# SIMPO East-West Corridor Study 

## WILLIAMSON \& JACKSON COUNTIES

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## INTRODUCTION

## A. Purpose of the Study

The purpose of this study is to identify the most feasible and beneficial corridor in the SIMPO planning area that could serve as a supplementary parallel corridor to IL 13 which is the primary east/west arterial route within the MPO. All of the cities and villages within the MPO are served by IL 13 either by direct access or indirectly via a major collector connecting route. Accordingly, traffic volumes on IL 13 are quite high exceeding $30,000 \mathrm{vpd}$ between Marion and Carbondale. An additional east/west corridor could alleviate congestion on IL 13 and provide better service to areas that do not have an efficient connection to IL 13 .

## B. Project Location and Study Area

The Study Area consists of the SIMPO Planning Area (see Exhibit 1A). Currently, the SIMPO planning area contains four continuous north/south corridors of Functional Class Minor Arterial or higher (I-57, IL 148, US 51, and IL 127). These corridors are depicted in the Functional Classification Map (Exhibit 1B). The map also shows that the only continuous east/west Major Collector or higher facility across the MPO is IL 13.

## C. Corridors Identified for Analysis

Two potential corridors were identified for analysis (See Exhibit 1C and Figure 1).
a. Herrin Road - Herrin Road lies at the northern boundary of the MPO and extends from the eastern Williamson County line through Johnson City, Herrin and Colp, terminating at an intersection with Cambria Road in western Williamson County. Additionally, there have been some preliminary investigations by SIMPO and others into the possibility of extending Herrin Road westward along the Club Road alignment and then southwest on new alignment to create a connection at the Reed Station/Vaughn Road intersection, this potential Herrin Road extension will also be included in the study. In addition to the new alignment, improvements would be needed to Reed Station Road from Vaughn Road southward to Lavern Road to connect with recent improvements to Reed Station Road which extend northward from IL 13.
b. Crenshaw Rd./College Street/Sycamore Rd. - This corridor lies in the central portion of the MPO beginning at an intersection with IL 37 north of Marion and extending westward through the communities of Marion, Energy, Herrin, Carterville and Cambria terminating at an intersection with Reed Station Road in eastern Jackson County.


Figure 1- East/West Study Corridors

## EXISTING CONDITIONS

## A. Herrin Road Corridor

Current Illinois Roadway Information System (IRIS) data for Herrin road is depicted in Exhibits 2A through 2C. Photographs of the Herrin Road corridor are included in Exhibits 2D through 2U.

## a. Existing Roadway Elements and Traffic Data

As shown in the IRIS data and summarized in the Table 1 below, the existing Herrin Road facility currently serves as a primary east/west corridor in Williamson County. The existing pavement and roadway geometry provide a relatively high level of service and mobility in keeping with the designated Functional Classification of Minor Arterial/Major Collector. Traffic volumes throughout the corridor are relatively high for a two lane facility, ranging from a low of 3450 west of Division Street to a high of 8900 within the city of Herrin. West of Cambria Road the corridor serves only a few residential parcels and farm fields and it terminates in a dead end near the Williamson/Jackson County line.

| EXISTING ROADWAY INFORMATION AND TRAFFIC DATA |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Shoulder Data |  |
| Location/Jurisdiction | AADT Min./Max. | Functional Class. | Surface Width | Surface Type | Paved Width/Type | Unpaved Width/Type |
| East of Johnston City/County | $\begin{aligned} & 2150 / \\ & 3100 \end{aligned}$ | Major Collector | 22' | HMA | 2' /HMA | 0' |
| In Johnston City/City | 6200 | Major Collector | 30' | PCC | C\&G | - |
| *l-57 to Herrin City Limits/State | $\begin{aligned} & 5700 / \\ & 7100 \end{aligned}$ | Minor Arterial/Major Collector | $22^{\prime}$ | HMA over PCC | 4'/HMA | 3'/sod |
| Herrin - East of IL 148/City | 7800 | Minor <br> Arterial | 40' | HMA | C\&G | - |
| Herrin - West of IL 148/City | $\begin{aligned} & 6900 / \\ & 8900 \end{aligned}$ | Minor Arterial | 24' | $\begin{aligned} & \hline \text { HMA } \\ & \text { over } \\ & \text { PCC } \end{aligned}$ | C\&G East of 20th St. | 6'/Agg. West of 20th St. |
| Division St. to Cambria Rd./State | $\begin{aligned} & 3450 / \\ & 5700 \end{aligned}$ | Major Collector | $26^{\prime}$ | HMA over PCC | 5'/HMA | 1'/Agg. |
| West of Cambria Rd./County | <50 | Local Road | 8' |  <br> Chip | - | 3'/Sod |

* An approximate 2 mile portion of this section is currently being reconstructed under IDOT Contract: 78277. This section will have a 24 ' pavement with 6 foot HMA shoulders.


## Table 1

## b. Existing Vertical Alignment

The existing vertical alignment of Herrin Road is relatively flat with mostly tangent sections and gentle vertical curvature. West of Herrin, there are four no passing zones due to small crest curves. West of Cambria Road on the Club Road alignment, there are several short vertical curves that are not adequate for a high speed facility.

## c. Existing Horizontal Alignment

The existing horizontal alignment is tangent throughout the corridor except for two sharp curves just east of Herrin. These curves have radii of 1000' and 2000' respectively and are currently being reconstructed to curves with 3,000 foot radii under IDOT contract 78277 which was let by IDOT District 9 in February of 2014.

## d. Existing Structures

There are 5 existing structures on Herrin Road within the study limits, two of these ( $100-3008 \& 3009$ ) will be replaced on new alignment under IDOT Contract: 78277. Basic data for these structures is listed in the Table 2 below. The location and partial IRIS data for the structures is shown in Exhibits 3A and 3B. Photographs of the structures are shown in Exhibits 3C through 3 N .

| EXISTING STRUCTURE DATA |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| STRUCTURE NUMBER | LENGTH | ROADWAY <br> WIDTH | DATE <br> CONS. | DECK <br> COND. | FEATURE <br> CROSSED | OWNER |  |
| $100-0075$ | $60.6^{\prime}$ | $36.0^{\prime}$ | 2001 | 7 | Little <br> Hurricane <br> Creek | STATE |  |
| $100-3008^{*}$ | $36.6^{\prime}$ | $36.2^{\prime}$ | 1956 | 6 | Pond <br> Creek <br> Trib. | STATE |  |
| $100-3009^{*}$ | $74.5^{\prime}$ | $26.7^{\prime}$ | 1956 | 7 | Pond <br> Creek <br> Trib. | STATE |  |
| $100-3010$ | $68.5^{\prime}$ | 26.0 | 1956 | 6 | Bear <br> Creek | STATE |  |
| $100-3011$ | $100^{\prime}$ | $26.8^{\prime}$ | 1956 | 7 | Lake <br> Creek | STATE |  |
| $100-0040$ | $100^{\prime}$ | 29.6 | 1961 | 5 | l-57 | STATE |  |
| $100-0080^{* *}$ | $67^{\prime}$ | $36^{\prime}$ | 2015 | NEW | Pond <br> Creek Trib. | STATE |  |
| $100-0081^{* *}$ | $124^{\prime}$ | $36^{\prime}$ | 2015 | NEW | Pond <br> Creek <br> Trib. | STATE |  |

* To be removed **Under Construction


## Table 2

## e. Crash History

A summary of the crash data from 2009-2014 is listed in Table 3. A total of 492 crashes occurred in the corridor during that time resulting in 220 injuries and 3 fatalities. The most frequent crash type is Rear End at $35 \%$, followed by Animal at $20 \%$ and Fixed Object and Turning crashes both at $14 \%$. These crash types comprised $83 \%$ of the total crashes and resulted in $78 \%$ of the total injuries and one of the three fatalities. The location of the fatal crashes is shown in Exhibit 4A. All of the fatal crashes occurred in rural sections of the corridor where the posted speed is 55 mph .

HERRIN ROAD CRASH DATA (2009-2014)

| Crash Type | $\begin{array}{c}\text { Total } \\ \text { Crashes }\end{array}$ | $\begin{array}{c}\text { Tnjury } \\ \text { Crashes }\end{array}$ | Injuries |  | A | Batalities | C | Impaired |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |$)$

Table 3
Four intersections within the corridor were identified by IDOT as having crash rates in the top $5 \%$ when compared to similar intersections statewide. The four intersections are Cambria road, $35^{\text {th }}$ Street, $13^{\text {th }}$ Street and Bandyville Road. In addition, three roadway segments were identified as having crash rates in the top $5 \%$ when compared to similar segments statewide. The three segments are from Cambria Road to Allen Road, from $17^{\text {th }}$ Street to $16^{\text {th }}$ Street in Herrin and from east of Bandyville Road to east
of Pumpkin Patch Road. The locations of each of the $5 \%$ segments or intersections are shown in Exhibits 4B through 4D.

## f. Existing Right of Way

A summary of the existing right of way for Herrin Road is listed in the Table 4 below. An approximate depiction of the existing right of way is also included in Exhibit 5.

| APPROXIMATE EXISTING RIGHT OF WAY |  |
| :---: | :---: |
| LOCATION | WIDTH (FEET) |
| Club Rd - West end to Cambria Rd. | 40' |
| Herrin Rd. - Cambria Rd. to Greenbrier Rd. | 100' |
| Herrin Rd. - Greenbrier Rd. to Little Hurricane Cr. West of Colp | 50' |
| Herrin Rd. - Little Hurricane Creek to Division St. | 100' |
| Herrin Rd. - Division St. to Packer Lane in Herrin | 80' - 90' |
| Herrin Rd. - Packer Lane to 33rd St | $100 '$ |
| Herrin Rd. - 33rd St. to west of 23rd St. | Varies > 100' |
| Herrin Rd. - West of 23rd St. to Weaver Rd. | 75' to 90' |
| Herrin Rd. - through Herrin (Weaver Rd. to 3rd St.) | 50' to 60' |
| Herrin Rd. - 3rd St. to Christmas Tree Rd. | Varies - 100' to 165' |
| Herrin Rd. - Christmas Tree Rd. to I57 | Varies - 80' to 210' |
| Broadway Blvd - I-57 to IL 37 | Varies, generally 50' |

Table 4

## g. Utilities

The Herrin Road right of way is host to numerous utilities. The presence of existing utilities was determined using the JULIE NEWTIN Remote Ticket Data Tool. Utilities present are listed in Table 5 below and shown graphically at select locations in Exhibit 6.

| EXISTING UTILITY INFORMATION |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Location | Water | Sewer | Gas | Power | Telephone | Cable | Pipeline |
| Herrin Road West of I-57 | Ferges, Highway 37 N. \& J'City | Johnston City | Ameren | Ameren \& Southeastern Elec. Co-op | Frontier | Mediacom | - |
| Herrin Road East of Herrin |  | - | - | Southeastern Elec. Co-op | Frontier | Mediacom | Marathon |
| Herrin Road in Herrin | Herrin | Herrin | Ameren | Ameren | Frontier \& Clearwave | Mediacom | - |
| Herrin Road East of Cambria Road | Blairsville Water Dist. | Blairsville Water Dist. | Ameren | Ameren \& Egyptian Elect. Co-op | Frontier \& Clearwave | Mediacom |  |
| Herrin Road Extension near Walkers Bluff | - | - | - | Egyptian Elect. Co-op | - | - | - |

Table 5

## B. Crenshaw/College/Sycamore Corridor

Current Illinois Roadway Information System (IRIS) data for Crenshaw/College/Sycamore roads is depicted in Exhibits 7A through 7D. Photographs of the Crenshaw/College/Sycamore corridor are included in Exhibits 7E through 7V.

## a. Existing Roadway Elements and Traffic Data

As shown in the IRIS data and summarized in Table 6 below, the existing Crenshaw/College/Sycamore Road corridor varies from a Local Road with relatively light traffic to a Major Collector with heavy traffic. The section with the heaviest traffic volumes (Bandyville Road to Skyline Drive) has been upgraded to a 24' HMA pavement with 4' aggregate shoulders. The rest of the corridor consists of an oil and chip surfaced roadway with sod shoulders. The oil and chip surface varies from 18 ' to $20^{\prime}$ in width and the sod shoulders are primarily 2' to 3 ' in width.

| EXISTING ROADWAY INFORMATION AND TRAFFIC DATA |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Location/Jurisdiction | AADT Min/Max | Functional Class. | Surface Width | Surface Type | Paved Shld Width/Type | Unpaved Shid Width/Type |
| IL 37 to Skyline Drive/County | $\begin{aligned} & 1200 / \\ & 2650 \\ & \hline \end{aligned}$ | Major/Minor Collector | 18'-20' | Oil \& Chip | - | 3'-4'/Sod |
| Skyline Drive to Bandyville Rd/County | 6200 | Major/Minor Collector | $24^{\prime}$ | HMA | - | 4'/Agg. |
| Bandyville Rd. to Energy/County | 2200 | Major Collector | 20' | Oil \& Chip | - | 3'/Sod |
| Energy Village Limits to IL 148/Energy | 3600 | Major Collector | 20' | Oil \& Chip | - | 3'/Sod |
| IL 148 to Energy Village Limits/Energy | 2300 | Major Collector | $24^{\prime}$ | $\begin{aligned} & \hline \text { Oil \& } \\ & \text { Chip } \\ & \hline \end{aligned}$ | - | 3'/Sod |
| Energy Village Limits to Hafer Rd./Herrin | 2200 | Major Collector | $20^{\prime}$ | Oil \& Chip | - | 2'/Sod |
| Hafer Rd to Division St/Carterville | 1800 | Local Road | 20' | Oil \& Chip | - | 2'/Sod |
| Division St to Carterville City limits | 1800 | Local Road | 18' | Oil \& Chip | - | 2'/Sod |
| Carterville City limits to Cambria Rd | $\begin{aligned} & 1450 / \\ & 1800 \end{aligned}$ | Local Road | 18'-20' | Oil \& Chip | - | 2'/Sod |
| Within Cambria City limits/Cambria | 1050 | Local Road | 18' | Oil \& Chip | - | 3'/Sod |
| Cambria to Jackson Cty./County | 1100 | Local Road | 18' | Oil \& Chip | - | 3'/Sod |
| Jackson County to Reed <br> Sta. Rd/Carbondale Township | 1150 | Local Road | 16' | Oil \& Chip | - | 1'/Sod |

## Table 6

Traffic volumes throughout the corridor are relatively high for a two lane local road especially between IL 148 and Skyline Drive where the highest volume of 6200 vpd is recorded. West of IL 148 the traffic volumes are lower ranging from a high of 2300 in Energy to a low 1050 at Cambria.

