



> **KINGS ISLAND DRIVE (PID 89180)**  
**WESTERN ROW ROAD TO**  
**GREAT WOLF DRIVE**

Prepared for City of Mason  
August 3, 2012



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## ➤ PROJECT UNDERSTANDING AND APPROACH

### PROJECT UNDERSTANDING

Our understanding of the project is based on our review of the RFP and safety study, site visit with the project manager on July 25, 2012, previous studies of the parking and operations for Kings Island and traffic operations in the region and similar prior project experience in the City of Mason including the widening and addition of a traffic signal at the Great Wolf Drive entrance and similar construction on Western Row Road. The purpose of this project is to improve the safety of the corridor while providing an enhanced experience for Mason residents and visitors as they travel to the region's largest tourist attraction within the project budget that has been established.

The addition of left turn lanes through the corridor will be a significant improvement. Coupled with new, interconnected signals and improved signing, this lane addition will help ease congestion during the peak hours, more clearly define the desired paths and will help reduce many of the common rear end and angle accidents. The addition of sidewalks and a bike path, coupled with providing areas for landscaping in the median will also make the corridor pedestrian friendly and enhance the appearance.

The key elements for success will include the following:

- > Maintaining reasonable access to Kings Island during construction
- > Obtaining "buy in" from local businesses, particularly Kings Island
- > Pro active communication with the city
- > Positive response from property owners during the acquisition process
- > An efficient design process that meets the project schedule
- > Effective management of the budget for both design and construction

### PROJECT APPROACH

From our preliminary review of the project, we recommend pushing most of the widening to the west side of the roadway. We will begin the new typical section approximately three feet from the existing L/A fence. We also suggest that the bike path be located on the west side. This section will then be a one-foot shoulder, ten-foot bikeway, sidewalk where appropriate, five-foot tree lawn, curb and gutter, then five and six 11- and 12-foot lanes. Consideration should be given to lane width because in such tight quarters every foot of width that can be saved is important and there is very little truck traffic.



We suggest reviewing the need for sidewalk within this project. An alternate concept is to provide a pedestrian crossing with a rectangular rapid flashing beacon from the bike path (shared-use path) to the drop off. Our design fee is the same for either a mid block crossing or designing sidewalk. If sidewalk is selected, it will be designed on the east side between Great Wolf Drive and the Kings Island (KI) drop off, and between the south KI exit and the KI drop off. This limits the potential

pedestrian and bicycle conflict points with vehicular traffic (such as crossing the KI south entrance) and provides safer crossings at signalized intersections.

In order to widen and build the sidewalk on the east side between the KI south exit and the drop off, the paved ditch will need to be filled in and piped. This will provide a place for the sidewalk and allow removal of the guard rail thereby improving safety. Other drainage considerations include the economic balance between having parallel storm trunk lines on each of the roadway and cutting in laterals. A combination of the two will prove most beneficial. The 48-inch culvert just south of the KI drop off will need to be extended and the end treatments rebuilt. A junction chamber will join the roadway drainage to the 60" outlet pipe to the east. An additional open ditch just north of the KI north entrance on the east side will also need to be piped, eliminating the need for guard rail and providing a place for widening and the sidewalk. Existing curb begins at the north end of this run of guard rail and continues to Great Wolf Drive. The guard rail in the median running south of the KI north entrance for about 600 feet will be removed. We will ensure that the curvature, cross slope and sight distance meet standards without the guard rail and make corrections as needed.



We recommend that the southern most driveway at the Rivers Crossing Community Church (previously a cinema) be closed. In this area there is already curb and a left-turn lane from this driveway, north to Great Wolf Drive on the west side. The drive can be closed as part of the construction of the new typical section to the south. Closing this driveway also provides improved safety for the bike path as it continues to Great Wolf Drive. There are two other driveways for that property, including a signalized one, so the loss of this

southernmost drive should not be a significant impact. The signalized drive for this property is combined with the signal for the north KI exit. Immediately south of this intersection will begin the improved signing for the north KI entrance. The goal will be to make it clear that the entrance is either available or closed and provide guidance to use the south entrance when closed. We will work closely with KI to determine an optimum solution. LJB studied all of the KI entrances along with their parking issues several years ago and LJB's Scott Knebel is familiar with many of their nuances.

