

4 Highway Safety

Highway safety is a very important consideration when designing and improving DOTD's highways and railroad crossings. Typical highway safety projects include lane and shoulder widening, alignment improvements, roadside recovery area improvements, intersection improvements, statewide/regional/corridor safety improvements (e.g., delineation, guardrail/attenuator upgrades, enforcement pullouts, etc.), and activities such as public education/awareness programs. The complexity of each project will determine the extent of the documentation needed to complete Stage 0.

Normally, the Stage 0 study for highway safety projects is prepared by the Districts, the Road Design Section, the Highway Safety Section, and/or the Transportation Planning Section. The Stage 0 for highway safety projects are checked for completeness and approved by the Highway Safety Section before being submitted to the Project Selection Team. Similarly, the Stage 0 study for railroad crossing upgrades is prepared, checked for completeness, and approved by the Systems Engineering Section. The following sections within this chapter will provide the information needed to achieve a completed Stage 0 for both highway safety and railroad crossing upgrade projects.

4.1 Highways

A Stage 0 Preliminary Scope and Budget Checklist and a Stage 0 Environmental Checklist is available to aid in the preparation of Stage 0 studies. A completed Preliminary Scope and Budget Checklist provides information such as project location, project category, purpose and need, description of existing facility, description of proposed facility, cost estimates, expected funding source(s), etc. Likewise, the Environmental Checklist is used to aid in the preliminary review of potential impacts to the natural and human environment. For minor or routine projects, the completed Preliminary Scope and Budget Checklist along with the Environmental Checklist can serve as the Stage 0 study document. For more complex projects, these checklists serve as an outline in preparing the Stage 0 study. A blank copy of the checklists can be found in this manual in the appendix.

Every Stage 0 study/checklist should have a well thought out preliminary purpose and need statement. A purpose and need statement indicates why the project is being proposed as well as describing the problem(s) that need to be addressed. This statement provides a basis for selecting reasonable and practical alternatives for consideration. It can also be an important factor in selecting a preferred alternative.

In order to complete the Stage 0 study/checklist, engineering data will have to be obtained, organized and reviewed. A Stage 0 study may include but is not limited to the following items:

- a. Existing traffic data
- b. Traffic crash data
- c. Existing highway plans (As-Builts)
- d. Utility information
- e. Previous studies and reports
- f. Unit cost data
- g. Map to identify project site
- h. Aerial photography

All safety Stage 0 studies are protected under Title 23 U.S.C. 409. The following statement should be included in these studies: “This document is exempt from discovery or admission under Title 23 U.S.C. 409.” Title 23 U.S.C. 409 is stated below.

“Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossings, pursuant to sections 130, 144, and 152 of this title or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.”

Projects not requiring right-of-way and/or utility relocations will need a geometric layout and the completed Stage 0 checklists as a minimum. On projects where right-of-way is required and utilities need to be relocated, a geometric layout of the alternative(s) using aerial photography and DOTD’s design standards shall be provided along with the Stage 0 checklists. Approximate right-of-way limits and area based on a standard template will need to be established. Both the apparent right-of-way and the required right-of-way shall be shown on the geometric layout.

Preliminary cost estimates for each alternative should be based on unit cost data. The estimates will include the costs associated with engineering design, environmental actions, construction, right-of-way acquisition, utility relocation, and contingencies. District / Headquarters Utility and Real Estate Sections should be involved in the Stage 0

process so as to provide a good preliminary estimate for utility relocations and right-of-way acquisitions, respectively.

The Stage 0 Environmental Checklist begins with a series of items to help define the context of the area followed by more detailed items to aid in the identification of potential impacts. Items to be considered include, but are not limited to, social, economic, historic, cultural, recreational, archaeological, noise, air, wetlands, flood plains, threatened or endangered species and/or their habitat and farmland. Also, identify and define the apparent environmentally sensitive areas, hazardous material sites, and natural or man-made constraints within the project's limits using field reconnaissance and aerial photography. A list of websites containing various environmental databases is included along with a general explanation of the relevance of each item in the checklist.