## b. Existing Vertical Alignment

The existing vertical alignment is relatively flat to gently rolling throughout the corridor. The existing grades and curves generally follow the existing topography and no major vertical grade corrections have been constructed during the history of these roadways. Accordingly, the sight distance for stopping or passing is deficient at numerous locations.

## c. Existing Horizontal Alignment

The existing horizontal alignment is predominantly tangent with the exception of Crenshaw Road between Skyline Drive and I-57. This section has one sharp curve with a radius of about 900 feet and two very sharp curves with radii of about 350 feet. The southern terminus of the 900 foot radius curve intersects with Pease Road at a very high skew angle (see photo EXHIBIT 7T). South of the Pease Road/Crenshaw Road intersection the alignment has a 90 degree turn at the Pease Road/Cedar Grove Road intersection (see photo EXHIBIT 7U).

## d. Existing Structures

Along the Crenshaw/College/Sycamore corridor there are 2 existing structures within the study limits. Basic data for these structures is listed in Table 7 below. The location and partial IRIS data for the structures is shown in Exhibits 8A and 8B. The Cambria Creek bridge is a PPC deck beam structure constructed in 2010 and the structure over I-57 is a reinforced concrete deck on steel I-beams constructed in 1961. Photographs of these structures are included in Exhibits 8C through 8F.

| EXISTING STRUCTURE DATA |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| STRUCTURE <br> NUMBER | LENGTH | WIDTH | DATE <br> CONS. | DECK <br> COND. | FEATURE <br> CROSSED | OWNER |  |
| $100-3178$ | $46.5^{\prime}$ | $24.4^{\prime}$ | 2010 | 8 | Cambria <br> Creek | Township |  |
| $100-0054$ | $100^{\prime}$ | $29.8^{\prime}$ | 1961 | 5 | $1-57$ | STATE |  |

Table 7

## e. Crash Data

A summary of the crash data from 2009-2014 is listed in Table 8 below. A total of 233 crashes occurred in the corridor during that time resulting in 86 injuries and 1 fatality. The most frequent crash type is Fixed Object at $33.5 \%$, followed by Rear End at $23 \%$ and Turning crashes at $14 \%$. These crash types comprised $70.5 \%$ of the total crashes and resulted in $72 \%$ of the total injuries. The single fatality in the corridor occurred in an overturning crash near the western edge of the Energy Village limits (see Exhibit 9A).

| Crash Type | Total Crashes | Injury Crashes | Injuries |  |  | Total Injuries | Fatalities | Impaired Drivers |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | A | B | C |  |  |  |
| Angle | 14 | 7 | 4 | 5 | 1 | 10 | 0 | 0 |
| Animal | 23 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |
| Fixed Object | 78 | 28 | 10 | 15 | 8 | 33 | 0 | 4 |
| Head on | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| overturned | 13 | 7 | 4 | 4 | 0 | 8 | 1 | 2 |
| Parked Vehicle | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| Pedal Cyclist | 2 | 2 | 1 | 1 | 0 | 2 | 0 | 0 |
| Pedestrian | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rear End | 53 | 13 | 3 | 6 | 6 | 15 | 0 | 1 |
| Sideswipe Opposite | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Sideswipe Same | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Turning | 32 | 9 | 6 | 5 | 3 | 14 | 0 | 0 |
| Other Object | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Other NonCollision | 7 | 2 | 0 | 2 | 0 | 2 | 0 | 1 |
| Totals | 233 | 69 | 28 | 40 | 18 | 86 | 1 | 10 |

Table 8

Four roadway segments were identified as having crash rates in the top 5\% when compared to similar segments statewide. The four segments are from Reed Station Road to 0.5 miles east of Reed Station Road, from $27^{\text {th }}$ Street to McVicker Dr in Energy, from Bandyville Road to west of Skyline Drive and from Decatur Road to Pease Road. The locations of each of the 5\% segments are shown in Exhibits 9B. There are no 5\% intersections within the corridor.

## f. Existing Right of Way

A summary of the existing right of way for Crenshaw/College/Sycamore corridor is listed in the Table 9 below. An approximate depiction of the existing right of way is also included in Exhibit 10.

| APPROXIMATE EXISTING RIGHT OF WAY |  |
| :---: | :---: |
| Location | Width |
| Lavern Rd - Reed Sta. to Williamson <br> Co. | $50^{\prime}$ |
| Sycamore Rd. - Jackson Co. to <br> Division St. | $50^{\prime}$ |
| Sycamore Rd. - Division St. to Energy <br> College St - Through Energy | Varies, but generally <br> $50^{\prime}$ |
| Crenshaw Rd. - Energy to Skyline Dr. | $80^{\prime}$ |
| Crenshaw Rd. - Skyline Dr. to I-57 | Varies, but generally <br> $60^{\prime}$ |
| Crenshaw Rd. - I-57 to IL 37 | $40^{\prime}$ to 50' |

Table 9

As shown in the table, the existing right of way is 50 ' to 60 ' in width for most of the corridor. A width of 50' to 60' will only accommodate an 18'22' pavement with narrow shoulders and relatively steep side slopes.

## g. Utilities

The Crenshaw/College/Sycamore right of way is host to numerous utilities. The presence of existing utilities was determined using the JULIE NEWTIN Remote Ticket Data Tool. Utilities present are listed in Table 10 below and shown graphically at select locations in Exhibit 11.

| EXISTING UTILITY INFORMATION |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Location | Water | Sewer | Gas | Power | Telephone | Cable | Pipeline |
| Crenshaw Rd east of I-57 | Pittsburg \& Rend Lake | Pittsburg |  | Southeastern Elec. Co-op | Frontier, Clearwave \& Windstream | Zito Media | - |
| Crenshaw Rd west of I-57 | Ferges Water District | - | - | - | - | - | - |
| Crenshaw Rd west of Skyline Drive | Ferges Water District | - | - | Southeastern Elec. Co-op | Frontier \& Clearwave | - | Marathon |
| College St. East of IL 148 | Energy | Energy | Ameren | Ameren | Frontier \& Clearwave | Mediacom | - |
| College St. West of IL 148 | Energy \& Herrin | Energy \& Herrin | Ameren | Ameren | Frontier \& Clearwave | Mediacom | - |
| Sycamore Rd. East of Division St. | Carterville \& Rend Lake | Carterville | Ameren | Ameren | Frontier | Mediacom | - |
| Sycamore Rd, West of Division St. | Carterville \& Cambria | Carterville/ Cambria | Ameren | Ameren | Frontier \& Clearwave | Mediacom | - |
| Sycamore Rd. East of Jackson County | Lakeside Water Dist. | - | - | Egyptian Elec. Co-op | Frontier \& Clearwave | Mediacom | - |
| Lavern Rd East of Reed Station Rd. | Lakeside Water Dist. | - | - | Egyptian Elec. Co-op | Frontier \& Clearwave | - | - |

Table 10

## DESIGN CRITERIA

Design criteria for either proposed corridor depends upon the Functional Classification, type of jurisdiction (State or Local), type of improvement and traffic volume. The Herrin Road Corridor is primarily classified as a Major Collector with a section through the city of Herrin classified as a Minor Arterial. The Crenshaw/College/Sycamore corridor is primarily classified as a Major or Minor Collector with the portion west of Energy classified as a Local Road. A summary of the major design requirements from the IDOT BDE Manual and the IDOT BLRS Manual for these facility types is listed in Table 11 and Table 12 below.

| TABLE OF NEW CONSTRUCTION/RECONSTRUCTION DESIGN CRITERIA |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Design Feature | State Jurisdiction |  | Local Jurisdiction |  |
|  | Minor Arterial | Collector | Collector | Local Road |
| Pavement Width | $24^{\prime}$ | $24^{\prime}$ | $24^{\prime}$ | $24^{\prime}$ |
| Pavement Type | HMA or Conc. | HMA or Conc. | HMA or Conc. | HMA or Conc. |
| Shoulder Width (Total) | $10^{\prime}$ | $8^{\prime}$ | $8^{\prime}$ | $8^{\prime}$ |
| Shoulder Width (Paved) | $4^{\prime}$ | $4^{\prime}$ | Not required | Not Required |
| Foreslopes | $6: 1$ | $4: 1$ | $4: 1$ | $4: 1$ |
| Minimum Structure Width <br> (to remain in place) | $30^{\prime}$ | $30^{\prime}$ | $28^{\prime}$ | $28^{\prime}$ |
| Horizontal Curvature( Minimum <br> Radius) | $3,000^{\prime}$ desirable <br> $1,330^{\prime}$ min. | $3,000^{\prime}$ desirable <br> $1,330^{\prime}$ min. | $1,205^{\prime}$ | $1,205^{\prime}$ |
| Vertical Alignment - Min. K value <br> (Crest/Sag) | $151 / 136$ | $151 / 136$ | $114 / 115$ | $114 / 115$ |

Table 11

| TABLE OF 3R DESIGN CRITERIA |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Design Feature | State Jurisdiction |  | Local Jurisdiction |  |
|  |  <br> Collector | Unmarked <br> State Routes | Collector | Local Road |
| Pavement Width | $24^{\prime}$ | $24^{\prime}$ | $24^{\prime}$ | $24^{\prime}$ |
| Pavement Type | HMA or Conc. | HMA or Conc. | HMA or Conc. | HMA or Conc. |
| Shoulder Width (Total) | $6^{\prime}$ | $6^{\prime}$ | $6^{\prime}$ | $6^{\prime}$ |
| Shoulder Width (Paved) | $3^{\prime}$ | Not Required | Not required | Not Required |
| Foreslopes | Existing | Existing | Existing | Existing |
| Minimum Structure Width <br> (to remain in place) | $30^{\prime}$ | $28^{\prime}$ | $28^{\prime}$ | $28^{\prime}$ |
| Horizontal Curvature( Minimum <br> Radius to remain in place) | $600 '$ | $600^{\prime}$ | $465^{\prime}$ | $465^{\prime}$ |
| Vertical Alignment - Min. K value <br> (Crest/Sag) | $44 /$ Existing | $44 /$ Existing | $44 /$ Existing | $44 / E x i s t i n g ~$ |

Table 12

For comparison of the corridors, it is assumed that any proposed improvements would be advanced by the controlling entity (State, County or City/Village) as a 3R improvement where the existing alignment is retained and as a New Construction/Reconstruction improvement where new alignment is required or desired. For Herrin Road, the Arterial/Collector criteria will be used for 3R improvements and for section continuity the Collector standards will be used for any improvements on new alignment. For the Crenshaw/College/Sycamore Corridor the Local Collector criteria will be used for both 3R and New Construction/Reconstruction improvements.

## CORRIDOR ANALYSIS AND COMPARISON

## A. Herrin Road

## a. Cross Sectional Elements

As shown in Table 13 below, with the exception of Club Road and a short section west of $20^{\text {th }}$ Street, the existing cross sectional elements in the corridor already meet the selected design criteria. The Club Road section would be included in the proposed Herrin Road extension and thus would be designed to comply with the new construction/reconstruction criteria. The section west of $20^{\text {th }}$ Street would only require that the aggregate shoulder be upgraded to HMA. The $22^{\prime}$ wide pavement in the $\mathrm{I}-57$ to Rue Belle Lane section is not deficient since IDOT 3R policies allow existing $22^{\prime}$ wide pavements to remain without widening (a 7 ' wide shoulder is required adjacent to 22 ' pavements). It should also be noted that if bicycle accommodation is desired/required an 8' paved shoulder would be needed since the current ADT is greater than 2000 vpd .

