Chapter Twelve

PHASE I
ENGINEERING REPORTS

BUREAU OF DESIGN AND ENVIRONMENT MANUAL

Chapter Twelve
PHASE I ENGINEERING REPORTS

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Chapter Twelve
PHASE I ENGINEERING REPORTS

Chapter 11 discusses the goals and objectives of Phase I studies for projects administered by the Department. Chapter 12 discusses the applicability of the various Phase I engineering report types, as well as their content, format, processing, and approval.

12-1 GENERAL

12-1.01 Purpose of Phase I Engineering Reports

The purpose of preparing reports for the projects in the annual and multi-year programs is to document the coordinated efforts of each district on why the Department is proposing an improvement and how the improvement will be designed to satisfy a need. Depending on the magnitude, complexity, and type of improvement proposed (e.g., new construction, reconstruction, 3R, 3P, SMART), the size of a Phase I engineering report and appropriate exhibits can vary from a two-page form for SMART or 3P projects, to 25 - 50 pages for a 3R project, to a few hundred pages for a complex new construction or reconstruction project.

These reports are more than just a paperwork requirement and have been created to ensure that a proposed improvement has been carefully evaluated, that appropriate policies and criteria are being used, that the design reflects an assessment of environmental concerns and, if required, that public involvement has occurred. These reports should be able to stand on their own and document all major design decisions and exceptions to policy.

12-1.02 Applicability of Report Types

Each type of Phase I study requires a corresponding report to document the findings of the investigation. The type of Phase I engineering report used depends upon the scope of the study and sometimes the funding source as described below:

1. Corridor Report. The funding and scope of engineering (e.g., a large scale Federally-funded project on new alignment) will determine when to prepare a Corridor Report. The following will apply to a Corridor Report:

    a. Funding. These projects involve Federal funding for construction or the desire to obtain future Federal reimbursement of construction costs.

    b. Engineering. Typically, these projects involve significant lengths of highway on new location with alternative corridors available for the proposed improvement.

c. Typical Projects. Typical projects include new freeways, alternative bypasses around an urban area, or expressway designs with a considerable length of proposed highway on new locations.

d. Environment. Because these projects are complex and Federally funded, environmental aspects are addressed in a separate section of the Corridor Report or in a separate EA or EIS type document.

e. Review. The BDE Location and Environment Section reviews and provides concurrence on engineering information contained in the Corridor Report, as well as environmental information either contained in the Corridor Report or provided separately through the EIS or EA.

2. Feasibility Study Report. A Feasibility Study, which is similar in scope and purpose to a Corridor Study, is typically prepared to assess whether or not a proposed highway improvement warrants further study or additional funding for Phase I engineering costs. The following other types of investigations are applicable:

- study of major drainage alternatives,
- comparison of proposed interchange types at different locations, and
- HOV studies versus other transportation alternatives.

The Feasibility Study Report documents the findings and recommendations of the study and, in many cases, may be used as a substitute for a Corridor Report. Reviews are essentially the same as for a Corridor Report and concurrence in the recommendations is by the Bureau Chief of Design and Environment.

3. Design Report. The funding and scope of engineering (e.g., a large scale Federally-funded project on new alignment) will determine when to prepare a Design Report. The following will apply to a Design Report:

a. Funding. These projects involve Federal funding for construction or the desire to obtain future Federal reimbursement of construction costs.

b. Engineering. Typically, these projects involve significant lengths of highway on new location and include an analysis of potential alternative locations and a detailed design of each alternative.

c. Typical Projects. Typical projects include new freeways, new bypasses around an urban area within a selected corridor, or expressway designs with considerable length of proposed highway on new locations.

d. Environment. Because these projects are complex and Federally funded, environmental aspects are addressed in a separate document (i.e., EA or EIS).

e. Review. The BDE Location and Environment Section reviews and provides concurrence on engineering information contained in the Design Report, as well as environmental information provided separately through the EIS or EA.

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4. Combined Design Report. The funding and scope of engineering (e.g., a large scale Federally-funded project on existing alignment) will determine when to prepare a Combined Design Report. The following will apply to a Combined Design Report:

a. Funding. These projects involve Federal funding for construction or the desire to obtain future Federal reimbursement of construction costs.

b. Engineering. Typically, these projects are complex projects using most or all of an existing highway alignment and right-of-way.

c. Typical Projects. The corridor or location is predetermined due to the design of the proposed project. Typical projects include:

- proposed expressway designs using much of the existing highway alignment;
- the upgrading of existing urban arterial or collector highways to add through lanes and/or the addition of a median or a change in median type;
- the creation of a one-way couple;
- the addition of an interchange;
- a change in type for an existing interchange;
- the reconstruction of an existing rural highway with a considerable number of changes to the alignment, profile, and front slopes and back slopes; or
- the reconstruction of an existing freeway or expressway to increase capacity by adding lanes and/or to increase safety.

d. Environment. Depending upon the anticipated environmental issues involved, the project could be a CE, EA, or EIS. If the proposed improvement qualifies as a Federal Approved CE project, the environmental documentation will be included in the Combined Design Report as a separate section. If not, a separate environmental report (EA or EIS) is prepared.

e. Review. Environmental information (EA or special analyses and studies that may be necessary to address environmental compliance requirements for specific types of resources or “potential for unusual circumstances”) and comments are passed on to the BDE Regional Field Engineer and forwarded to the district for inclusion in the Combined Design Report. The district is responsible for compliance with engineering policies. However, if design exceptions are proposed, the project should be presented at a district coordination meeting.