In the Stage 0 study/checklist, an alternative will be recommended based on purpose and need, traffic analysis, alignment, cost estimates, environmental impacts, etc. An example of completed Stage 0 checklists can be found at the end of this section.

Once Stage 0 has been completed, it must be sent to the Program Manager for review of completeness before submitting it to the Project Selection Team. The team will then decide which projects proceed to Stage 1, Planning and Environmental, within the respective budget constraints. Projects not selected can be shelved or retained for reconsideration the following year. For further information on the project selection teams and the project selection procedures, refer to the DOTD's "Highway Project Selection Process" manual.

Once the decision is made to proceed to Stage 1, it is the Program Manager's responsibility to ensure that a project number is obtained by the appropriate departmental personnel and to make the necessary contacts to initiate Stage 1. The Program Manager is responsible for sending a memorandum to the Environmental Section indicating that the project was selected and approved for further processing through Stage 1. Also, a copy of the completed Stage 0 study should be sent to the appropriate DOTD sections and/or district.

Any significant changes to the approved project scope or budget must be submitted to the Program Manager for approval. Changes to the budget may need to be brought to the Project Delivery Steering Committee, particularly if the Budget Partition is impacted.

**STAGE 0
Preliminary Scope and Budget Checklist**

District 04 Parish Claiborne Route LA XX
 Control Section 000-00 Total Project Length (miles) 0.06
 Begin Project (CS Log Mile) 5.80 End Project (CS Log Mile) 5.86
 Project Category (Safety, Capacity, etc.) Safety Date Prepared: 9/8/2006

A. Purpose and need for the project: The purpose and need for this project is to reduce the number of rear end accidents on LA XX at Joe Road.

B. Project Concept

- Description of existing facility (functional class, ADT, number of lanes, etc): The ADT for this section of LA XX is 27,000 with a truck percentage of 16. The existing road is an urban arterial with four lanes and a posted speed of 40 miles per hour. The existing roadway section at this location consists of 4 - 12' travel lanes with no shoulders, curb and gutter, and a subsurface drainage system. The apparent right of way width is 80'.
- Major Design Features/Criteria of the proposed facility (attach aerial photo w/concept if applicable): Construct a 12' wide right turn lane on LA XX at Joe Rd. with 150' for storage and 165' for transition. See the attached aerial.
- Design Exceptions: No design exceptions will be needed.
- Technical Analyses (traffic analysis, safety analysis, etc): See the attached crash data. The data indicates that removing turning traffic from the through travel lane will reduce rear-end collisions at this location.
- Alternatives to Project Concept: No build
- Future ITS / Traffic Considerations: No plans for ITS deployment along LA XX. The intersection is signalized.
- Construction Traffic Management/Property Access Considerations: Construct Under Traffic

C. Potential environmental impacts (Complete the Stage 0 Environmental Checklist on pages 4-10 to 4-13):

Two gas station (Exxon and Shell) are located adjacent to the project. See the attached Environmental Checklist and aerial layout.

D. Cost Estimate

- Engineering Design: 0 (In house design)
- Environmental (document, mitigation, etc.): 0
- R/W Acquisition: \$25,000
(C of A if applicable)
- Utility Relocations: \$100,000
- Construction (including const. traffic management): \$225,000

TOTAL PROJECT COST **\$350,000**

E. Expected Funding Source(s) (Highway Priority Program, CMAQ, Urban Systems, Fed/State earmarks, etc.)

Highway Priority Program (Safety)

ATTACH ANY ADDITIONAL DOCUMENTATION

Prepared By: John Doe

Disposition (circle one): (1) Advance to Stage 1 (2) Hold for Reconsideration (3) Shelve

EXAMPLE

Stage 0 Environmental Checklist

C.S. 000-00 Parish Claiborne
Route LA XX Begin Log mile 5.80 End Log mile 5.86

ADJACENT LAND USE: Commercial

Any property owned by a Native American Tribe?

(Y or N or Unknown) If so, which Tribe? N

Any property enrolled into the Wetland Reserve Program?