Red Cells indicate a deficient condition

| EXISTING ROADWAY DATA |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Location <br> (Total Length of Section $=11.4$ miles) | Length | Surface Width | Surface Type | Shoulder Data |  |
|  |  |  |  | Paved Width | Unpaved Width |
| In Johnston City | 0.9 miles | 30' | PCC | C\&G | - |
| I-57 to Rue Belle Lane | 2.1 miles | 22' | HMA over PCC | 4' | 3' |
| *Rue Belle Lane to 3rd Street (currently under construction) | 1.5 miles | 24' | HMA | 6' | 0' |
| Herrin - IL 148 to 3rd St | 0.9 miles | 40' | HMA | C\&G | - |
| Herrin - IL 148 to 20th St | 0.33 mi . | 36' | PCC | C\&G | - |
| Herrin - 20th St to Elem. School | 1.8 miles | 24' | HMA over PCC | - | 6' |
| Division St. to Cambria Rd. | 3.3 miles | 24' to 26' | HMA over PCC | 5' | $1 '$ |
| West of Cambria Rd. (Club Road) | 0.7 miles | 8' | Oil \& Chip | - | 3' |

Table 13

## b. Vertical Alignment

The existing vertical alignment was analyzed to determine if any areas did not meet the recommended minimum stopping sight distance criteria for vertical curves. The analysis was based on the maximum posted speed of 55 mph and using IDOT 3R criteria a distance of 305 feet was used as the minimum for stopping sight distance. An existing profile was created from publically available county wide Lidar data and the sight distance was checked using Autodesk planning and analysis software. This analysis determined that there are no vertical curves east of Cambria Road that do not meet the minimum 3R criteria to remain in place. West of Herrin, there are four no passing zones due to vertical alignment but the stopping sight distance is more than adequate. West of Cambria Road, in the Club Road section there are several deficient vertical curves which would require complete reconstruction if the Herrin Road extension is advanced. A detailed listing of the analysis is included in Exhibit 12.

## c. Horizontal Alignment

Upon completion of IDOT contract 78277 the existing horizontal alignment will meet Construction/Reconstruction standards for the selected design criteria and thus would be adequate to leave in place throughout the section for an upgraded facility.

## d. Structures

Upon completion of IDOT contract 78277 three of the six structures in the corridor (100-0080, $0081 \& 0075$ ) will meet or exceed the recommended design criteria. Structures 100-3010 \& 3011 are only 26.0 and 26.8 feet wide respectively and are considered functionally obsolete (see Table 2 and EXHIBIT 3A \&3B). Additionally, these structures are 60 years old and nearing the end of their service life. Replacement of these structures is recommended for an upgraded corridor. The structure over l-57 (1000040) is not functionally obsolete but is slightly under 30 feet in width. However, since this structure is only slightly under the recommend width replacement is not essential for an upgraded corridor.

## e. Crash data analysis

As part of the Highway Safety Improvement Program (HSIP), states are required to submit an annual report to the Federal Highway Administration (FHWA) describing at least 5 percent of highway locations exhibiting the most pressing safety needs. This FIVE PERCENT Report is used to help

Illinois to gain an understanding of the nature and extent of safety problems and to provide guidance on where safety investments are needed. The $5 \%$ locations evaluated in this report are based on data from the years 2009 to 2014. A review of each of the $5 \%$ intersections and segments follows:

## 5\% Intersections

Cambria Road - Crash data at the Cambria Road/Herrin Road intersection is depicted in Exhibit 13A. There were 20 total crashes and 7 injury crashes during the time period resulting in 10 A -injuries, 3 B -injuries, 1 C-injury and no fatalities. Crash types involved were Fixed Object, Rear End and Turning. Of the 6 injury crashes, 3 involved alcohol impaired drivers and darkness. In two of these the drivers were westbound and ran through the stop sign and off road west of the intersection. The other impaired driver crash resulted from a southbound vehicle turning left in front of a northbound vehicle. These crashes resulted in 8 of the 10 Ainjuries. The remaining crashes involved 2 westbound rear ends (resulting in 1 B and 1 C injuries), 1 southbound rear end (resulting in 2 A -injuries) and an additional southbound left turner impacted by a northbound vehicle (resulting in 2 B injuries). Potential counter measures for these crashes would be: stop ahead signage, double stop signs, flashing lights on the stop signs, additional highway lighting and a southbound left turn lane.
$35^{\text {th }}$ Street - Crash data at the Herrin Road $/ 35^{\text {th }}$ Street intersection is depicted in Exhibit 13B. There were 15 total crashes and 8 injury crashes during the time period resulting in 5 A -injuries, 5 C -injuries and no fatalities. Crash types involved were Angle, Animal, Fixed Object, Overturned, Rear End and Turning. Of the 8 injury crashes none involved alcohol impaired drivers. The most frequent crash type resulting in injuries is rear-end ( 5 C -injuries) with 4 occurrences. Of these, 3 involved westbound vehicles waiting to turn left onto $35^{\text {th }}$ street, the fourth rear-end crash occurred in the queue of a construction zone and involved eastbound traffic. There were two injury crashes involving northbound left turners resulting in 3 A-injuries, one overturning crash resulting in 1 Ainjury and one Animal crash (deer) resulting in one A injury. Potential counter measures at this location are limited. The westbound rearends could be addressed with the addition of a westbound left turn lane but this is not likely to be cost effective since it addresses only 4 crashes and 4 C -injures. Two of the eight crashes occurred after dark (resulting in one A and one C injury). Due to relatively low cost additional highway lighting could be cost effective.
$13^{\text {th }}$ Street - Crash data at the Herrin Road/ $13^{\text {th }}$ Street intersection is depicted in Exhibit 13C. There were 28 total crashes and 10 injury crashes during the time period resulting in 2 A-injuries, 4 B-injuries, 6 C injuries and no fatalities. Crash types involved were Angle, Pedal cyclist, Fixed Object and rear end. Of the 10 injury crashes, 1 involved an impaired driver and three occurred at night. The most frequent crash type resulting in injuries is Angle and Rear end with four occurrences of each. The Angle crashes accounted for 1 B and 3 C injures. The Rear end crashes accounted for 2 A-injures, 1 B-injury and 2 injures. Potential counter measures for these crashes would be: Double stop signs (a flashing overhead beacon is already present) and removal of sight distance obstructions (trees) in the northeast, northwest and southwest quadrants.

Bandyville Road - Crash data at the Herrin Road/Bandyville Road intersection is depicted in Exhibit 13D. There were 8 total crashes and 2 injury crashes during the time period resulting in 4 A-injuries, and no fatalities. Crash types involved were; Animal, Fixed Object, Head on, Rear end and Turning. The A injuries resulted from a single turning crash (2 injuries) and a single head on crash (2 injuries). Potential counter measures for these crashes would be geometric improvements to the curve on Herrin Road and the skew angle of the Herrin Road/Bandyville Road intersection. Both of these countermeasures are currently being implemented under IDOT Contract 78277.

## 5\% Segments

Cambria Road to Allen Road - Crash data for this segment is depicted in Exhibit 14A. There were 127 total crashes and 33 injury crashes during the time period resulting in 23 A -injuries, 15 B -injuries 13 C -injuries and 1 fatality. The fatal accident resulted from a pedestrian crash at night approximately 0.5 miles west of Divisions Street. The most frequent crash type was Animal (43), however, only 1 C-injury resulted from these crashes. Other frequent crash types were Rear End (38), Fixed Object (23) and Turning (9). The Rear End crashes resulted in 22 total injuries (3A, 8B and 11C) and occurred primarily at the Cambria Rd (8 crashes), Division St (8 crashes) and Allen Road (6 crashes) intersections. The Fixed Object crashes occurred throughout the section with a grouping of 3 at near Cambria Road and a grouping of 4 near Allen Road. All 3 of the group near Cambria Road involved westbound impaired drivers that did not stop at the Cambria Road intersection; these crashes resulted in 3 Ainjuries. The Fixed Object crashes also involved a high percentage of impaired drivers (20\%) and occurrence at night (61\%). The Fixed Object Crashes also had a high percentage of severe injuries (80\% were Ainjuries). The turning crashes resulted in 11 total injuries ( 8 A and 3B) with 5 of the A-injuries occurring in one alcohol related crash at Cambria Road.

The other 3 A-injuries occurred in one crash at involving a southbound left turning vehicle at Division Street. Potential counter measures for the Rear End crashes would be to give increased warning ahead of the stop controlled intersections and left turn lanes at select locations to remove turning vehicles from the through lanes. An HMA shoulder and rumble strips would be an effective counter measure for the Fixed Object crashes and these measures were implemented throughout this segment under IDOT contract 78457 which was let in June of 2015.

Bandyville Road to Pumpkin Patch Road - Crash data for this segment is depicted in Exhibit 14B. There were 66 total crashes and 20 injury crashes during the time period resulting in 11 A -injuries, 16 B -injuries 3 C injuries and 2 fatalities. The fatal accidents resulted from a rear end crash near Chittyville Road and Head-on crash near Christmas Tree road. The most frequent crash type was Fixed Object (22) resulting in 10 injuries (2A, 6-B, 2-C). Other frequent crash types were Animal (19), Rear End (8) and Overturned (6). The Rear End crashes resulted in 13 injuries (8A, 5B) and 1 fatality. Four of the 8 Rear End crashes resulted when westbound vehicles were waiting to turn left onto Pumpkin Patch Road. One of these crashes resulted in 2 A-injures. The other Rear End crashes were scattered throughout the segment. One of these resulted in 9 injures (5-A and $4-B$ ) when a westbound vehicle rear ended a vehicle that was stopped for construction work just east of Bandyville Road. The Overturned crashes resulted in 1-A and 3-B injuries. Four of these crashes occurred in the area of sharp horizontal curvature at the western end of the segment. Potential counter measures for the roadway departure crashes (Fixed Object and Overturned) would be rumble strips and geometric improvements to the sharp horizontal curves. Improvements to the horizontal curves are currently under construction. Counter measures for the Rear End crashes would be the installation of a westbound left turn lane at Pumpkin Patch Road to remove left turning vehicles from the through lane.

## f. Intersection Improvements

Table 14 below lists the intersecting side roads that are classified as Major Collector or higher. These are the most likely locations that will require future improvements. The unsignalized intersections were evaluated for the need for left turn lanes (see Exhibit 15). Due to the relatively high traffic volume all of the intersections meet the criteria for left turn lane consideration on Herrin Road. Within the city of Herrin, left turn lanes are already in place at IL 148 as well as $16^{\text {th }}$, $13^{\text {th }}$ and $11^{\text {th }}$ Streets. In the rural section, a left turn lane will be in place at Bandyville Road when contract 78277 is completed. At the remaining intersections left turn
lanes may be warranted depending on future development and traffic patterns.

HERRIN ROAD - MAJOR INTERSECTIONS

| INTERSECTON | TYPE | ADT <br> HERRIN <br> RD/SIDEROAD | POTENTIAL LONG TERM <br> IMPROVEMENTS |
| :---: | :---: | :---: | :---: |
| Cambria Road | "T" intersection-stop <br> control on Herrin Rd. | $3450 / 5900$ | LFTL on North, South and east <br> legs |
| Division St. | 4 way Stop | $7700 / 4350$ | LFTL for WB Herrin Rd |

Table 14

## g. Right of Way Needs

The existing right of way is in general more than sufficient for a Minor Arterial or Major Collector facility with more than 80 feet of right of way available in almost all of the rural area. The only exceptions to this being Club Road west of Cambria Road and a relatively short section ( 0.5 miles) from Greenbrier Road to near Little Hurricane Creek. Accordingly, there are no immediate needs for additional right of way. In the long term, additional right of way will be needed where intersections are improved, bridges replaced and for the potential extension to Reed Station Road.

## h. Utility Adjustments

Since the corridor already meets the design criteria for cross sectional elements and alignment extensive utility adjustments would not be required for an upgraded facility along the existing alignment. Improvements for the Herrin Road extension would require extensive adjustments to the following utilities along Club Road: Blairsville Public Water District, Ameren CIPS, Clearwave Communications, Egyptian Electric Co-op, Frontier Communications and Mediacom.

## i. Herrin Road Extension

An additional feature of the Herrin Road corridor could be a westward extension from Cambria Road along the existing Club Road alignment and then southwesterly near the Walker's Bluff development and southward to the Reed Station Road Vaughn Road intersection (see Figure 2 and Exhibit 16A). To provide a consist corridor; improvements would also be needed to existing Reed Station Road from Vaughn Road south to Lavern Road. This section currently consists of an oil and chip surfaced roadway which is $20^{\prime}$ in width and has $2^{\prime}$ sod shoulders (see Exhibit 7A). These additional improvements would connect to the recent upgrades to Reed Station Road that extend northward from IL 13 and thus would provide a consist typical section from the new alignment southward to IL 13.

Figure 2


This connection of Herrin Road to Reed Station Road would provide several benefits. First, it would provider a safer and more direct connection to IL 13 and Carbondale for commuters from the Herrin/Colp/Carterville/Blairsville/Hurst area. Currently, about 1,400 vehicles access westbound IL 13 daily from southbound Cambria Road, these same commuters return via eastbound IL 13 and turn north onto Cambria Road for a total volume of about 2800 vehicles per day. A good percentage of these commuters would use the Herrin Road extension and signalized intersection at IL 13/Reed Station Road avoiding the unsignalized IL 13/Cambria Road intersection which has experienced numerous severe crashes and has historically been a $5 \%$ intersection location. Additionally, the Herrin Road extension would also provide
greatly improved access to the Walkers Bluff entertainment complex and resort. The existing access road into Walkers Bluff (Meridian Road) is subject to periodic flooding from backwaters of the Big Muddy River resulting in closure of the facility and temporary layoff of 200 employees for extended periods.