Construction phasing will be set to maintain full access to all lanes at all times during KI's open season. Between the end of August and the middle of May, the contractor may shut down one lane at a time during the weekdays; between the end of October and the end of April, the contractor may have a lane closed any day of the week. The contractor should be able to finished the underground work and concrete through fall, winter and early spring months. This will leave only paving and striping work for the following fall. Signals, sidewalk and the bike path can be built with all lanes open.



Having designed the signal at Great Wolf Lodge, and two signals on Western Row Road, LJB is familiar with the city's preferences for signal equipment specifications and placement. LJB also has performed three separate studies on the corridor for the city/Warren County over the past five years, and a study of the parking lots adjacent to the project for Kings Island. LJB will use this understanding of the project corridor to design traffic signals and traffic control that provides optimal traffic flow on Kings Island Drive while meeting the needs of the King's

Island access points. LJB will collect data and model the traffic flows during AM, PM, and KI peak periods to determine the best signal system timing for all four traffic signals in the project. We will also coordinate with Kings Island to determine the best way to maximize use of the north drive, including potentially limiting left-turns into the south drive.

We anticipate replacing the street lighting for the project to complement the lighting style that exists throughout the City of Mason. Lighting and landscaping elements of the design will be coordinated closely with the city and Kings Island stakeholders to ensure that the goals are met, while not placing unnecessary maintenance burdens on the city.

Of importance to keeping construction of the project on schedule is the early definition of additional property needed for right of way. Early design of cross sections and drainage is the critical path to establishing the need for new property. The sooner final right of way can be set, the quicker the acquisition process can begin. Along with efficient acquisition, the coordination of utility relocations is important to help keep the project from being delayed at the sale date.

## WHY LJB

Through our previous experience with the city, several projects and studies completed in the immediate vicinity of this project, site visit and detailed discussions with Prem Garg the project manager, working relationship with ODOT District 8 we are confident that we understand the critical issues and critical tasks for this project.

Our project manager's experience with several projects of similar size and scope; the depth and availability of the project team; and appreciation of project management as a discipline are all significant benefits that this team will bring to the city. Our plan and commitment to evaluate performance before invoicing to major milestones and engage and advise the city in critical project decisions will ensure that our design efforts are efficiently spent in pursuit of the city's goals.

LJB's reputation and experience developing plans that result in fewer construction issues and our experience working with the city to address utility and construction concerns in the field will allow the project team to maximize the use of federal and state funds without increasing the requirement for additional city contributions.

Lastly, the project hits this design team's sweet spot:

- > Working for an LPA allows more application of our innovation and creativity for the client's benefit
- > Size of the project warrants our focused design team leaders that can rely on additional depth of staff to meet critical design checkpoints
- > In-depth understanding of the ODOT design process and staff that is intimately familiar with their standards and details will deliver the most efficient design
- > Development of the Mason typical section and potentially unique design elements such as the rectangular rapid flashing beacon at a midblock crossing that this project team has implemented at other locations will eliminate learning on the job
- > The goals of this project fit our infrastructure division's goal of increasing the safety and efficiency of the traveling public and our company's core purpose of improving the quality of life



## ➤ PROPOSED SCHEDULE OF TASKS

### PROPOSED SCHEDULE

The table below lists our proposed project schedule. This schedule is based on a start date of September 1, 2012, and a final document delivery date of 3/31/2014. It can be modified as needed to meet specific project scheduling constraints. A detailed report from the Vision planning software of the hours planned for each team member to meet this schedule is included in this proposal.

Milestone	Start Date	End Date
Authorization to proceed	8/31/2012	
Preliminary Engineering	9/1/2012	10/31/2012
Stage 1 Design	10/31/2012	1/18/2013
Preliminary Right of Way	2/19/2013	4/22/2013
Stage 2 Design (including CE)	2/19/2013	8/19/2013
Final Right of Way	5/27/2013	8/19/2013
Stage 3 Design	9/19/2013	12/20/2013
Right of Way Acquisition	12/18/2013	12/18/2014
Final Tracings	2/3/2014	3/31/2014
Sale	1/9/2015	3/13/2015
Award	3/13/2015	5/15/2015
Construction	5/15/2015	11/1/2016
As-Built	11/1/2016	12/31/2016



## ▶ PLANNED PROJECT HOURS AND FEE

The table below lists our proposed project hours and fee. LJB will perform this work for a **lump sum fee of \$319,900**. If-authorized tasks are itemized below.