(Y or N or Unknown) If so, give the location N

Community Elements: Is the project impacting or adjacent to any:

(Y or N) Cemeteries N

(Y or N) Churches N

(Y or N) Schools N

(Y or N) Public Facilities (i.e., fire station, library, etc.) N

(Y or N) Community water well/supply N

Section 4(f) issue: Is the project impacting or adjacent to any:

(Y or N) Public recreation areas N

(Y or N) Public parks N

(Y or N) Wildlife Refuges N

(Y or N) Historic Sites N

Is the project impacting, or adjacent to, a property listed on the National Register of Historic Places? (Y or N) Is the project within a historic district or a national landmark district? (Y or N) If the answer is yes to either question, list names and locations below:

N
N

Do you know of any threatened or endangered species in the area? (Y or N)

If so, which species? N

Does the project impact a stream protected by the Louisiana Scenic Rivers Act? (Y or N)

If yes, name the stream. N

Are there any Significant Trees as defined by EDSM I.1.1.21 within proposed ROW?(Y or N)

If so, where? N

What year was the existing bridge built? N/A

Are any waterways impacted by the project considered navigable? (Y or N) If unknown, state so, list the waterways: N/A

Hazardous Material: Have you checked the following DEQ and EPA databases for potential problems?

(Y or N) Leaking Underground Storage Tanks Y, nothing found

(Y or N) CERCLIS Y, nothing found

(Y or N) ERNS Y, nothing found

(Y or N) Enforcement and Compliance History Y, nothing found

If found site, give the name and location: N/A

Underground Storage Tanks (UST): Are there any Gasoline Stations or other facilities that may have UST on or adjacent to the project? (Y or N) Y

If so, give the name and location: Exxon (C.S. log mile 5.858) and Shell (located on Joe Rd. near the project site) See the attached aerial.

Stage 0 Environmental Checklist

Any chemical plants, refineries or landfills adjacent to the project? (Y or N) Any large manufacturing facilities adjacent to the project? (Y or N) Dry Cleaners? (Y or N) If yes to any, give names and locations: N to all

Oil/Gas wells: Have you checked DNR database for registered oil and gas wells? (Y or N)
List the type and location of wells being impacted by the project. oil/gas wells are not being impacted by this project

Are there any possible residential or commercial relocations/displacements? (Y or N)
How many? N

Do you know of any sensitive community issues related to the project? (Y or N)
If so, explain N

Is the project area population minority or low income? (Y or N) N

What type of detour/closures could be used on the job? Construct Under Traffic

Did you notice anything of concern during your site/windshield survey of the area? If so, explain below.
 No

 John Doe

Point of Contact

 (225) 379-1297

Phone Number

 9/8/2006

Date

Stage 0 Environmental Checklist

Threatened & Endangered Species Information

<http://www.wlf.louisiana.gov/experience/threatened/speciesfactsheets/>
<http://www.wlf.louisiana.gov/experience/threatened/threatenedandendangeredtable/>
<http://www.wlf.louisiana.gov/experience/threatened/>

LA Wildlife Refuge Information

<http://www.wlf.louisiana.gov/experience/wmas/refuges/>

Louisiana Scenic Rivers Act (R.S. 56:1840-1856)

Louisiana Natural and Scenic Rivers (R.S. 56:1847)

<http://www.legis.state.la.us/lss/lss.asp?doc=104995>

Louisiana Historic and Scenic Rivers (R.S. 56:1856)

<http://www.legis.state.la.us/lss/lss.asp?doc=105004>

<http://www.wlf.louisiana.gov/experience/scenicrivers/>

Significant Tree Policy (EDSM I.1.1.21)

EDSMs can be found on DOTD's intranet site: <http://ladotnet/>

(Live Oak, Red Oak, White Oak, Magnolia or Cypress, aesthetically important, 18" or greater in diameter at breast height and has form that separates it from surrounding or that which may be considered historic.)