There are challenges associated with the potential Herrin Road extension. The alignment traverses the 100 year flood plain of the Big Muddy River so wetland and floodplain encroachment issues would need to be addressed. Impacts to Threatened and Endangered species or habitat would also have to be addressed through the Phase I environmental process. The Greater Egypt Regional Planning Commission recently submitted the Herrin Road extension as a candidate for a US Department of Housing and Urban Development (HUD) grant and some preliminary environmental data was included in the grant submittal. This preliminary information is listed below:

Wetlands: Based on data from the National Wetlands Inventory (NWI) Maps the proposed extension would impact about 2.1 acres of Forested/Shrub Wetland and about 0.2 acres of Freshwater Pond Wetland (See Exhibit 16B and 16C)

Threatened and Endangered Species and Natural Areas: A Natural Resource Review utilizing the Ecological Compliance Assessment Tool (EcoCAT) indicates that the proposed extension would not impact any T\&E species, Natural areas or registered Land and Water Reserves (See Exhibit 16D)

Floodplain Impacts: The proposed alignment crosses the 100 year floodplain as shown on the FEMA flood insurance rate map dated August 4, 2008 (see Exhibit 16E). The flood plain crossed is in an area where no base flood elevation has been determined by FEMA. However, an IDOT structure (100-0062) carrying FAS Route 907 over the Big Muddy River is nearby and the 100 year flood elevation at that location is indicated by IDOT analysis to be at elevation 380.2 (See Exhibit 16E and 16F). This elevation correlates well with field observations of recent extreme flooding events where high water elevations in the area were observed at about elevation 380. According to the FEMA map the proposed alignment would cross the 100 year flood plain at three locations. Two of those locations are clearly transverse crossings; the largest crossing appears to be a longitudinal encroachment (see Exhibit 16E) which would involve additional permitting requirements and compensatory storage. However, these impacts may be reduced if the 100 year flood elevation is confirmed at elevation 380. Exhibit 16G depicts the extent of flooding at elevation 380 and based on
this elevation the flooding extent in the area of the largest crossing is greatly reduced and the flood plain crossing appears to be transverse. The extent of flooding shown in Exhibit 16G at elevation 380 is based on recent Lidar data which should be quite accurate.

An additional concern with a potential extension of Herrin Road is the current condition of Reed Station Road from Vaughn Road to Laverne Road (about 4000'). This section of Reed Station Road is currently a 20' wide oil and chip pavement with 2' sod shoulders and would also need to be improved to maintain the continuity of the corridor. South of Laverne Road, Reed Station Road has been improved to a 24 ' HMA pavement with HMA shoulders.

## j. Connection to US 51:

An additional benefit of an extension to Herrin Road could be a further westward expansion connecting to US 51. This extension would be about 6 miles in length and could terminate at the Southern Illinois Airport providing the airport with a connection to Interstate 57 (see Figure 3). This connection would also be beneficial to destinations on the north side of Carbondale such as the Carbondale Industrial Park or the Carbondale Memorial Hospital. Local interest in a possible northern connector route is indicated by previous studies, sponsored by the city of Carbondale and IDOT, which have explored the possibility of a northern route that would provide better access to the north side of Carbondale and alleviate congestion on IL 13. To date, none of these studies have advanced beyond the feasibility level. In addition, public comments received for this East/West Corridor study also indicate a desire for this connection (see Exhibit 20). Analysis of this connection is beyond the scope of this study, however, a future study of this further expansion to US 51 is recommended.


Figure 3

## k. Cost Estimate

As shown in Table 15 below, the estimated cost to upgrade the Herrin Road Corridor to the recommended design criteria is approximately $\$ 17,300,000$. Almost all of the cost is associated with the Herrin Road extension since very little of the existing roadway does not already meet the recommended design criteria. See Exhibit 17 for a detailed listing of the cost estimate.

Table 15
Herrin Road Corridor Preliminary Cost Estimate Summary

| Location | Description | Cost |
| :---: | :---: | :---: |
| IL 37 to l-57 | Urban section meets 3R, no improvements needed | \$0 |
| I-57 to Rue Belle Lane (new alignment begins) | Rural section meets 3R, no roadway improvements needed. Structures 100-3010 \& 3011 warrant replacement. | \$1,200,000 |
| Rue Belle Lane to 3rd Street (Herrin city limits) | New construction, no improvements needed | \$0 |
| 3rd Street to IL 148 | Urban section meets 3R, no improvements needed | \$0 |
| IL 148 to 20th Street | Urban section meets 3R, no improvements needed | \$0 |
| 20th Street to Elementary School | Has aggregate Shoulders, upgrade to 6' HMA | \$500,000 |
| Elementary School to Cambria Road | Rural section meets 3R, no improvements needed | \$0 |
| Cambria Road to Laverne Road (Herrin Road Extension) | New Construction | \$15,600,000 |
| Grand Total |  | \$17,300,000 |

## CORRIDOR ANALYSIS AND COMPARISON

## B. Crenshaw/College/Sycamore

## a. Cross Sectional Elements

As shown in the Table 16 below, very little of the existing corridor meets the recommended design criteria. The current corridor is deficient throughout for shoulder width and only very short sections meet the minimum pavement width and surface type. A 3R type improvement would be needed throughout the corridor to meet the desired typical section criteria. In regards to bicycle accommodation, Local Roads and Streets policy requires a minimum shoulder width of 4' which is exceeded by the recommend design criteria ( 6 ' shoulder width) for comparison of the corridors.

Red cells indicate a deficient condition

| EXISTING ROADWAY INFORMATION AND TRAFFIC DATA |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Length <br> (Total=13 <br> miles) |  |  | Shoulder Data |  |
| Location/Jurisdiction |  | Surface Width | Surface Type | Paved Width/Type | Unpaved Width/Type |
| IL 37 to Skyline Drive/County | 3.2 miles | 18'-20' | Oil \& Chip | - | 3'-4'/Sod |
| Skyline Dr to Bandyville Rd/County | 1.0 miles | 24 | HMA | - | 4'/Agg. |
| Bandyville Rd. to Energy/County | 0.8 miles | 20' | Oil \& Chip | - | 3'Sod |
| Energy Vill. Limits to IL 148/Energy | 0.6 miles | $20 '$ | Oil \& Chip | - | 3'/Sod |
| IL 148 to Energy Vill. Limits/Energy | 1.0 miles | $24^{\prime}$ | Oil \& Chip | - | 3'Sod |
| Energy Village Limits to Hafer Rd./Herrin | 0.3 miles | $20^{\prime}$ | Oil \& Chip | - | 2'Sod |
| Hafer Rd to Div. St/Carterville | 1.5 miles | $20^{\prime}$ | Oil \& Chip | - | 2'Sod |
| Div. St to Carterville City limits | 0.5 miles | 18' | Oil \& Chip | - | 2'Sod |
| Carterville City Imts to Cambria Rd | 1.8 miles | 18'-20' | Oil \& Chip | - | 2'Sod |
| Within Cambria/Cambria | 0.8 miles | $18{ }^{\prime}$ | Oil \& Chip | - | 3'Sod |
| Cambria to Jackson Cty./County | 1.0 miles | $18^{\prime}$ | Oil \& Chip | - | 3'/Sod |
| Jackson County to Reed Sta. Rd/Carbondale Township | 0.5 miles | 16' | Oil \& Chip | - | 1'Sod |

Table 16

## b. Vertical Alignment

The existing vertical alignment was analyzed to determine if any areas did not meet the recommended minimum stopping sight distance criteria for vertical curves. The analysis was based on the maximum posted speed of 55 mph and using Local Roads and streets criteria for 3R improvements a distance of 305 feet was used as the minimum for stopping sight distance. An existing profile was created from publically available county wide Lidar data and the sight distance was checked using Autodesk planning and analysis software. This analysis determined that there are 34 vertical curves that do not meet the recommended criteria. A detailed listing of the analysis is included in Exhibit 18.

## c. Horizontal Alignment

From Reed Station Road eastward to Skyline Drive the existing alignment is essentially tangent and could be retained. Between Skyline Drive and I57 three sharp curves and a 90 degree turn at Pease Road would need to be improved to meet the recommended criteria (see Figure 3).


Figure 3

These curves do not meet the minimum radius (465') 3R criteria for curves to remain in place. Additionally, the southern terminus of curve 3 intersects with Pease Road at a very high skew angle resulting in an additional safety concern.

Clearly, improvements would be required for this section of roadway to provide the desired level of service and safety. Potential solutions to the deficient horizontal alignment are shown in Figure 4.

Figure 4


As shown in red, Cedar Grove Road could be extended westward to Skyline Drive from the Pease Road/Cedar Grove Road intersection. While eliminating the substandard radii this option would result in two 90 degree turns in the east/west corridor. This option would also result in significant impacts to several residential properties along Cedar Grove Road as well as an existing business near Skyline Drive. In addition, the property west of the termination of Cedar Grove Road is owned by the Kibler Development Corporation and has been permitted for use as a construction waste landfill.

Alternatively, the radii of the curves could be flattened as shown. At curves 1 and 2 the alignment passes through unreclaimed strip mines and there would be no impacts to residential or business properties. However, the property on either side of Crenshaw Road is also part of the area that has been permitted as a possible future landfill. The third curve relocation would also require realignment of Pease Road and would have major impacts to four residences with all four likely to be complete displacements.

## d. Structures

As previously noted, there are two structures with the limits of the corridor. The structure over I-57 meets the desired minimum width criteria for structures to remain place (28'). The structure over Cambria Creek is deficient in width by approximately 4 feet and would need to be widened to meet the recommended criteria.

## e. Crash data analysis

The 5\% locations evaluated in this section are based on data from the years 2009 to 2014. A review of each of the $5 \%$ intersections and segments follows:

## 5\% Intersections

Based on 2009 to 2014 crash data there are no 5\% intersection locations for the Crenshaw/College/Sycamore corridor.

## 5\% Segments

Reed Station Road to 0.5 miles east of Reed Station Road - Crash data for this segment is depicted in Exhibit 19A. There were 5 total crashes and 3 injury crashes during the time period resulting in 1 A-injury, 1 B-injury and 2 C-injuries. The injury crashes occurred in 2 fixed object crashes east of Reed Station road and one rear end crash at Reed Station road. Potential counter measures would be: HMA shoulders, rumble strips and slope work for the roadway departure crashes and additional warning signs or lights prior to the stop controlled intersection for the rear end crashes.
$27^{\text {th }}$ Street to McVicker Drive in Energy - Crash data for this segment is depicted in Exhibit 19B. There were 8 total crashes and 2 injury crashes during the time period resulting in 1 B injury (fixed object) and 1 fatality (overturned). Five of the crashes were roadway departure type (4 fixed object and 1 overturned). The fatal crash was also roadway departure
(overturned). Potential counter measures for these crashes would be the addition of HMA shoulders, rumble strips and reconstruction of the existing steep foreslopes in this area.

Bandyville Road to west of Skyline Drive - Crash data for this segment is depicted in Exhibit 19C. There were 28 total crashes and 6 injury crashes during the time period resulting in 6 A injuries, 2 B injuries and 1 C injury. Excluding the 8 animal crashes, $65 \%$ of the remaining crashes (13 of 20) occurred at the Bandyville Road intersection. In addition, 6 of the 9 injuries resulted from crashes at the intersection. At Bandyville road there were 4 rear end crashes, 3 fixed object crashes, 2 turning crashes, 1 angle crash, 1 overturned crash, 1 animal crash and 1 pedalcyclist crash. A significant portion of the intersections crashes involve southbound vehicles (8 of 13) and 3 of 4 rear end crashes also involved southbound vehicles. Potential counter measures for these crashes would be: additional warning signs or lights prior to the stop controlled intersection for southbound traffic and a left turn lane for southbound traffic.

Decatur Road to Pease Road - Crash data for this segment is depicted in Exhibit 19D and 19E. There were 34 total crashes and 14 injury crashes during the time period resulting in 7 A -injuries, 6 B -injuries and 3 C injuries. Roadway departure crashes were by far the most common crash type for this segment. Of the 34 crashes $74 \%$ (25) involved vehicles that departed from the pavement. These crashes resulted in almost all of the injury crashes as well (13 of 14 including 15 of the 16 injuries). Potential counter measures for these crashes would be: HMA shoulders and rumble strips, reconstruction of existing steep slopes, signage for the existing sharp horizontal curves and reconstruction or realignment of the substandard horizontal curves.

## f. Intersection Improvements

Table 17 below lists the intersecting side roads that are classified as Major Collector or higher. These are the most likely locations that will require future improvements. The unsignalized intersections were evaluated for the need for left turn lanes (see Exhibit 20).

CRENSHAW/COLLEGE/SYCAMORE - MAJOR INTERSECTIONS

| INTERSECTION | TYPE | ADT <br> COLL-SYC/SIDEROAD | POTENTIAL LONG TERM <br> IMPROVEMENTS |
| :---: | :---: | :---: | :---: |
| REED STA. RD. | "T" intersection-stop <br> control on Lavern Rd | $1150 / 1300$ | None |
| CAMBRIA ROAD | 4-way int.-stop <br> control on Sycamore | $1450 / 4800$ | LFTL for NB \& SB Cambria Rd. |
| DIVISION STREET | 4-way int.-stop <br> control on Sycamore | $1800 / 5800$ | LFTL for NB \& SB Divison St. |
| HAFER ROAD | 4-way int.-stop <br> control on College St. | $2500 / 1450$ | None |
| IL 148 | Signalized | $3600 / 18300$ | LFTL for EB \&B College St. |
| BANDYVILLE RD. | "T" intersection-stop <br> control on Bandyville | $6900 / 4650$ | None |
| SKYLINE DRIVE | "T" intersection-stop <br> control on Skyline Dr. | $6900 / 7000$ | LFTL for WB Crenshaw Rd. |
| LAMASTER ROAD | "T" intersection-stop <br> control on Lamaster <br> Rd. | $1900 / 1750$ | LFTL for NB IL 37 |
| IL 37 | "T" int.-stop control <br> on Cedar Grove | $1200 / 9600$ |  |

Table 17

## g. Right of Way Needs

As previously described in the existing conditions section the existing right of way is generally 50 ' to 60 ' in width. This width is insufficient for major improvements such as turn lanes or even the addition of wider shoulders and improved side slopes. In order to upgrade the corridor to a Major Collector/Minor Arterial facility right of way would likely be needed throughout the corridor. Additionally, as can be seen in Exhibit 10 much of the corridor has residential development adjacent to the roadway right of way so additional right of way will have impacts to residential property and thus be more expensive.