	Phase	Task	Planned Hours	Design Fee
<b>Preliminary Engineering</b>				
Project management	0001	000001	24	\$3390
Notify property owners	0001	000002	9	\$753
Utility coordination	0001	000003	5	\$450
Courthouse research	0001	000004	16	\$1504
Complete and process field survey	0001	000005	208	\$16488
Geotechnical investigations and report	0001	000006		\$17870
Purpose and need statement	0001	000007	31	\$2757
Cultural resources coordination package	0001	000008	24	\$2148
Ecological survey level 1	0001	000009	42	\$3208
Farmland screening	0001	000010	2	\$186
Public involvement	0001	000011	6	\$558
ESA screening	0001	000012	44	\$3380
Boundary resolution	0001	000013	48	\$5664
Design criteria forms	0001	000014	3	\$332
Preliminary laning plan	0001	000015	18	\$2264
Preliminary typical sections	0001	000016	7	\$636
Preliminary plan and profile	0001	000017	64	\$5652
Preliminary cross sections	0001	000018	32	\$2826
Conceptual drainage	0001	000019	10	\$1404
Conceptual maintenance of traffic	0001	000020	18	\$2572
	<b>Total for Preliminary Engineering</b>		<b>611</b>	<b>\$74,042</b>
<b>Stage 1 Design</b>				
Project management	0002	000001	38	\$4904
Title sheet	0002	000002	4	\$4363
Schematic plan	0002	000003	19	\$1672
Typical section sheets	0002	000004	17	\$1487
Plan and profile sheets	0002	000005	168	\$14864
Cross section sheets	0002	000006	173	\$16187
Intersection detail sheets	0002	000007	24	\$2233
Drainage calculations	0002	000008	48	\$6784
Storm sewer details	0002	000009	60	\$6128
Post construction BMP	0002	000010	7	\$867
Pavement marking plan	0002	000011	50	\$4504
Preliminary signal layout	0002	000012	59	\$4690
Draft CE level 1 document	0002	000013	58	\$5395
Utility coordination	0002	000014	17	\$1699
Construction cost estimate	0002	000015	30	\$4156
	<b>Total for Stage 1 Design</b>		<b>772</b>	<b>\$75,933</b>



**Preliminary Right of Way**

Legend Sheet	0003	000001	3	\$257
Centerline survey plat	0003	000002	18	\$1548
Property map	0003	000003	15	\$1337
Summary of additional right of way	0003	000004	10	\$1036
Detailed right of way plan sheets	0003	000005	24	\$2257

<b>Total for Preliminary Right of Way</b>			<b>70</b>	<b>\$6,435</b>
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**Stage 2 Design**

Project Management	0004	000001	60	\$7920
Update title sheet	0004	000002	3	\$261
Update schematic plan	0004	000003	6	\$519
Update typical sections	0004	000004	10	\$870
Maintenance of traffic plans	0004	000005	144	\$15353
Update plan and profile	0004	000006	72	\$6217
Update cross sections	0004	000007	75	\$6526
Update intersection details	0004	000008	20	\$1712
Update storm sewer details	0004	000009	56	\$5656
Traffic control sheets	0004	000010	96	\$8257
Traffic signal plans	0004	000011	136	\$11683
Interconnect details	0004	000012	40	\$3504
Lighting plans	0004	000013	160	\$14274
Landscape plans	0004	000014	48	\$4224
Utility coordination	0004	000015	16	\$1609
Final CE document	0004	000016	14	\$1302
Construction cost estimate	0004	000017	22	\$2932

<b>Total for Stage 2 Design</b>			<b>978</b>	<b>\$92,819</b>
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**Final Right of Way**

Legend Sheet	0005	000001	2	\$189
Centerline plat	0005	000002	15	\$1338
Property map	0005	000003	9	\$775
Summary of additional right of way	0005	000004	5	\$495
Detailed right of way plan sheets	0005	000005	25	\$2008
Legal descriptions and closures	0005	000006	15	\$1771