LA Historic Sites and Districts

<http://www.crt.state.la.us/hp/nhl/default.htm>

Hazardous Waste Site Information

<http://www.deq.louisiana.gov/portal/tabid/71/Default.aspx>

<http://www.epa.gov/superfund/sites/cursites/index.htm>

<http://www.epa.gov/superfund/sites/npl/la.htm>

http://www.deq.louisiana.gov/portal/Portals/0/permits/ust_facility_owner.pdf

http://www.deq.louisiana.gov/portal/Portals/0/remediation/form_5222_r01.xls

http://www.nrc.uscg.mil/wdbcgi/wdbcgi.exe/WWWUSER/WEBDB.foia_query.show_parms

<http://www.epa.gov/echo/>

DNR Oil & Gas Well Information

http://sonris-www.dnr.state.la.us/www_root/sonris_portal_1.htm

Environmental Justice (minority & low income)

<http://www.fhwa.dot.gov/environment/ej2000.htm>

Demographics

<http://www.louisiana.gov/wps/wcm/connect/Louisiana.gov/About+Louisiana/Demographics%3A+Census+Info/Census+2000+Information/>

<http://www.census.gov/>

Water Wells

<http://www.dotd.state.la.us/intermodal/wells/home.asp>

FHWA's Environmental Website (Just a good reference for understanding NEPA)

<http://www.fhwa.dot.gov/environment/index.htm>

Additional Databases Checked

Other Comments:

Stage 0 Environmental Checklist

General Explanation:

To adequately consider projects in Stage 0, some consideration must be given to the human and natural environment which will be impacted by the project. The Environmental Checklist was designed knowing that some environmental issues may surface later in the process. This checklist was designed to obtain basic information, which is readily accessible by reviewing public databases and by visiting the site. It is recognized that some information may be more accessible than other information. Some items on the checklist may be more important than others depending on the type of project. It is recommended that the individual completing the checklist do their best to answer the questions accurately. Feel free to comment or write any explanatory comments at the end of the checklist.

The Databases:

To assist in gathering public information, the previous sheet includes web addresses for some of the databases that need to be consulted to complete the checklist. As of October 2006, these addresses were accurate.

Note that you will not have access to the location of any threatened or endangered (T&E) species. The web address list only the threatened or endangered species in Louisiana. It will generally describe their habitat and other information. If you know of any species in the project area, please state so, but you will not be able to confirm it yourself. If you feel this may be an issue, please contact the Environmental Section. We have biologist on staff who can confirm the presence of a species.

Why is this information important?

Land Use? Indicator of biological issues such as T&E species or wetlands.

Ownership? Tells us whether coordination with tribal nations will be required.

WRP properties? Farmland that is converted back into wetlands. The Federal government has a permanent easement which cannot be expropriated by the State. Program is operated through the Natural Resources Conservation Service (formerly the Soil Conservation Service).

Community Elements? DOTD would like to limit adverse impacts to communities. Also, public facilities may be costly to relocate.

Section 4(f) issues? USDOT agencies are required by law to avoid certain properties, unless a prudent or feasible alternative is not available.

Historic Properties? Tells us if we have a Section 106 issue on the project. (Section 106 of the National Historic Preservation Act) See <http://www.achp.gov/work106.html> for more details.

Scenic Streams? Scenic streams require a permit and may require restricted construction activities.

Significant Trees? Need coordination and can be important to community.

Age of Bridge? Section 106 may apply. Bridges over 50 years old are evaluated to determine if they are eligible for the National Register of Historic Places.

Navigability? If navigable, will require an assessment of present and future navigation needs and US Coast Guard permit.

Hazardous Material? Don't want to purchase property if contaminated. Also, a safety issue for construction workers if right-of-way is contaminated.

Oil and Gas Wells? Expensive if project hits a well.