Exceptions to this are the section from Bandyville Road to Skyline Drive which has 80 foot right of way and minimal residential development and the section from Skyline Drive to Pease Road which has relatively narrow right of way at 60 feet but has very little residential development. As previously discussed, that surrounding area has been permitted as a construction waste landfill so right of way acquisition in that area for roadway expansion may be problematic.

## h. Utility Adjustments

Since the existing corridor predominately does not meet the design criteria for cross sectional elements extensive utility adjustments would be required for an upgraded facility along the existing alignment. A 3R type of improvement would likely require adjustments to all of the utilities listed in the Existing Conditions section.

Figure 5 below depicts some of the typical utility challenges that would be encountered with a major project along Sycamore Road. A major electric transmission line would require adjustments along with gas, telephone and water lines serving the adjacent residential properties.


FIGURE 5

## i. Potential Connection to US 51:

As previously discussed in the Herrin Corridor analysis a further westward extension of the corridor would provide additional benefits. However, an extension westward from the Lavern Rd/Reed Station Rd intersection would have to be routed northward to avoid the low areas associated with Crab Orchard Creek, Little Crab Orchard Creek, Piles Fork Creek and the Big Muddy River (see Figure 6 below). Longitudinal floodplain impacts are likely as well as impacts to residential property near Reed Station Road. For these reasons a westward expansion of the Crenshaw/College/Sycamore corridor would face significant challenges. Further analysis of this westward expansion is also beyond the scope of this study.

## POSSIBLE CRENSHAW/COLLEGE SYCAMORE CORRIDOR EXPANSION



Figure 6

## j. Cost Estimate

As shown in Table 18 below, the estimated cost to upgrade the Crenshaw/College/Sycamore Corridor to the recommended design criteria is approximately $\$ 36,225,000$. Additional details for the cost segments shown below are included in EXHIBIT 21. Due to the much greater extent of improvements needed to meet the recommended design criteria, the cost to upgrade the Crenshaw/College/Sycamore Corridor is more than twice the costs to upgrade the Herrin Road corridor.

Table 18
Crenshaw/College/Sycamore Preliminary Cost Estimate

| Location | Cost |
| :--- | ---: |
| IL 37 to Skyline Drive (3.2 miles) | $\$ 8,770,000$ |
|  | $\$ 1,200,000$ |
| Skyline Drive to Bandyville Road (1.0 miles) |  |
|  | $\$ 3,440,000$ |
| Bandyville to IL 148 (1.4 miles) | $\mathbf{1 , 7 0 0 , 0 0 0}$ |
|  | $\mathbf{4 , 6 3 0 , 0 0 0}$ |
| IL 148 to Energy Village Limits (1.0 miles) |  |
|  | $\mathbf{9 7 5 , 0 0 0}$ |
| Energy Village Limits to Division Street (1.8 miles) |  |
|  | $\mathbf{4 , 9 3 0 , 0 0 0}$ |
| Division Street to Carterville City Limits (0.5 miles) |  |
|  | $\mathbf{5 , 8 5 5 , 0 0 0}$ |
| Carterville City Limits to Cambria Road (1.8 miles) |  |
|  | $\$ 31,500,000$ |
| Cambria Road to Reed Station Road (2.3 miles) | $\$ 4,725,000.00$ |
|  | $\$ 36,225,000.00$ |
| Total |  |
| Add 15\% contingency |  |
| Grand Total |  |

## PUBLIC INVOLVEMENT

A public meeting to solicit comments regarding this study was held on March 30, 2016 from 4:00 p.m. to 6:00 p.m. at Herrin City Hall. The meeting was attended by 20 people. The handout, attendance list and public comments received are included in Exhibit 22.

A total of 6 comments were received, all of the commenters identified the Herrin Road Corridor as having the most potential to benefit the region's transportation network. Additionally, 4 commenters expressed support for the Herrin Road extension to Reed Station Road and 2 commenters stated that a further expansion to US 51 was also needed.

## CONCLUSION/RECOMMENDATIONS

A matrix of twelve evaluation criteria was used to compare the corridors and is shown in Table 17 below:

Table 17

| Design Criteria | Herrin Road Corridor | Sycamore/College/ <br> Crenshaw Corridor |
| :---: | :---: | :---: |
| Cross Sectional Elements | $\checkmark$ |  |
| Vertical Alignment | $\checkmark$ |  |
| Horizontal Alignment | $\checkmark$ |  |
| Structures | X | X |
| Safety Analysis | x | x |
| Intersection improvements | X | X |
| Right of way impacts | $\checkmark$ |  |
| Utility Adjustments | $\checkmark$ |  |
| Environmental Impacts |  | $\checkmark$ |
| Connection to l-57 | $\checkmark$ |  |
| Regional Benefits | $\checkmark$ |  |
| Estimated Cost | $\checkmark$ |  |

$\sqrt{ }$ indicates the more favorable corridor for the criteria,
X indicates the corridors are similar for the criteria

The Herrin Road corridor is more favorable for 8 of the 12 criteria. Due to the potential wetland and floodplain impacts for the Herrin Road extension, the Sycamore/College/Crenshaw corridor was judged to be more favorable in regards to environmental impacts. The corridors are similar in regards to safety issues, existing structures and needed intersection improvements. Both corridors have $5 \%$ segments that need warrant safety improvements and both corridors will need various intersection improvements as development occurs and traffic increases.

Clearly, the Herrin Road corridor should be the priority for future transportation improvements. Coordinated improvements to the Herrin Road corridor will provide benefits to all of the MPO member communities and agencies. Specifically, the following projects/studies should be pursued as conditions warrant and funding permits:

## Herrin Road Corridor

- SIMPO should continue with planning efforts for the potential Herrin Road extension and opportunities for funding grants should be pursued as they become available.
- From $20^{\text {th }}$ Street to the Elementary School the existing aggregate shoulder should be upgraded to HMA. This improvement would eliminate the only section in the corridor with deficient roadway cross sectional elements.
- Safety improvements within the $5 \%$ segments or at the $5 \%$ intersections should be evaluated for potential HSIP funding.
- The potential need for left turn lanes at Cambria Road and Division Street should be considered in any future improvements at those locations.
- IDOT should advance the previously planned 3R improvement (which included replacement of structures 100-3010 \& 3011) from l-57 westward to the eastern terminus of Contract 78277 (near Christmas Tree Road) as funding permits.
- If an extension to Reed Station Road is advanced, consideration should be given to a further expansion to US 51 and the Southern Illinois Airport.


## Crenshaw/College/Sycamore Corridor

- Safety improvements within the $5 \%$ segments should be evaluated for potential HSIP funding.
- The segment from Bandyville Road to the Energy Village limits should be upgraded to an HMA surface to match the adjacent sections to the east and west (although currently oil and chip, the section to the west is scheduled for HMA resurfacing by the Village of Energy in 2016).

EXHIBIT 1




EAST WEST CORRIDORS MAP

## EXHIBIT 2




SHLD TYPE KEY: 2=sod, 3=aggregate, 5=HMA, 9=C\&G
SURF TYPE KEY: 300=O\&C, 500=HMA FD, 600=HMA over PCC, 700=PCC


JURISDICTION KEY: 1=State, 3=County 4=City, 9=TWNSHP


SHLD TYPE KEY: 2=sod, 3=aggregate, 5=HMA, 9=C\&G
SURF TYPE KEY: 300=O\&C, 500=HMA FD, 600=HMA over PCC, 700=PCC

JURISDICTION KEY: 1=State, 3=County 4=City, 9=TWNSHP

State Maintenance

## County Maintenance

Municipal Maintenance



















## EXHIBIT 3

## HERRIN ROAD - EXISTING STRUCTURES
















## EXHIBIT 4






EXHIBIT 5






















Ms-1ІІІнX3












## EXHIBIT 6




## Club Road Utilities




## Herrin Road Utilities east of Cambria Road




Herrin Road Utilities in Herrin City limits







## EXHIBIT 7





SHLD TYPE KEY: 2=sod, 3=aggregate, 5=HMA, 9=C\&G
SURF TYPE KEY: 300=O\&C, 500=HMA FD, 600=HMA over PCC, 700=PCC

JURISDICTION KEY: $1=$ State, $3=$ County $4=$ City, $9=$ TWNSHP

State Maintenance
County Maintenance
Municipal Maintenance $\qquad$


SHLD TYPE KEY: 2=sod, 3=aggregate, $5=$ HMA, $9=$ C\&G
SURF TYPE KEY: $300=0 \& C, 500=H M A$ FD, $600=H M A$ over PCC, 700=PCC

JURISDICTION KEY: 1=State, 3=County 4=City, 9=TWNSH

| State Maintenance |
| :--- | :--- |
| County Maintenance |
| Municipal Maintenance |




















## EXHIBIT 8








## EXHIBIT 9




## EXHIBIT 10














60 ft . row starts just west of Division St.
























## EXHIBIT 11




## Lavern Rd Utilities East of Reed Station Rd




## Sycamore utilities west of Division St




## Sycamore utilities east of Division St




College St Utilities west of IL 148



## College Street Utilities East of IL 148






## Crenshaw Rd Utilities west of I-57




Crenshaw Rd Utilities east of I-57



## EXHIBIT 12

| HERRIN ROAD - SIGHT DISTANCE CHECK |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Alignment: Existing | Eye Height:3.5 ft |  | Object Height:0.5 ft |  |
| Station | Actual Sight <br> Distance | Minimum <br> Sight Distance | Obstruction Point | Violated? |
| Cambria Rd. $=0+00$ | $305+$ | 305 | None | No |
| Cundiff Rd. (25+90) | 305+ | 305 | None | No |
| Laminack Rd (53+10) | 305+ | 305 | None | No |
| Greenbrier Rd (79+55) | $305+$ | 305 | None | No |
| Madison St (116+40) | 305+ | 305 | None | No |
| 120+10 (Friendship Rd) | 305+ | 305 | None | No |
| Gentile St (126+60) | $305+$ | 305 | None | No |
| Division St (133+50) | $305+$ | 305 | None | No |
| Sunnyside Ln (160+40) | $305+$ | 305 | None | No |
| Packer Ln (162+40) | 305+ | 305 | None | No |
| Allen Rd (187+20) | 305+ | 305 | None | No |
| Camarato Dr. (207+40) | $305+$ | 305 | None | No |
| N. 35th St (214+40) | 305+ | 305 | None | No |
| N. 33rd St (221+25) | 305+ | 305 | None | No |
| N 31st St (227+80) | $305+$ | 305 | None | No |
| N 30th St (231+10) | 305+ | 305 | None | No |
| N 29th St (234+40) | $305+$ | 305 | None | No |
| N 23rd St (252+20) | 305+ | 305 | None | No |
| N 21st St (257+40) | 305+ | 305 | None | No |
| N 20th St (260+70) | $305+$ | 305 | None | No |
| Weaver Rd (265+40) | 305+ | 305 | None | No |
| N 18th St (267+60) | 305+ | 305 | None | No |
| N 17th St (271+25) | 305+ | 305 | None | No |
| N 16th St (274+55) | 305+ | 305 | None | No |
| IL 148 (277+95) | $305+$ | 305 | None | No |
| N 14th St (281+00) | 305+ | 305 | None | No |
| N 13th St (284+60) | $305+$ | 305 | None | No |
| N 12th St (287+90) | 305+ | 305 | None | No |
| N 11th St (291+40) | 305+ | 305 | None | No |
| N 9th St (298+60) | $305+$ | 305 | None | No |
| N 8th St (301+30) | 305+ | 305 | None | No |
| N 7th St (304+60) | 305+ | 305 | None | No |
| N 5th St (311+20) | 305+ | 305 | None | No |
| N 4th St (317+75) | 305+ | 305 | None | No |
| N 3rd St (324+40) | 305+ | 305 | None | No |

EXHIBIT 12A

| Bandyville Rd (351+40) | $305+$ | 305 | None | No |
| :--- | :--- | :--- | :--- | :--- |
| Christmas Tree Rd (417+40) | $305+$ | 305 | None | No |
| Pumpkin Patch Rd (470+60) | $305+$ | 305 | None | No |
| Stardust Rd (497+30) | $305+$ | 305 | None | No |
| Meadows Ln (511+30) | $305+$ | 305 | None | No |
| SB I-57 ramp (519+40) | $305+$ | 305 | None | No |
| I-57 (526+20) | $305+$ | 305 | None | No |
| NB I-57 ramps (530+60) | $305+$ | 305 | None | No |
| Prosperity Ave (537+40) | $305+$ | 305 | None | No |
| Taft Ave (542+75) | $305+$ | 305 | None |  |
| Nelson Ave (546+75) | $305+$ | 305 | None | No |
| Johnson Ave (550+75) | $305+$ | 305 | None | No |
| Trout Ave (555+75) | $305+$ | 305 | None | No |
| Davis Ave (559+75) | $305+$ | 305 | None | No |
| IL 37 (564+50) | $305+$ | 305 |  | No |

## EXHIBIT 13

Herrin Road 5\% Intersection at Cambria road



Herrin Road 5\% Intersection at $13^{\text {th }}$ Street



## EXHIBIT 14



Herrin Road 5\% Segment - Bandyville Rd to east of Pumpkin Patch Rd


## EXHIBIT 15

```
Left Turn Lane Warrants
```

(Est. with


Herrin Rd EB at Cambria Rd - not warranted
Cambria Rd SB - consider LFTL

Left Turn Lane Warrants

Herrin Rd \& Division St Herrin Road WB meets criteria for LFTL consideration


Left Turn Lane Warrants

Herrin Rd \& Allen Rd. WB Herrin Rd meets criteria for LFTL consideration.