<b>Total for Final Right of Way</b>			<b>71</b>	<b>\$6,576</b>
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**Stage 3 Design**

Project management	0006	000001	28	\$3864
Roadway quantities	0006	000002	8	\$744
Drainage quantities	0006	000003	8	\$1168
Pavement quantities	0006	000004	8	\$744
Maintenance of traffic quantities	0006	000005	8	\$1168
Traffic control quantities	0006	000006	8	\$944
Traffic signal quantities	0006	000007	14	\$1484
Lighting quantities	0006	000008	12	\$1416
Landscaping quantities	0006	000009	12	\$1116
General summary	0006	000010	34	\$4048





General notes	0006	000011	18	\$1644
Signal details	0006	000012	22	\$1740
Signal system timing	0006	000013	20	\$1600
Erosion control plan	0006	000014	20	\$2164
Utility coordination	0006	000015	56	\$4808
Construction cost estimate	0006	000016	11	\$1466
	<b>Total for Stage 3 Design</b>		<b>287</b>	<b>\$30,118</b>
<b>Right of Way Acquisition</b>				
Project administration	0007	000001		\$1900
Title reports	0007	000002		\$2300
Appraisals	0007	000003		\$5700
Acquisitions	0007	000004		\$4300
Closings and title updates	0007	000005		\$2325
	<b>Total for Right-of-Way Acquisition</b>			<b>\$16,525</b>
<b>Final Tracings</b>				
Project management	0008	000001	12	\$1696
Construction plans	0008	000002	98	\$8668
Construction cost estimate	0008	000003	5	\$456
	<b>Total for Final Tracings</b>		<b>115</b>	<b>\$10,820</b>
<b>As-Built</b>				
As-built plans	0009	000001	80	\$6632
	<b>Total for As-Built</b>		<b>80</b>	<b>\$6,632</b>
			<b>FINAL TOTAL</b>	<b>\$319,900</b>
<b>*If-Authorized</b>				
Total for Cultural Resources Phase 1	0010	000001		<del>\$10000</del>
Total for 404 NWP - Army Corps of Engineers	0010	000002	34	\$2769
Total for ESA Phase I/Phase II/Remediation	0010	000003	52	<del>\$4086</del>
Total for Fiber-Optic Interconnect Plans	0010	000006	139	\$10847
Total for Construction observation	0010	000007	1800	<del>\$117000</del>
Total for Residual property surveys	0010	000008	152	\$13124
	<b>Total for If-Authorized</b>			<b>\$157,826</b>

\$319,900  
 2,769  
 10,847  
 13,124  


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 346,640  
 35,000 - Coordinator w/  
 I-71 NB Ramp  


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\$381,640



## ➤ SCOPE OF SERVICES

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LJB Inc. has developed a detailed scope of services including project understanding, assumptions and deliverables. This document is based on the information known on the date of preparation and may be modified to reflect additional data received throughout the project process, if required.

The following phases and tasks are anticipated in the completion of this project. If-authorized tasks are included at the end of the document.

### PRELIMINARY ENGINEERING

- > Project management – Management of the project will begin at the project kickoff meeting. One element of the meeting is the introduction of the project evaluation tool that includes confirmation of the city’s critical factors for project success. Those critical elements and potential risks to achieving them will be discussed and documented in the meeting. Monthly project progress reports will include updates towards the goals to be reviewed in a progress meeting or teleconference. The project evaluation tool will be reviewed with the city following major milestone submittals and invoices to those milestone limits will not be submitted until it is established that LJB is meeting the city’s expectations. A review meeting for the preliminary engineering submittal is included.
- > Notify property owners – Project notification will be accomplished through the delivery of a right-of-entry letter to adjacent property owners. This letter will provide survey, design and environmental personnel the ability to enter the property. The language in this letter will be tailored to provide project information, thereby reducing public involvement efforts. LJB will draft the letter and develop the address list. We assume that the city of Mason will print these letters and mail.
- > Utility coordination – existing as-built and any proposed plans for utility facilities within the project vicinity will be collected through initial coordination with utility companies prior to the field survey.
- > Courthouse research – existing property record documents will be collected from the county website and courthouse, ODOT and city records for the seven parcels and rights of way for I-71 and Kings Island Drive.
- > Complete and process field survey – field survey of the front lines of the adjacent parcels and topographic features of the project corridor will be completed according to the detailed survey scope of services.
- > Geotechnical investigations and report – twenty test borings, each measuring ten feet in depth will be collected per the ODOT spacing guidelines of one boring every 400-500 feet. Field and laboratory tests will be completed to evaluate the classification, strength and compressibility parameters of the subgrade material. A report will be prepared including roadway and subgrade recommendations. A detailed scope of work from Thelen Associates is attached.
- > Purpose and need statement – As the need to address safety has been clearly defined by the traffic study, this statement is straight-forward. LJB will coordinate the P&N statement with the city of Mason and ODOT prior to submittal of the CE document. This early step will streamline the CE review process.