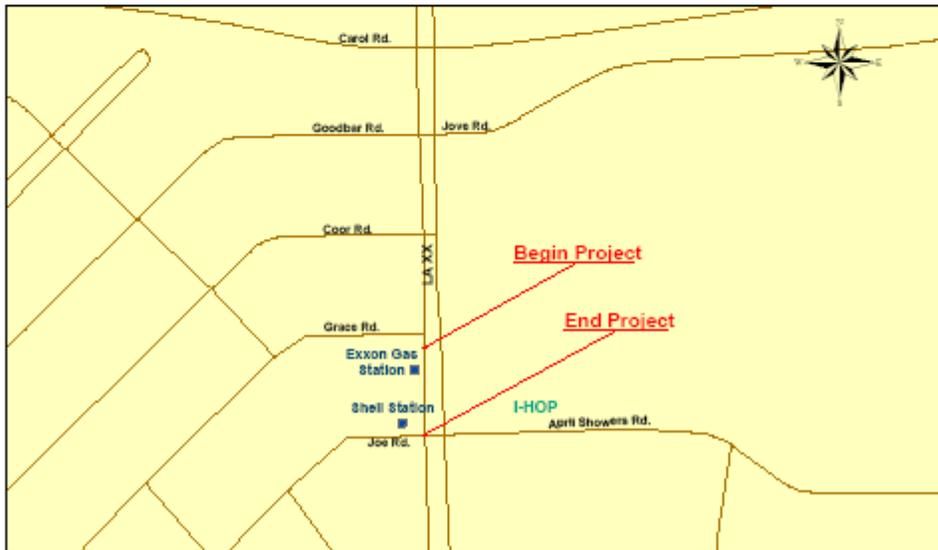
Relocations? Important to community. Real Estate costs can be substantial depending on location of project. Can result in organized opposition to a project.

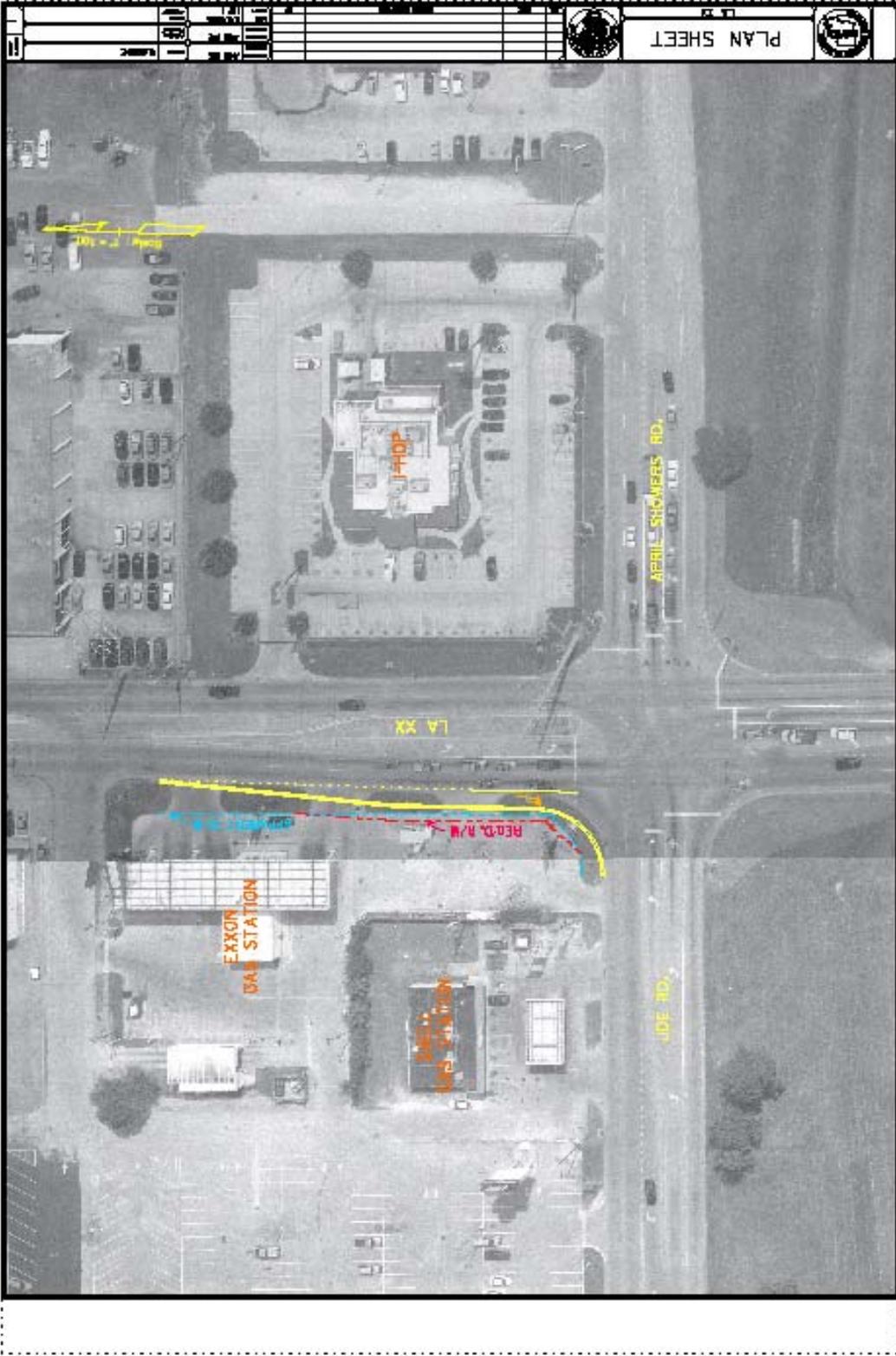
Sensitive Issues? Identification of sensitive issues early greatly assists project team in designing public involvement plan.