Allen Rd NB - Not warranted
Herrin Rd WB - consider LFTL

Herrin Rd at $35^{\text {th }} \mathrm{St}$.

Herrin Rd \& $35^{\text {th }}$ St. - WB
Herrin Rd meets criteria
for LFTL consideration



VOLUME GUIDELINES FOR LEFT-TURN LANES AT UNSIGNALIZED
EXHIBIT 15D

Left Turn Lane Warrants

Herrin Rd \& $16^{\text {th }}$ Street - LFTL already provided on Herrin Rd, not needed for NB $15{ }^{\text {th }}$ Street (" $T$ " intersection)

Herrin Rd \& $16^{\text {th }}$ St

## DHV 640

 W CC85001wy| 몿 | 250 | E Ta75)rSt |
| :---: | :---: | :---: |
|  |  | $\begin{aligned} & Z \\ & \vec{A} \end{aligned}$ |
|  | 350 | 900 |

Left Turn Lane Warrants

Herrin Rd \& $13^{\text {th }} \& 11^{\text {th }}$ St Intersections

- LFTL exists on Herrin Road, not warranted on $13^{\text {th }}$ or $11^{\text {th }} \mathrm{St}$.




## Herrin Rd at Bandyville Rd




```
Left Turn Lane Warrants
```

Herrin Rd \& I-57 Ramps - Consider LFTL for WB to SB and EB to NB movements.

Herrin Rd at I-57



## EXHIBIT 16





| Moppicant: | Greater Egypt Regional Planning and Development <br> Commission | IDNR Froject Number: | 1602253 |
| :--- | :--- | :--- | :--- |
| Contact: | Cary Minnis | Date: | $08 / 25 / 2015$ |
| Adcyess: | 3000 West Deyoung St. Suite $800 \mathrm{~B}-3$ |  |  |
|  | Marion, IL 62959 |  |  |
| Project: | Herrin Road Extension |  |  |
| Address: | 326 Vermont Rd, Carterville |  |  |

Description: New alignment to mitigate existing flooding.

```
                    Natural Resource Review Results
Consultation for Endangered Species Protection and Natural Areas Preservation (Part 1075)
The Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location.
Wetland Review (Part 1090)
The Illinois Wetlands Irwentory shows wetlands within 250 feet of the project location.
```

An IDNR staff member will evaluate this information and contact you to request additional information or to terminate consultation if adverse effects are unlikely.

## Location

The applicant is responsible for the accuracy of the location submitted for the project.

| County: Jackson | County: Williamson |
| :--- | :--- |
| Township, Range, Section: | Township, Range, Section: |
| $88,1 \mathrm{~W}, 24$ | $\prime \prime$ |
| $88,1 \mathrm{~W}, 25$ | $\prime \prime$ |
| $8 \mathrm{~S}, 1 \mathrm{~W}, 36$ | $\prime \prime$ |
| $\prime \prime$ | $88,1 \mathrm{E}, 19$ |
| $\prime \prime$ | $88,1 \mathrm{E}, 20$ |



IL Department of Natural Resources Contact
Sheldon Fairfield
217-785-5500
Division of Ecosystems \& Environment

Government Jurisdiction
IL Department of Commerce and Economic Opportunity David Wortman
500 E Monroe St
Springfield, Illinois 62701

## FEMA 100 year Flood Plain





## EXHIBIT 17

## HERRIN ROAD CORRIDOR PRELIMINARY COST ESTIMATE

| ITEM | QUANTITY | UNIT | UNIT PRICE | TOTAL |
| :---: | :---: | :---: | :---: | :---: |
| HERRIN ROAD EXTENSION |  |  |  |  |
| Tree Removal (Over 15") | 325 | inch | \$30 | \$9,750 |
| Tree Removal Acres | 14 | acres | \$2,875 | \$40,250 |
| Earth Excavation | 304,000 | Cubic Yard | \$7 | \$2,128,000 |
| Trench Backfill | 1,100 | Cubic yard | \$35 | \$37,950 |
| Mulch | 30 | acres | \$600 | \$18,000 |
| Erosion Control Blanket | 60,000 | Square Yard | \$2 | \$120,000 |
| Seeding Class II | 40 | acres | \$2,875 | \$115,000 |
| Temporary Ditch Checks | 150 | Each | \$58 | \$8,625 |
| Perimeter Erosion Barrier | 36,000 | foot | \$2 | \$86,400 |
| Stone Dumped Riprap, Class A4 | 400 | Square Yard | \$32 | \$12,880 |
| Subbase Granular Material, Type A (for widening) | 888 | Ton | \$40 | \$35,520 |
| Bituminous Materials Prime Coat | 16,000 | Gallon | \$2 | \$37,600 |
| Processing Lime Modified Soil | 83,066 | Square Yard | \$3 | \$207,665 |
| Lime | 2,303 | Ton | \$70 | \$161,210 |
| Hot Mix Asphalt Binder Course | 19,002 | Ton | \$100 | \$1,900,200 |
| Hot Mix Asphalt Shoulders | 18,870 | Ton | \$90 | \$1,698,300 |
| Hot Mix Asphalt Surface Course | 6,511 | Ton | \$115 | \$748,765 |
| Hot Mix Asphalt Base Course Widening | 896 | Ton | \$100 | \$89,600 |
| Removal of Existing Structure | 1 | Each | \$1,150 | \$1,150 |
| Pipe Culvert Removal | 500 | Lin. Foot | \$10 | \$5,000 |
| Structure - 40' wide by 200' length | 1 | Each | \$1,500,000 | \$1,500,000 |
| 7x5 Box Culvert | 125 | Lineal Foot | \$700 | \$87,500 |
| 15" CMP Entrance Culverts | 770 | Lineal Foot | \$25 | \$19,250 |
| Mail Box Relocation | 10 | Each | \$865 | \$8,650 |
| Steel Plate Beam Guardrail | 500 | Lineal Foot | \$25 | \$12,500 |
| Steel Bridge Rail | 400 | Lineal Foot | \$200 | \$80,000 |
| Traffic Barrier Terminal, Type 1 | 4 | Each | \$2,500 | \$10,000 |
| Traffic Barrier Terminal, Type 6 | 4 | Each | \$4,500 | \$18,000 |
| Temporary Access | 1 | Lump Sum | \$50,000 | \$50,000 |
| Traffic Control | 1 | Lump sum | \$100,000 | \$100,000 |
| Contingency 10\% |  |  |  | \$1,000,000 |
| Wetland Mitigation (assume 4 ac @ 5.5:1 ratio) | 22 | acres | \$20,000 | \$440,000 |
| Tree Replacement | 1 | Lump Sum | \$50,000 | \$50,000 |
| Total Construction Cost |  |  |  | \$10,837,765 |
| Utility Adjustments (Herrin Rd Extension) |  |  |  |  |
| Water Main Adjustment | 1 | Lump Sum | \$30,000 | \$500,000 |
| Overhead Power (Laverne to Vaughn) | 1 | Lump Sum | \$500,000 | \$500,000 |
| Telephone (Laverne to Vaughn) | 1 | Lump Sum | \$400,000 | \$400,000 |


| Total Utilities Cost |  |  |  | \$1,400,000 |
| :---: | :---: | :---: | :---: | :---: |
| Engineering (Herrin Rd Extension) |  |  |  |  |
| Phase I | 1 | Lump Sum | \$800,000 | \$800,000 |
| Phase II | 1 | Lump Sum | \$750,000 | \$750,000 |
| Phase III | 1 | Lump Sum | \$600,000 | \$600,000 |
| Total Engineering Cost (Herrin Rd Extension) |  |  |  | \$2,150,000 |
|  |  |  |  |  |
| Right of Way (Herrin Rd Extension) |  |  |  |  |
| Survey \& Description | 50 | Parcel | \$2,000 | \$100,000 |
| Appraisal | 50 | Parcel | \$4,000 | \$200,000 |
| Negotiation | 50 | Parcel | \$2,500 | \$125,000 |
| Parcel Cost | 40 | Acres | \$10,000 | \$400,000 |
| Laverne to Vaughn right of way \& easement cost | 200,000 | square ft. | \$2.00 | \$400,000 |
| Total Right of Way Cost (Herrin Rd Extension) |  |  |  | \$1,225,000 |
| Total Cost of Herrin Rd Extension |  |  |  | \$15,612,765 |
| Structures |  |  |  |  |
| 100-3010 | 1 | Lump Sum | \$600,000 | \$600,000 |
| 100-3011 | 1 | Lump Sum | \$600,000 | \$600,000 |
| Total Structure Cost |  |  |  | \$1,200,000 |
| 20th Street to Elementary School paved shoulders |  |  |  | \$500,000 |
| Grand Total |  |  |  | \$17,312,765 |

## EXHIBIT 17B

## EXHIBIT 18

| Crenshaw/College/Sycamore - Sight Distance Check |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Alignment: Existing | Eye Height: 3.5 ft |  | Object Height: 0.5 ft |  |
| Station | Actual Sight Distance | Minimum <br> Sight <br> Distance | Obstruction Point | Violated? |
| Reed Sta. Rd (0+00) |  |  |  |  |
| 7+00.00' | 278.00' | 305.00' | (2588239.3062',404744.7016',411.9546') | Yes |
| 7+50.00' | 232.50' | 305.00' | (2588243.8061',404744.7143',411.8784') | Yes |
| 8+00.00' | 201.50' | 305.00' | (2588262.8061',404744.7679',411.5413') | Yes |
| 8+50.00' | 184.50' | 305.00' | (2588295.8059',404744.8610',410.5872') | Yes |
| 36+00.00' | 289.50' | 305.00' | (2591150.7625',404754.1448',410.1459') | Yes |
| 36+50.00' | 260.00' | 305.00' | (2591171.2617',404754.3263',410.0248') | Yes |
| 37+00.00' | 253.93' | 305.00' | (2591215.1913',404754.7154',409.6491') | Yes |
| 44+00.00' | 294.00' | 305.00' | (2591954.9253',404775.2055',410.9198') | Yes |
| 44+50.00' | 266.00' | 305.00' | (2591976.9224',404775.5639',410.5472') | Yes |
| 45+00.00' | 286.00' | 305.00' | (2592046.9131',404776.7041',409.3260') | Yes |
| Burghoff Street (57+00) |  |  |  |  |
| Strawberry Road (66+75) |  |  |  |  |
| 72+00.00' | 274.00' | 305.00' | (2594734.4426',404823.5305',438.3590') | Yes |
| 72+50.00' | 239.50' | 305.00' | (2594749.9404',404823.7929',438.1813') | Yes |
| 73+00.00' | 216.00' | 305.00' | (2594776.4366',404824.2415',437.7617') | Yes |
| 73+50.00' | 270.00' | 305.00' | (2594880.4217',404826.0021',435.7288') | Yes |
| Downey Cr. Rd (80+00) |  |  |  |  |
| 85+00.00' | 292.00' | 305.00' | (2596052.2388',404846.6970',426.3787') | Yes |
| 85+50.00' | 253.00' | 305.00' | (2596063.2370',404846.8955',425.9540') | Yes |
| 86+00.00' | 219.00' | 305.00' | (2596079.2344',404847.1843',425.2257') | Yes |
| 86+50.00' | 195.50' | 305.00' | (2596105.7301',404847.6625',423.8276') | Yes |
| 87+00.00' | $248.50{ }^{\prime}$ | 305.00' | (2596208.7133',404849.5213',417.7185') | Yes |
| Cambria Rd (120+00) |  |  |  |  |
| 166+00.00' | 297.50' | 305.00' | (2604156.9052',404943.3406',458.5566') | Yes |
| 166+50.00' | 245.00' | 305.00' | (2604154.4053',404943.3159',458.5657') | Yes |
| 167+00.00' | 200.00' | 305.00' | (2604159.4051',404943.3653',458.5475') | Yes |
| 167+50.00' | 187.00' | 305.00' | (2604196.4033',404943.7303',458.4127') | Yes |
| 178+50.00' | 259.45' | 305.00' | (2605368.7703',404957.2889',481.5040') | Yes |
| 179+00.00' | 230.27' | 305.00' | (2605389.5955',404957.4361',481.5915') | Yes |
| 179+50.00' | 224.01' | 305.00' | (2605433.3352',404957.7452',481.3776') | Yes |
| 180+00.00' | 223.93' | 305.00' | (2605483.2484',404958.0980',480.5366') | Yes |
| 180+50.00' | 233.86' | 305.00' | (2605543.1834',404958.5216',478.7462') | Yes |
| 184+00.00' | 254.00' | $305.00 '$ | (2605913.3110',404961.1377',488.7859') | Yes |
| 184+50.00' | 220.50' | 305.00' | (2605929.8106',404961.2543',488.9156') | Yes |
| 185+00.00' | 202.85' | 305.00' | (2605962.1613',404961.4830',488.9199') | Yes |