- > Cultural resources coordination package – A package that LJB has prepared on numerous other projects, this coordination will be developed to illustrate the degree of disturbance adjacent to the roadway with the expectation that no further cultural studies will be needed.
- > Ecological survey level 1 – The project area is surrounded by roadside drainage ditches and Hoff Run; no wetlands are expected. Impacts of greater than 200 linear feet of jurisdictional waters are not expected.
- > Farmland screening – As this project’s environmental coordination will utilize ODOT’s new online process, the farmland screening will be part of the CE process.
- > Public involvement – The city of Mason has a head start with public involvement, having included a bike bath along King’s Island Drive in their 2010 Mason Comprehensive Plan. Initial contact with property owners will have been made through right-of-entry letters. Public controversy is not anticipated with this project. Therefore the public involvement effort should be focused on public notification of the construction project and its schedule. LJB will prepare a project information package for posting by ODOT (to the local media) and on stakeholder websites such as the city of Mason and King’s Island.
- > ESA screening – A screening of all projects within the project corridor will be conducted to identify suspect parcels requiring additional investigation. No additional investigations, such as a Phase I ESA, are anticipated.
- > Boundary resolution – The field survey and courthouse research information will be utilized to resolve the right of way limits and parcel boundaries for the lines that intersect the existing or proposed right of way lines. Seven parcels and the right of way of I-71 and Kings Island Drive are anticipated.
- > Design criteria forms – Drainage and roadway design criteria forms will be developed and submitted to the city for review and concurrence of the design criteria that will be applied.
- > Preliminary laning plan – A preliminary striping plan will be developed and submitted on a roll plan to communicate the anticipated revisions to the horizontal alignment and/or travel lanes.
- > Preliminary typical sections – Preliminary typical sections will be developed for the various sections of the corridor. Three typical sections are anticipated.
- > Preliminary plan and profile – Preliminary horizontal and vertical alignments and pavement limits will be submitted on a roll plan.
- > Preliminary cross sections – Preliminary cross sections will be submitted from selected critical locations to communicate the impact of the laning plan and vertical alignment on the adjacent properties.
- > Conceptual drainage – Locations of planned storm sewer locations including anticipated trunk lines and lateral locations will be included on the preliminary roll plan to communicate the intended drainage scheme.
- > Conceptual maintenance of traffic – Preliminary phasing notes will be submitted to communicate the anticipated maintenance of traffic restrictions for coordination with the city and Kings Island.

Anticipated deliverables from the preliminary engineering phase of the project include a roll plan of the resolved property lines and preliminary laning plan, pavement limits and conceptual drainage. The existing and proposed profile will also be included. Design criteria forms, preliminary cross sections from select critical locations and conceptual maintenance of traffic notes will also be submitted.