Minority/Low Income Populations? Executive Order requires Federal Agencies to identify and address disproportionately high and adverse human health and environmental effects on minority or low income populations. (often referred to as Environmental Justice)

Detours? The detour route may have as many or more impacts. Should be looked at with project. May be unacceptable to the public.

LA XX C.S. 000-00 CLAIBORNE PARISH





LADOTD Crash List

LADOTD Crash List

LA XX
 Claiborne Parish

Control-Section between logmiles 5.78 and 5.88
 2003-01-01 to 2006-12-31

Csect	Log Mile	tot acc	pdo acc	fat acc	inj acc	fat num	inj num	crash date	most harm	type coll	type acc	surf cond	crash num	par ish	hour	int	iv agy	dir trav	move prior	
	5.87	1	1	0	0	0	0	05/6/2006	MV in Trans	Left Turn-g	Coll wt veh	wet	1753324	10	11	0	B	EN	WB	
	5.84	1	1	0	0	0	0	05/11/2006	MV in Trans	S Swipe(sd)	Coll wt veh	dry	1753474	10	19	1	B	SS	JL	
	5.84	5	5	0	0	0	0	07/10/2006	Oth Non Coll	Rear End	Non Col on Rd	dry	1755108	10	18	1	B	WW	NB	
Total	2006	7	7	0	0	0	0													

CONFIDENTIAL INFORMATION - This document is exempt from discovery or admission under 23 U.S.C. 409. Contact the Traffic Safety Office at (225)379-1871 before releasing any information.

Crash Data Example

4.2 Railroad Crossing Upgrades

Generally, the federal railroad safety projects are located on existing public at-grade highway/rail crossings. If Louisiana's public highway/rail crossings evaluation determines that an upgrade to the crossing's warning and/or surface is to be considered, the Railroad Unit will request plans and estimates from the railroad company. This evaluation serves as the Stage 0 study and since these proposed improvements take place at the crossing, all within the railroad's and public road's right-of-way, the environmental process is typically less complicated than for many other projects. Once received by the Railroad Unit, the Stage 0 evaluation is forwarded to the Environmental Section for completion of Stage 1, Planning and Environmental. If the rail crossing is not located on a state highway, the Railroad Unit must get a commitment from the local government to install and maintain advance warning signs and pavement markings for the railroad crossing to be upgraded.

If a minor roadway improvement is considered for railroad safety funding, i.e. road widening at the crossing or construction to close and/or consolidate crossing(s), then a Stage 0 evaluation will be needed as discussed in the previous section of this Chapter. These are generally lower cost roadway construction projects (< \$250,000) to aide in highway/rail safety; therefore, the Stage 0 documentation is typically not complex or extensive.