<td>Smilax rotundifolia</td>
</tr>
<tr>
<td>Low Serviceberry</td>
<td>Amelanchier humilis</td>
</tr>
<tr>
<td>Maple-leaved Arrowwood</td>
<td>Viburnum acerifolium</td>
</tr>
<tr>
<td>Smooth Sumac</td>
<td>Rhus glabra</td>
</tr>
</tbody>
</table>

### Table B-7. Deer Diet Forbs and Grasses List

<table>
<thead>
<tr>
<th>Deer Diet – Forbs and Grasses</th>
<th>(Leaves, berries and acorns)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Name</td>
<td>Botanical Name</td>
</tr>
<tr>
<td>Ladino Clover</td>
<td>Trifolium repens</td>
</tr>
<tr>
<td>Red Clover</td>
<td>Trifolium pratense</td>
</tr>
<tr>
<td>Illinois Bundleflower</td>
<td>Desmanthus illinoensis</td>
</tr>
<tr>
<td>Englemann Daisy</td>
<td>Englemannia peristenia</td>
</tr>
<tr>
<td>Maximilian Sunflower</td>
<td>Helianthus maximiliani</td>
</tr>
<tr>
<td>Awnless Bushsunflower</td>
<td>Simsia calva</td>
</tr>
</tbody>
</table>