**STAGE 1 DESIGN**

- > Project management – Stage 1 management activities will include implementation of the LJB quality management plan, identification and monitoring of project risks and monthly project progress reports. Preparation of the Stage 1 submittal is also included.
- > Title sheet – A title sheet will be developed for the plan set.
- > Schematic plan – Two schematic plan sheets including horizontal design and project control information will be developed.
- > Typical section sheets – Typical sections, including limiting stations, pavement widths and pavement compositions, will be developed. Two typical sections sheets are anticipated.
- > Plan and profile sheets – An estimated 16 plan and profile sheets will be developed to detail the roadway and pavement design details. Preliminary right of way lines will be included.
- > Cross section sheets – Detailed cross sections including ditch flow line elevations will be developed at fifty foot intervals to determine construction limits. Approximately 60 cross section sheets are anticipated.
- > Intersection detail sheets – detail sheets will be developed for the intersections of Kings Island Drive and commercial driveways. Ten details are anticipated.
- > Drainage calculations – Inlet spacing, storm sewer and ditch design calculations are anticipated using the ODOT CDSS software.
- > Storm sewer details – storm profiles, underdrain details, culvert details and drainage structure details will be developed for the proposed storm system.
- > Post construction BMP – design of exfiltration trenches at limited locations along the corridor are anticipated to meet EPA guidelines.
- > Pavement marking plan – Preliminary traffic control sheets will be developed to detail the striping plan.
- > Preliminary signal layout – preliminary pole, controller and conduit locations will be established to confirm their impact on construction limits and right of way requirements at the KI South Drive and Soak City Drive. Design calculations will be performed at KI North and Great Wolf Drive to determine if the existing poles can support backplates. Traffic counts will be collected at the four project signals for AM, PM and KI peak periods (if contracted before KI closes for the year).
- > Draft CE level 1 document – A draft document will be prepared and submitted to ODOT District 8 through the new ODOT CE-Online system. The document will include drinking water resources, flood plain / flood way, farmland, environmental justice, and noise and air quality elements.
- > Utility coordination – Stage 1 plans with a listing of the anticipated crossings and conflicts will be submitted to affected utility companies. A coordination meeting will be held to identify potential relocations and/or design revisions that will avoid significant conflicts.
- > Construction cost estimate – A preliminary construction cost estimate will be developed to enable an evaluation of the status of the project with respect to the budget.

Anticipated deliverables from the stage 1 design phase of the project include 11x17” plan sheets according to ODOT L&D Section 1403.7.3. Drainage calculations, list of encroachments, and construction cost estimate will also be submitted.



## PRELIMINARY RIGHT OF WAY

The use of federal money in right of way acquisition for this project will require the development of right of way plans to ODOT standards.

- > Legend sheet – A legend sheet will be developed.
- > Centerline survey plat – A centerline plat will be developed to document the centerline of right of way that will be used to reference proposed right of way takes and found monumentation. Three sheets are anticipated.
- > Property map – A property map will be developed. Three sheets are anticipated.
- > Summary of additional right of way – One summary of additional right of way sheet is anticipated to detail the three anticipated takes from two parcels.
- > Detailed right of way plan sheets – Three right of way detail sheets are anticipated to detail the limits of proposed right of way takes at limited locations along the corridor.

Anticipated deliverables from the preliminary right of way phase of the project include a preliminary right of way plan submittal including Legend Sheet, Centerline Plat, Property Map, Summary of Additional Right of Way and Detailed Right of Way Plan Sheets.

## STAGE 2 DESIGN

- > Project management – Stage 2 management activities will include implementation of the LJB quality management plan, identification and monitoring of project risks and monthly project progress reports. Preparation of the Preliminary Right of Way and Stage 2 submittals are also included.
- > Update title sheet – Additional details will be included on the revised title sheet.
- > Update schematic plan – The schematic plan sheets will be revised to include final details.
- > Update typical sections – Final typical sections sheets will be prepared.
- > Maintenance of traffic plans – Maintenance of traffic notes and phasing plans will be developed to detail the conceptual maintenance of traffic scheme. Eighteen detailed phasing plans are anticipated for each of two maintenance of traffic phases.
- > Update plan and profile sheets – Plan and profile sheets will be labeled to include final details of the proposed construction.
- > Update cross sections – Grading details will be refined to confirm the final construction limits.
- > Update intersection details – Remaining details will be added to communicate the layout and elevations of pavement, curb and bike path elevations.
- > Update storm sewer details – Revisions to the storm sewer system will be included along with final structure details.
- > Traffic control sheets – Traffic control sheets will be developed to include revised pavement marking information, signing details and, if included, rectangular rapid flashing beacon details. Major sign details, including SignCAD detailing, for an estimated 6 signs are included. Sixteen plan sheets and five detail sheets are anticipated.
- > Traffic signal plans – Signal plans will be developed at KI South and Soak City Drive showing horizontal layout of all signal equipment, signal specifications, detector layout, and pole design. Placement of backplates and potential controller replacement (for consistency of signal system operation) at KI North and Great Wolf Lodge will be shown on the traffic control plans.