## EXHIBIT 18A

| 185+50.00' | 201.48' | 305.00' | (2606010.7893',404961.8470',488.2823') | Yes |
| :---: | :---: | :---: | :---: | :---: |
| 186+00.00' | 201.62' | 305.00' | (2606060.9267',404962.2456',486.8128') | Yes |
| Greenbrier Rd(188+50) |  |  |  |  |
| 227+00.00' | 291.50' | 305.00' | (2610250.6913',404993.3189',440.9576') | Yes |
| 227+50.00' | 236.50' | $305.00{ }^{\prime}$ | (2610245.6914',404993.2816',441.0672') | Yes |
| 228+00.00' | 195.50' | $305.00{ }^{\prime}$ | (2610254.6912',404993.3488',440.8700') | Yes |
| 230+50.00' | 291.00' | 305.00' | (2610600.1815',404995.9310',446.5588') | Yes |
| 231+00.00' | 243.50' | $305.00{ }^{\prime}$ | (2610602.6814',404995.9497',446.5370') | Yes |
| 231+50.00' | 203.50' | $305.00{ }^{\prime}$ | (2610612.6812',404996.0244',446.3916') | Yes |
| 232+00.00' | $166.50{ }^{\prime}$ | $305.00{ }^{\prime}$ | (2610625.6808',404996.1216',446.0621') | Yes |
| 232+50.00' | 144.50' | $305.00{ }^{\prime}$ | (2610653.6800',404996.3309',445.0284') | Yes |
| 233+00.00' | 145.50' | $305.00{ }^{\prime}$ | (2610704.6786',404996.7120',441.9238') | Yes |
| Division St (241+60) |  |  |  |  |
| 246+00.00' | 256.50' | 305.00' | (2612115.6504',405005.4428', 414.8535') | Yes |
| 246+50.00' | 203.00' | $305.00{ }^{\prime}$ | (2612112.1504',405005.4259',414.9315') | Yes |
| 247+00.00' | 156.00' | $305.00{ }^{\prime}$ | (2612115.1504',405005.4404',414.8653') | Yes |
| 250+50.00' | $285.00{ }^{\prime}$ | $305.00{ }^{\prime}$ | (2612594.1448',405007.7582',435.4506') | Yes |
| 251+00.00' | 240.00' | $305.00{ }^{\prime}$ | (2612599.1447',405007.7824',435.5675') | Yes |
| 251+50.00' | 201.50' | 305.00' | (2612610.6446',405007.8380',435.8117') | Yes |
| 252+00.00' | 161.50' | $305.00{ }^{\prime}$ | (2612620.6445',405007.8864',435.8811') | Yes |
| 252+50.00' | 135.50' | 305.00' | (2612644.6442',405008.0025',435.7576') | Yes |
| Woodland Dr.$(252+75)$ |  |  |  |  |
| 253+00.00' | 133.00' | 305.00' | (2612692.1436',405008.2324',434.3381') | Yes |
| 255+00.00' | 303.91' | $305.00{ }^{\prime}$ | (2613063.0483',405010.2354',428.1080') | Yes |
| 255+50.00' | 253.68' | $305.00{ }^{\prime}$ | (2613062.8139',405010.2336',428.1180') | Yes |
| 256+00.00' | 217.44' | 305.00' | (2613076.5739',405010.3419',427.5324') | Yes |
| 256+50.00' | 208.84' | $305.00{ }^{\prime}$ | (2613117.9790',405010.6679',425.5557') | Yes |
| 263+00.00' | 269.50' | 305.00' | (2613828.6142',405016.2630',431.1776') | Yes |
| 263+50.00' | 233.00' | $305.00{ }^{\prime}$ | (2613842.1138',405016.3693',431.0993') | Yes |
| 264+00.00' | 219.00' | $305.00{ }^{\prime}$ | (2613878.1127',405016.6527',430.6890') | Yes |
| 271+50.00' | 282.50' | 305.00' | (2614691.5875',405023.0574',442.9157') | Yes |
| 272+00.00' | 263.50' | $305.00{ }^{\prime}$ | (2614722.5865',405023.3015',442.2336') | Yes |
| 272+50.00' | 259.00' | $305.00{ }^{\prime}$ | (2614768.0851',405023.6597',440.8897') | Yes |
| 273+00.00' | 263.21' | $305.00{ }^{\prime}$ | (2614822.2943',405024.0865',438.8156') | Yes |
| 302+00.00' | 276.00' | $305.00{ }^{\prime}$ | (2617734.8267',405039.4826',418.8356') | Yes |
| 302+50.00' | 243.00' | 305.00' | (2617751.8261',405039.6274',418.8989') | Yes |
| 303+00.00' | 223.00' | $305.00{ }^{\prime}$ | (2617781.8250',405039.8831',418.8783') | Yes |
| Birch Lane (306+25) |  |  |  |  |
| Winterset Dr. (319+75) |  |  |  |  |
| Hafer Rd (322+40) |  |  |  |  |
| S. 27th St (349+25) |  |  |  |  |

## EXHIBIT 18B

| McVicker Dr. (362+50) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| McGinnis St (363+70) |  |  |  |  |
| Jackson Lane (370+50) |  |  |  |  |
| 370+50.00' | 305.00' | 305.00' |  | No |
| Shannon Ave (370+50) |  |  |  |  |
| Maple Street (378+25) |  |  |  |  |
| Pine St (380+50) |  |  |  |  |
| 381+00.00' | 305.00' | 305.00' |  | No |
| Thompson St (381+20) |  |  |  |  |
| Caswell St (383+75) |  |  |  |  |
| McNeil St (386+40) |  |  |  |  |
| IL 148 (389+00) |  |  |  |  |
| Front St (391+50) |  |  |  |  |
| Madison St (393+10) |  |  |  |  |
| Ryan Dr. (402+50) |  |  |  |  |
| Cardinal Lane (405+10) |  |  |  |  |
| 435+50.00' | 268.50' | 305.00' | (2631075.7614',405217.0659',486.1307') | Yes |
| 436+00.00' | $220.50{ }^{\prime}$ | 305.00' | (2631077.7613',405217.0864',486.1190') | Yes |
| 436+50.00' | 174.50' | 305.00' | (2631081.7611',405217.1273',486.0956') | Yes |
| 437+00.00' | 132.00' | 305.00' | (2631089.2607',405217.2041',485.8904') | Yes |
| 437+50.00' | 103.00' | $305.00{ }^{\prime}$ | (2631110.2596',405217.4191',485.1886') | Yes |
| Bandyville Rd (458+90) |  |  |  |  |
| 459+00.00' | 271.00' | 305.00' | (2633427.4701',405275.3300',449.2629') | Yes |
| 459+50.00' | 215.00' | 305.00' | (2633421.4709',405275.2273',449.3100') | Yes |
| 460+00.00' | 168.50' | 305.00' | (2633424.9704',405275.2872',449.2825') | Yes |
| 460+50.00' | 136.00' | 305.00' | (2633442.4679',405275.5867',448.9545') | Yes |
| 461+00.00' | 133.00' | 305.00' | (2633489.4610',405276.3909',447.0456') | Yes |
| 469+00.00' | 274.87' | 305.00' | (2634431.1606',405293.4049',451.5167') | Yes |
| 469+50.00' | 223.52' | 305.00' | (2634429.8123',405293.4034',451.4998') | Yes |
| 470+00.00' | 177.74' | 305.00' | (2634434.0346',405293.4082',451.5071') | Yes |
| 470+50.00' | 151.71' | 305.00' | (2634458.0065',405293.4356',451.2385') | Yes |
| 471+00.00' | 180.28' | 305.00' | (2634536.5710',405293.5255',449.6231') | Yes |
| Skyline Drive (511+40) |  |  |  |  |
| 532+50.00' | 304.77' | $305.00{ }^{\prime}$ | (2640810.1071',405347.0791',452.4459') | Yes |
| Decatur Rd (532+90) |  |  |  |  |
| 533+00.00' | 271.94' | 305.00' | (2640827.2649',405347.8983',452.2354') | Yes |
| 533+50.00' | 277.26' | 305.00' | (2640882.5175',405350.5364',451.4949') | Yes |
| 542+50.00' | 301.65' | 305.00' | (2641806.5259',405370.3267',479.8422') | Yes |
| 543+00.00' | 257.83' | 305.00' | (2641812.7058',405370.3569',479.7842') | Yes |
| 543+50.00' | 217.74' | 305.00' | (2641822.6071',405370.4052',479.6913') | Yes |
| 544+00.00' | 190.84' | 305.00' | (2641845.7082',405370.5181',479.3064') | Yes |

## EXHIBIT 18C

| 544+50.00' | 177.88' | 305.00' | (2641882.7512',405370.6990',478.2682') | Yes |
| :---: | :---: | :---: | :---: | :---: |
| 553+00.00' | 283.82' | 305.00' | (2642651.4499',404943.0514',484.2801') | Yes |
| 553+50.00' | 255.00' | 305.00' | (2642663.7215',404925.7926',484.9460') | Yes |
| 554+00.00' | 240.50' | 305.00' | (2642684.2931',404896.8606',485.8192') | Yes |
| 554+50.00' | 245.50' | 305.00' | (2642716.1647',404852.0365',486.6931') | Yes |
| 577+50.00' | 273.62' | 305.00' | (2644331.2677',403191.6284',486.9791') | Yes |
| 578+00.00' | 232.60' | 305.00' | (2644337.3494',403185.0200',486.7359') | Yes |
| 578+50.00' | 202.07' | 305.00' | (2644350.5307',403170.6970',486.1454') | Yes |
| 579+00.00' | 168.21' | 305.00' | (2644361.4602',403158.8208',485.4750') | Yes |
| 579+50.00' | 166.27' | 305.00' | (2644394.0065',403123.4557',482.8569') | Yes |
| 584+00.00' | 298.03' | 305.00' | (2644931.4962',402936.8971',490.2190') | Yes |
| 584+50.00' | 279.23' | 305.00' | (2644962.3345',402932.1560',490.5713') | Yes |
| 585+00.00' | 278.39' | 305.00' | (2645011.1963',402926.9596',490.7819') | Yes |
| 585+50.00' | 281.27' | 305.00' | (2645063.9213',402922.9052',490.5205') | Yes |
| 586+00.00' | 282.74' | 305.00' | (2645115.3004',402919.9974',489.8204') | Yes |
| Cedar Gr Rd ( $623+00$ ) |  |  |  |  |
| l-57 (633+00) |  |  |  |  |
| 633+50.00' | 305.00' | 305.00' |  | No |
| $634+00.00 '$ | 301.40' | 305.00' | (2648895.0229',401508.8586',507.6012') | Yes |
| 634+50.00' | 271.00' | 305.00' | (2648914.6177',401509.3099',506.8885') | Yes |
| Lamaster Rd (640+50) |  |  |  |  |
| 640+50.00' | 305.00' | 305.00' |  | No |
| 641+00.00' | 305.00' | 305.00' |  | No |
| Trolley Line (641+25) |  |  |  |  |
| 641+50.00' | 305.00' | 305.00' |  | No |
| 642+00.00' | 303.20' | 305.00' | (2649696.7126',401520.7313',516.9988') | Yes |
| 642+50.00' | 283.49' | 305.00' | (2649726.9976',401520.9735',516.9940') | Yes |
| Penn. Dr. (646+60) |  |  |  |  |
| White Pine ( $663+30$ ) |  |  |  |  |
| 659+00.00' | 305.00' | 305.00' |  | No |
| 659+50.00' | 305.00' | 305.00' |  | No |
| 660+00.00' | 305.00' | 305.00' |  | No |
| 660+50.00' | 275.53' | 305.00' | (2651518.9825',401507.4631',518.4077') | Yes |
| 661+00.00' | 254.24' | 305.00' | (2651547.6904',401507.7497',517.2940') | Yes |
| $661+50.00 '$ | 236.86' | 305.00' | (2651580.3168',401508.0753',515.7937') | Yes |
| 662+00.00' | 253.67' | 305.00' | (2651647.1200',401508.7422',512.2374') | Yes |
| 675+00.00' | 303.30' | 305.00' | (2652996.7179',401500.8456',513.5026') | Yes |
| 675+50.00' | 264.00' | 305.00' | (2653007.4117',401500.7771',513.1712') | Yes |
| 676+00.00' | 230.51' | 305.00' | (2653023.9217',401500.6713',512.6171') | Yes |
| IL 37 (680+70) |  |  |  |  |

## EXHIBIT 18D

## EXHIBIT 19

Lavern Road 5\% Segment


College St. $5 \%$ Segment



No injuries resulted from the 8 Animal crashes in this segment

Crenshaw Rd. 5\% Segment



## EXHIBIT 20




```
Left Turn Lane Warrants
```

Sycamore Rd \& Cambria Rd - consider LFTL on Cambria Rd NB \& SB


$\square$

## Left Turn Lane Warrants

Sycamore Rd \& Division St consider LFTL on Division St NB \& SB



VOLUME GUIDELINES FOR LEFT-TURN LANES AT UNSIGNALIZED
INTERSECTIONS ON TWO-LANE HIGHWAYS
EXHIBIT 20C
( 60 mph Design Speed)

## Sycamore Rd EB - Not Warranted

Sycamore Rd WB - Not Warranted

College St \& Hafer Rd.



