

## **D. 32<sup>nd</sup> Street Alignment B Alternative Impacts on the Section 4(f) Properties and Environment**

### **1. DIRECT IMPACTS TO 4(f) PROPERTIES**

The 32<sup>nd</sup> Street Alignment B Alternative passes through the Haskell Agricultural Farm Property and will have a direct adverse impact on the Farm Property (see Exhibit 4f-8).

The Farm Property is large (804 acres) and is composed of an array of diverse elements. The general area where the 32<sup>nd</sup> Street Alignment B Alternative would cross the property is a mixture of historic structures (e.g., dikes, canals, roads, bridges and water control gates), and open landscape – all part of the former Haskell Institute’s agricultural training land.

Physical impacts associated with this alignment would involve construction of approximately one mile of 300- to 400-foot-wide roadway corridor across the Farm Property on approximately 53 acres of land east-west across the property. This includes all construction, the South Lawrence Trafficway, relocation of 31<sup>st</sup> Street, mitigative walls and vegetation, and construction of a hike and bike trail) east-west across the property. The roadway corridor would be constructed south of the east-west dike and canal located along the northern edge of Baker Wetlands to avoid and preserve these significant structures.

Fill associated with construction of the 32<sup>nd</sup> Street Alignment B Alternative will be placed on approximately 48 acres of the former Haskell Institute’s farm fields (now wetlands). An additional five (5) acres within the Farm Property would be filled with earthen material and a bridge structure to cross remnant structures: a degraded and intermittent remnant dike along the eastern edge of the property (placement of earthen fill); Mink Creek a north-south drainage canal located on the eastern half of the property (placement of earthen fill); the north-south access road and the adjacent borrow area (ponded water) located in the center of the property (placement of earthen fill); and the dike and Naismith Creek drainage canal located along the western edge of the property (construction of a bridge and associated earthen fill).

Construction of the 32<sup>nd</sup> Street Alignment B Alternative will alter small portions of the surface of the Farm Property by placing fill material in W-ditches, fields, the Mink Creek drainage canal, the north-south access road, the low eastern and western remnant dikes. The borrow area (ponded water) located immediately east of the north-south access road is a recent feature created by Baker University when borrow material was excavated to raise the access road. The dike located along the western edge of the property has already been modified over its entire length when it was relocated approximately 25 to 30 feet east of its historic location in 1969 in an effort to reduce flooding north of 31<sup>st</sup> Street.

### **2. CUMULATIVE AND INDIRECT IMPACTS TO 4(f) PROPERTIES**

The elevation of the roadway corridor and its associated structures within the segment of the bypass passing through the Farm Property have been designed to avoid significant impacts to views within the Property. Changes to the current views will be most dramatic close to the roadway, with diminishing viewshed impacts as one moves farther north or south of the road.

The historic open views of the Farm Property have already been modified by second growth trees on the southern half of the HINU campus and a line of trees along the east-west dike at the northern edge of Baker Wetlands. These existing trees form a break or barrier to the probable open views from the north of the historic landscape. The roadway corridor will be located parallel to and immediately south of the tree line on the northern edge of Baker Wetlands and, therefore, will be generally screened from the HINU campus. Open views from the east, west, and south will be preserved.

A traffic noise analysis was completed for the proposed SLT alternatives. The noise analysis was performed in accordance with FHWA and KDOT policies using the Traffic Noise Model. Existing noise levels were measured in the field. Noise measurements were taken during September 2001 at 13 locations identified as noise sensitive areas or as areas having a potential to be impacted by the proposed project. Measurements were taken on warm, dry, and calm weekdays using a Quest 2900 integrating/logging level meter.

Acceptable noise levels have been established for various activities related to land use. Category A lands are those where serenity and quiet are of extraordinary significance and serve an important public need. Category B land use includes picnic areas, park and recreational areas, residences, motels, hotels, schools, churches, libraries and hospitals. Category C land is developed land that is not included in Categories A or B. Category D land is any undeveloped area.

An exterior noise level of 57 dBA (A-weighted decibels) or less is acceptable for Category A land. An exterior noise level of 67 dBA or less is acceptable for Category B land, and a noise level of 72 dBA or less is considered acceptable for Category C land. There are no dBA guidelines for Category D land. Existing noise levels in the project area range from 51.1 dBA to 64.1 dBA, and the majority of the land use is Category B or C.