- > Interconnect details – Interconnect design in the base bid will include spread spectrum radio interconnect locations to interconnect with either Kings Mill Road or Western Row Road. Fiber-optic design and plans can be provided as an if-authorized item.
- > Lighting plans – Detailed lighting calculations, electrical design, pole locations and pole and fixture details will be developed to replace the existing lighting with lighting that will complement the lighting style that exists in other portions of the city.
- > Landscape plans – Landscape design plans will be developed from city standards to implement landscaping that is consistent with other portions of the city, reducing additional maintenance requirements while improving the aesthetics of the corridor and welcoming visitors to the community.
- > Utility coordination – Stage 2 plans will be submitted to each of the affected utility companies to be used as the basis of the design of any required relocations. Up to two individual utility coordination meetings are included to resolve conflicts and ensure relocations are planned in a way to minimize construction costs.
- > Final CE document – Comments provided through the ODOT review process will be addressed. The CE document will be modified then submitted for final review and approval.
- > Construction cost estimate – A detailed construction cost estimate will be developed in the ODOT Estimator format.

Anticipated deliverables from the stage 2 design phase of the project include 11x17” plan sheets according to ODOT L&D Section 1403.9.3. Lighting analysis and voltage drop calculations, utility company correspondence, construction cost estimate and disposition of stage 1 comments will also be submitted.

#### FINAL RIGHT OF WAY

Final right of way documents for an estimated three parcels from two owners will be developed and submitted to the city, Warren County and ODOT for approval.

- > Legend sheet – The final legend sheet including surveyor’s certification, stamp and signature will be developed.
- > Centerline plat – A copy of the stamped, preapproved and recorded centerline plat will be submitted.
- > Property map – The final property map will be developed including reference information for pertinent easements.
- > Summary of additional right of way – Final details including remarks and personalty items will be included.
- > Detailed right of way plan sheets – Bearings and distances and disposition of personalty items will be included. A detailed field review prior to submittal of tracings is also included. Iron pins will be set at the new corners of the proposed permanent right of way.
- > Legal descriptions and closures – Preapproved legal descriptions and closure calculations will be submitted for use during the acquisition of the property.

Anticipated deliverables from the final right of way phase of the project include preapproved, stamped and signed right of way documents including the right of way tracings and legal descriptions.



**STAGE 3 DESIGN**

- > Project management – Stage 3 management activities will include implementation of the LJB quality management plan, identification and monitoring of project risks and monthly project progress reports. Preparation of the Stage 3 submittal is also included.
- > Roadway quantities – Detailed roadway quantities will be tabulated for inclusion in the General Summary.
- > Drainage quantities – Detailed drainage quantities will be tabulated for inclusion in the General Summary.
- > Pavement quantities – Detailed pavement quantities will be tabulated for inclusion in the General Summary.
- > Maintenance of traffic quantities – Detailed maintenance of traffic quantities will be tabulated for inclusion in the General Summary.
- > Traffic control quantities – Detailed traffic control quantities will be tabulated for inclusion in the General Summary.
- > Traffic signal quantities – detailed signal quantities and final traffic signal specifications will be provided for inclusion on the signal plan sheets and General Summary
- > Lighting quantities – Detailed lighting quantities will be tabulated for inclusion in the General Summary.
- > Landscaping quantities – Detailed landscaping quantities will be tabulated for inclusion in the General Summary.
- > General summary – Quantities will be collected and listed with ODOT item and extension numbers to facilitate the development of the bid proposal.
- > General notes – An estimated three general notes sheets will be developed to provide clarification and additional details to the contractor. Payment details will be carried to the General Summary as necessary.
- > Signal details – wiring diagrams, pole orientation charts and timing charts will be developed
- > Signal system timing – the four signal system will be analyzed using Synchro software to develop signal system timing for implementation on the corridor
- > Erosion control plan – a project site plan, including erosion control details and quantities will be developed.
- > Utility coordination – planned private utility relocations will be referenced on the plan and profile sheets as work to be completed by others. Water relocations will be designed by GCWW and may be included as separate sheets in the plan set.
- > Construction cost estimate – A detailed construction cost estimate will be developed in the ODOT Estimator format.