## VOLUME GUIDELINES FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON TWO-LANE HIGHWAYS

EXHIBIT 20D




## Left Turn Lane Warrants

Crenshaw Rd \& Skyline Dr. consider LFTL for WB Crenshaw Rd (left turn movement likely exceeds $15 \%$ of WB traffic)



## Left Turn Lane Warrants

Crenshaw Rd \& LaMaster Rd - No LFTL warranted



## Left Turn Lane Warrants

Crenshaw Rd \& IL 37

## Crenshaw Rd \& IL 13 - consider LFTL


for NB IL 37.


VOLUME GUIDELINES FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON TWO-LANE HIGHWAYS
EXHIBIT 20H

## EXHIBIT 21

## Crenshaw/College/Sycamore Estimate

| Location | Cost |
| :---: | :---: |
| IL 37 to Skyline Drive ( $\mathbf{3 . 2}$ miles) |  |
| Pavement/Subgrade/Shoulders/Earthwork @ \$1M per mile | \$3,200,000 |
| Vertical Curve Corrections - 9 @ \$300k each | \$2,700,000 |
| Utilities @ \$250k per mile | \$800,000 |
| Right of way @ \$100k per mile | \$320,000 |
| 10 trunk line power poles @ \$25k each | \$250,000 |
| Horizontal Curve relocations @ \$500k each | \$1,500,000 |
|  | \$8,770,000 |
|  |  |
| Skyline Drive to Bandyville Road (1.0 miles) |  |
| Pavement/Subgrade/Shoulders/Earthwork- existing is adequate | \$0 |
| Vertical Curve Corrections - 2 @ \$300k each | \$600,000 |
| Left Turn Lane for WB Crenshaw Road | \$500,000 |
| Right Turn Lane for NB Skyline Drive | \$100,000 |
|  | \$1,200,000 |
| Bandyville to IL 148 (1.4 miles) |  |
| Pavement/Subgrade/Shoulders/Earthwork @ \$1M per mile | 1,400,000 |
| Vertical Curve Corrections - 1 @ \$300k each | 300,000 |
| Utilities @ \$250k per mile | 350,000 |
| Right of way @ \$100k per mile | 140,000 |
| 50 trunk line power poles @ \$25k each | 1,250,000 |
|  | \$3,440,000 |
| IL 148 to Energy Village Limits (1.0 miles) |  |
| Pavement/Subgrade/Shoulders/Earthwork @ \$1M per mile | 1,000,000 |
| Vertical Curve Corrections - 0 @ \$300k each | 0 |
| Utilities (\$250k added due to dense urban area) | 500,000 |
| Right of Way (\$100K added due to dense urban area) | 200,000 |
|  | 1,700,000 |
| Energy Village Limits to Division Street (1.8 miles) |  |
| Pavement/Subgrade/Shoulders/Earthwork @ \$1M per mile | 1,800,000 |
| Vertical Curve Corrections - 5 @ \$300k each | 1,500,000 |
| Utilities @ 250k per mile | 450,000 |
| 20 trunk line power poles @ 25 k each | 500,000 |
| Right of Way @100k per mile | 180,000 |
| New Culvert West of Energy | $\underline{200,000}$ |
|  | 4,630,000 |
| Division Street to Carterville City Limits ( 0.5 miles) |  |
| Pavement/Subgrade/Shoulders/Earthwork @ \$1M per mile | 500,000 |
| Vertical Curve Corrections - 1 @ \$300k each | 300,000 |


| Utilities @ \$250k per mile | 125,000 |
| :---: | :---: |
| Right of Way @ \$100K per mile | 50,000 |
|  | 975,000 |
| Carterville City Limits to Cambria Road ( 1.8 miles) |  |
| Pavement/Subgrade/Shoulders/Earthwork @ \$1M per mile | 1,800,000 |
| Vertical Curve Corrections - 4 @ \$300k each | 1,200,000 |
| Utilities @ 250 k per mile | 450,000 |
| 53 trunk line power poles @ 25 k each | 1,300,000 |
| Right of Way @100k per mile | 180,000 |
|  | 4,930,000 |
|  |  |
| Cambria Road to Reed Station Road ( $\mathbf{2 . 3}$ miles) |  |
| Pavement/Subgrade/Shoulders/Earthwork @ \$1M per mile | 2,300,000 |
| Vertical Curve Corrections - 5 @ \$300k each | 1,500,000 |
| Utilities @ 250 k per mile | 575,000 |
| Right of Way @100k per mile | 180,000 |
| New Bridge at Cambria Creek | 400,000 |
| 36 trunk line power poles @ 25 k each | 900,000 |
|  | 5,855,000 |
|  |  |
| Total | \$31,500,000 |
| Add 15\% contingency | \$4,725,000.00 |
| Grand Total | \$36,225,000.00 |

## EXHIBIT 22

## East/West Corridor Study

## Introduction

Welcome to the Public Information Meeting conducted for the East/West Corridor Study. This meeting is a part of our public involvement process which provides study information and an opportunity for public comments and suggestions.

The success of this meeting depends on citizen participation. Please examine the displays presented and discuss the study with staff members.

If you wish to provide additional comments after the meeting, a pre-addressed comment sheet is provided for your convenience. This sheet can be folded and stapled or taped. Mailing requires proper postage. If you write your comments at this meeting, you may leave the sheet at the comment table. Also, please visit our website at: http://www.greateregypt.org/SIMPO/simpo-eastwest-corridor-study/ to complete a brief interactive survey for the study.

## Purpose of this Meeting

The purpose of this informational meeting is to obtain public input regarding east/west transportation corridors within the MPO planning area. Your input regarding the need to identify and plan for an additional east/west transportation corridor within the SIMPO planning area is requested. In addition, please provide your suggestions or comments for any transportation improvements that you feel are needed along the corridors.

## Next Steps

SIMPO staff will evaluate the existing conditions along each corridor, features such as the existing roadway geometry, traffic volumes, structures, crash history, right of way and utilities will be inventoried and evaluated. Taking into consideration public input, a final report will be prepared which will include recommended further actions and a recommendation of which corridor has the most potential for meeting future transportation needs of the region.

## Inquiries, Comments, and Information

All attendees at today's meeting are encouraged to take a few minutes to write down their comments. SIMPO will give careful consideration to all comments received from the public. The study team will use this input to assist in evaluating the corridors and making any recommendations.

Written comments may be submitted during the meeting or later mailed to:
Southern Illinois Metropolitan Planning Organization (SIMPO)
Attn: Joe Zdankiewicz
3000 West DeYoung Street - Suite 8008-3
Marion, Illinois 62959


Attendance List
meeting East/west Corridor
LOCATION INERRIN CITY \&IALL
DATE $3 / 38 / 2016$


Attendance List
meeting East/West Corridor Study
LOcation HerR City NACL DATE $3 / 30 / 2016$


## East/West Corridor Study Comment Sheet

SIMPO appreciates your input. Please fill out the information at the top of the comment form, answer the questions and provide your general comments. If you would like to provide additional information, please submit your comments on additional pages. You may leave the form with us today or mail to SIMPO at the address provided on the reverse side of this form. Please submit your comments) by April 13, 2016.

## - Please Circle the Descriptions that apply to you



ADDRESS:
P GB
PHONE NUMBER: 6182188766 EMAIL: jashmure sballc@idand.com

1. Please describe your main reason for attending today's public meeting:
$\qquad$
2. Which corridor do you feel offers the most potential for transportation benefits to the region?

3. Please describe your ideas for transportation improvements to the Herrin Road Corridor:
$\qquad$
$\qquad$
$\qquad$
4. Please describe your ideas for transportation improvements to the Crenshaw/College/Sycamore Corridor:
5. My general comments are:

$\qquad$
$\qquad$

EXHIBIT 22E

## East/West Corridor Study Comment Sheet

SIMPO appreciates your input. Please fill out the information at the top of the comment form, answer the questions and provide your general comments. If you would like to provide additional information, please submit your comments on additional pages. You may leave the form with us today or mail to SIMPO at the address provided on the reverse side of this form. Please submit your comments) by April 13, 2016.

## - Please Circle the Descriptions that apply to you


2. Which corridor go you feel offers the most potential for transportation benefits to the region?

3. Please describe your ideas for transportation improvements to the Herrin Road Corridor:
$\qquad$
4. Please describe your ideas for transportation improvements to the Crenshaw/College/Sycamore Corridor:
$\qquad$
$\qquad$
5. My general comments are: Look forward the progress.
$\qquad$

## EXHIBIT 22F

## East/West Corridor Study Comment Sheet

SIMPO appreciates your input. Please fill out the information at the top of the comment form, answer the questions and provide your general comments. If you would like to provide additional information, please submit your comments on additional pages. You may leave the form with us today or mail to SIMPO at the address provided on the reverse side of this form. Please submit your comment(s) by April 13, 2016.

## - Please Circle the Descriptions that apply to you

Residential Owner
Residential Tenant
Business Owner

Business Operator
Business Employee
Farm Owner

Farm Tenant
Other (please specify)
tackSon Couthty Boardy

## PLEASE PRINT

NAME: Julie Reterson
ADDRESS:

PHONE NUMBER: $\qquad$ EMAIL: $\qquad$

1. Please describe your main reason for attending today's public meeting:
$\qquad$
2. Which corridor do you feel offers the most potential for transportation benefits to the region?

Herrin Road corrided
3. Please describe your ideas for transportation improvements to the Herrin Road Corridor:
$\qquad$
$\qquad$
$\qquad$
4. Please describe your ideas for transportation improvements to the Crenshaw/College/Sycamore Corridor:
$\qquad$
$\qquad$
5. My general comments are:
Exceilent presentation - this developments would be an asset
Sor both Jadkson + williumson Lounties sor both Jatusen + williumson Lounties
$\qquad$
$\qquad$
$\qquad$
$\qquad$

EXHIBIT 22G

## East/West Corridor Study Comment Sheet

SIMPO appreciates your input. Please fill out the information at the top of the comment form, answer the questions and provide your general comments. If you would like to provide additional information, please submit your comments on additional pages. You may leave the form with us today or mail to SIMPO at the address provided on the reverse side of this form. Please submit your comments) by April 13, 2016.

## - Please Circle the Descriptions that apply to you

| Residential Owner | Business Operator | Farm Tenant |
| :--- | :--- | :--- |
| Residential Tenant | Business Employee <br> Business Owner | Farm Owner |

PLEASE PRINT
name: Jason B. Brown
ADDRESS:
S662 Sycamore Rod. Cartersville, IL 62918
PHONE NUMBER: 6/8-559-6770 EMAIL: J66rwo e Vahoo.com

1. Please describe your main reason for attending today's public meeting:

2. Which corridor do you feel offers the most potential for transportation benefits to the region? Avertin Rad expansions
3. Please describe your ideas for transportation improvements to the Herrin Road Corridor:

4. Please describe your ideas for transportation improvements to the Crenshaw/College/Sycamore Corridor:

5. My general comments are:


## East/West Corridor Study Comment Sheet

SIMPO appreciates your input. Please fill out the information at the top of the comment form, answer the questions and provide your general comments. If you would like to provide additional information, please submit your comments on additional pages. You may leave the form with us today or mail to SIMPO at the address provided on the reverse side of this form. Please submit your comments) by April 13, 2016.

## - Please Circle the Descriptions that apply to you

| Residential Owner | Business Operator | Farm Tenant |
| :--- | :--- | :--- |
| Residential Tenant | Business Employee | Other (please specify) Director |
| Business Owner | Farm Owner | Nf Executive Direst |

## PLEASE PRINT

NAME: Jeff Doherty
ADDRESS:
1740 Innovation Drive, Suite 215, 10BOK23, Carbondale, IL 6280; PHONE NUMBER: C(18-713-9210 EMALL: jdoherty @jocksonbiz, org

1. Please describe your main reason for attending today's public meeting:

Farm Tenant
Other (please specify) Erector Economic Development
$\qquad$
2. Which corridor do you feel offers the most potential for transportation benefits to the region?

```
Herrin Road Corridor
```

3. Please describe your ideas for transportation improvements to the Herrin Road Corridor:


## EXHIBIT 22I

## East/West Corridor Study Comment Sheet

SIMPO appreciates your input. Please fill out the information at the top of the comment form, answer the questions and provide your general comments. If you would like to provide additional information, please submit your comments on additional pages. You may leave the form with us today or mail to SIMPO at the address provided on the reverse side of this form. Please submit your comments) by April 13, 2016.

- Please Circle the Descriptions that apply to you

| Residential Owner |
| :--- |
| Residential Tenant |
| Business Owner |

Business Operator
Business Employee
Farm Owner

Farm Tenant
Other (please specify)

## PLEASE PRINT

NAME: EVELYN (ALCATERRA
$\frac{\text { address: }}{204} \mathrm{NH} 3^{\text {th }}$ street, HERRIN
PHONE NUMBER: $\qquad$ EMAIL: $\qquad$

1. Please describe your main reason for attending today's public meeting:

2. Which corridor do you feel offers the most potential for transportation benefits to the region?


EXHIBIT 22J