### **3. OTHER ENVIRONMENTAL IMPACTS**

#### **a. Relocations and Farm Severances**

The 32nd Street Alignment B Alternative has four residential relocations, four business relocations, and 11 farm severances.

#### **b. Floodplain and Floodway Impacts**

The 32nd Street Alignment B Alternative is routed along the northern edge of the Wakarusa River floodplain for a distance of approximately three miles (approximately two miles of the alignment are located in the floodplain), however the main alignment does not cross the Wakarusa River floodway. Existing Louisiana Street and Haskell Avenue are currently located in the floodway and floodplain. The relocation of Louisiana Street will result in a slight reduction in the length of the road within the Wakarusa River floodplain and floodway. However, the length of relocated Haskell Avenue within the floodplain and floodway will be approximately the same as existing conditions.

#### **c. Wetland Impacts**

The 32nd Street Alignment B Alternative passes through the Baker Wetlands, resulting in impacts to wetlands totaling 53 acres. In addition, this alternative would impact wetlands outside of the Baker Wetlands, and open water in ponds and lakes. To mitigate for the total wetland losses of 58 acres, a total of approximately 317 acres of wetlands will be created for a net gain of approximately 259 acres of wetlands.

#### **d. Stream Impacts**

The 32nd Street Alignment B Alternative will include 6 stream crossings, equating to 2800 linear feet of stream impacts.

#### **e. Woodland Impacts**

The 32nd Street Alignment B Alternative will impact 1.2 acres of riparian woodlands and 9.6 acres of upland woods.

**f. Noise Impacts**

The 32nd Street Alignment B Alternative was modeled for noise levels with and without noise walls. Without noise walls, there would be a significant impact on adjacent noise-sensitive areas (HINU south campus, Baker Wetlands). However, due to noise mitigation features, which include 12-foot-high noise walls and relocation of Louisiana Street and Haskell Avenue, the total audible disturbance associated with this alternative will be less by the year 2025 (ending year for local land use planning) than noise disturbances associated with the No-Action or 42<sup>nd</sup> Street alternatives.

**g. Visual Impacts**

The 32nd Street Alignment B Alternative, with mitigation, will have a low visual impact on HINU's southern campus. Trees and the dike located along the northern edge of Baker Wetlands will substantially screen the roadway from users in the south campus area. The removal and relocation of 31<sup>st</sup> Street will significantly reduce the roads visual impact on the campus. This Alternative, with mitigation, will have a low visual impact on the Baker Wetlands, as noise walls and vegetative plantings will screen views of the road from users in Baker Wetlands.

**h. Consistency with Future Land Use**

The 32<sup>nd</sup> Street corridor is within the Lawrence Urban Growth Area, Service Area 4. Development south of 31<sup>st</sup> Street outside of the floodplain is planned for low-density residential use, with some mixed and industrial use along the eastern leg of the SLT. *Horizon 2020* policies/recommendations prohibit urban development within this area until access to a municipal wastewater treatment system is either planned or under development. A wastewater treatment facility is currently in the planning stages. In addition, land located within the 100-year floodplain is not recommended for urban development.

Because of the built-out character of the area north of 31<sup>st</sup> Street and the limited potential for development in some areas (Baker Wetlands and the floodplain) along its southern side, the 32<sup>nd</sup> Street Alignment B Alternative will have a somewhat limited impact on future development. The greatest potential for development pressure will occur at the interchanges between the SLT and local arterial streets. Such pressure may include requests for approval of commercial development along Haskell Avenue and replacement of the existing industrial site at the intersection of Haskell Avenue and 31<sup>st</sup> Street. This will also be likely to increase the demand for commercial development south along US-59 Highway.

The 32<sup>nd</sup> Street Alignment B Alternative is generally consistent with the goals set forth in *Transportation 2020*, *Horizon 2020* and the *South Lawrence Trafficway Corridor Land Use Plan*. *Transportation 2020* will need to be amended to reflect a 32<sup>nd</sup> Street alignment and potentially to address traffic issues caused by the relocation of local streets. *Horizon 2020* may need to be amended to study the types of development that will be acceptable along US-59 Highway and south of 31<sup>st</sup> Street to the SLT and to reflect the location of selected access points. The *South Lawrence Trafficway Corridor Land Use Plan* should remain generally applicable with respect to general policies and recommendations, although specific land uses, zoning classifications and references to existing plans may need to be updated.