Anticipated deliverables from the stage 3 design phase of the project include 11x17" plan sheets according to ODOT L&D Section 1403.12.3. Disposition of stage 2 comments and a construction cost estimate will also be submitted.

**RIGHT OF WAY ACQUISITION**

Acquisition services, excluding review appraisals which must be contracted separately, are included for the three takes from two parcels. A detailed scope of work from O.R. Colan is attached.

- > Project administration – Administration fees for the acquisition of proposed right of way from two parcels are included.



- > Title reports – two complex 42 year titles and one non-complex 42 year title are anticipated.
- > Appraisals – An appraisal scoping meeting, one non-complex summary narrative and one value finding appraisal are included.
- > Acquisitions – Negotiations on behalf of the city are included for one commercial complex and one commercial non-complex parcel.
- > Closings and title updates – Two formal closings and updates to the three title reports are included.

Anticipated deliverables from the right of way acquisition phase of the project include individual parcel files including recorded instruments for signed parcels or the filing of an appropriation case.

#### FINAL TRACINGS

- > Project management – Stage 3 management activities will include implementation of the LJB quality management plan, identification and monitoring of project risks and monthly project progress reports. Preparation of the Stage 3 submittal is also included.
- > Construction plans – Stage 3 comments will be addressed and final construction plans will be developed.
- > Construction cost estimate – The final engineer’s construction cost estimate will be developed using the ODOT Estimator format.

Anticipated deliverables from the final tracings phase of the project include one mylar and three paper copies of the plans to the city and three paper copies to ODOT. Electronic submittal of the plans in .pdf format is also anticipated. The construction cost estimate will also be submitted.

#### AS-BUILT

- > As-built plans – Field information will be collected from the city inspectors or contractor or surveyed to include actual locations and inverts as constructed on the final plans.

Anticipated deliverables from the as-built phase of the project include a mylar hard copy and AutoCAD compatible electronic files with actual locations and inverts listed in red.

#### IF-AUTHORIZED

- > Cultural Resources Phase 1 – In LJB’s experience, a Phase I Cultural Resources investigation would be unlikely for this project due to evidence of previously disturbed areas and a limited area of potential effect. Therefore LJB has not included these services on the team. However, we have successfully teamed with PAST on prior projects with the Department for this work and have included a budget estimate for the if-authorized task.
- > 404 NWP – Army Corps of Engineers – LJB will prepare the submittal for a Nationwide Permit (NWP). Individual 404 and 401 permits are not anticipated.
- > ESA Phase I /Phase II/Remediation – LJB will conduct a Phase I Environmental Site Assessment (ESA) in accordance with ODOT Site Assessment Guidelines. Phase II Environmental Site Assessments and Remediation are not anticipated, will vary from one site to another and have not been included in this proposal.
- > Fiber-Optic Interconnect Plans – LJB will provide fiber-optic interconnect plans for the Kings Island Drive Corridor if the construction budget permits installation and there are not





significant conflicts with underground utilities. Plans will include fiber, conduit and pullbox locations, splice diagrams, and fiber-optic specifications.

- > Construction observation – LJB employees Larry DeRoo, former president of Ahern Construction with 25 years of construction experience, and/or Bob Holland, former president of Holland Excavating with 25 years of construction experience, are available to assist the city with construction observation services if required on the project. Larry and Bob have exceeded client expectations in this roll on prior projects for LJB including a bridge project for the University of Dayton, construction of a new road for DTR Industries and the reconstruction of State Route 123 in the city of Carlisle. As requested in the RFP, 1800 hours are included in the not to exceed fee estimate.
- > Residual property surveys – LJB understands that the city prefers to perform and provide a plat of survey of the residual property following city right of way takes. However, due to the size and nature of the properties on this project, particularly the Kings Island parcel, significant field work is required to resolve the rear boundaries. In addition, the county does not require a residual survey prior to sale of the remaining parcel. As a result, we have included these services as an if-authorized task. As part of the base fee, the right of way lines and intersecting property lines will be resolved. As part of this task, additional field survey will be completed to located rear property corners and provide a complete resolution of the parcel boundary. A plat of survey will be prepared to be filed with county offices and iron pins will be set at the unmonumented or unreferenced project corners for each of the Kings Island and Rivers Crossing Community Church properties.