5. Project Report. Only the scope of engineering (e.g., 3R or bridge replacement) will determine when to prepare a Project Report. The following will apply to the Project Report:

   a. Funding. These projects involve Federal or State funding for construction. The design of the project would allow it to be programmed for either Federal or State-only funding.

   b. Engineering. Typically, these projects involve construction projects using an existing highway alignment, right-of-way or, possibly, some minor relocations.

   c. Typical Projects. Typical projects may include:

      - widening and resurfacing or resurfacing only of existing lanes,
      - bridge rehabilitation or total bridge replacements,
      - reconstruction of an existing intersection with minor right-of-way impacts, or
      - other 3R projects which may involve an occasional curve relocation or profile changes.

   d. Environment. These projects typically qualify as a CE and, therefore, the environmental documentation is included in the Project Report.

   e. Review. Environmental information (EA or special analyses and studies that may be necessary to address environmental compliance requirements for specific types of resources or "potential for unusual circumstances") and comments are passed on to the BDE Regional Field Engineer and forwarded to the district for inclusion in the Project Report. The district is responsible for compliance with engineering policies. However, if design exceptions are proposed, the project should be presented at a district coordination meeting.

6. State Improvement Report. The funding and scope of engineering (e.g., a large scale State-funded project) will determine when to prepare a State Improvement Report (SIR). The following will apply to a State Improvement Report:

   a. Funding. A decision has been made that no Federal funds will be used for planning, right-of-way, or construction of the project.

   b. Engineering. Typically, these projects involve a major construction project that may or may not use an existing highway alignment or street.

   c. Typical Projects. Typical projects will include:

      - upgrading of existing urban arterial or collector highways to add through lanes and/or the addition of a median or change in median type;

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- creation of a one-way couple;
- addition of an interchange;
- change in type for an existing interchange; or
- reconstruction of an existing intersection with significant right-of-way impacts.

d. Environment. Because Federal funding is not being used, these projects typically only require environmental documentation to comply with State regulations and Federal permits as identified in Chapters 26 and 28. Include any documentation of public involvement coordination in the State Improvement Report (SIR).

e. Review. Environmental information (EIS, EA, or special analyses and studies that may be necessary to address environmental compliance requirements for specific types of resources or "potential for unusual circumstances") and comments are passed on to the BDE Regional Field Engineer and forwarded to the district for inclusion in the State Improvement Report. The district is responsible for compliance with engineering policies. However, if design exceptions are proposed, the project should be presented at a district coordination meeting.

7. Pavement Preservation Policy (3P) Report. The scope of engineering will determine when to prepare a 3P Report and the following will apply:

a. Funding. These projects may or may not involve Federal funding for construction.

b. Engineering. These projects rehabilitate existing paved roadways to prevent further pavement deterioration by repairing and resurfacing existing pavements. Avoid projects with significant severe roadside hazards where a 3R improvement would be more appropriate.

c. Typical Projects. The emphasis of this program is to improve State highway pavements with few or no non-pavement items. Focus is on rural marked routes but urban marked routes and high-volume unmarked routes may be acceptable on a priority basis. Rural projects should be at least 1 mile (1.6 km) in length. No geometric revisions or pavement widening are permitted and acquisition of right-of-way is not allowed except when required to implement a countermeasure to mitigate Five Percent Report locations. However, 1 ft (300 mm) wide shoulder strips are required for rural cross-sections if no paved shoulders exist. Structurally deficient or functionally obsolete bridges should be gapped and addressed through other programs. Avoid projects with significant severe roadside hazards where a 3R improvement would be more appropriate.

d. Environment. These projects will usually qualify as a categorical exclusion.

e. Review. Engineering information will be developed by the district using the standard 3P Report, form BDE 1202 (fill in the blanks, check-off items, and attachments). Occasionally, a special analysis may be required to address environmental compliance requirements. The district is responsible for compliance with engineering policies. However, if design exceptions are proposed, the project should be presented at a district coordination meeting.

8. Surface Maintenance at the Right Time (SMART) Report. The scope of engineering will determine when to prepare a SMART Report and the following will apply:

a. Funding. These projects may or may not involve Federal funding for construction.

b. Engineering. These pavement preservation projects are intended to prevent further pavement deterioration by repairing and resurfacing existing pavements. Roadside hazards should have been previously addressed with a 3R improvement.

c. Typical Projects. The emphasis of this program is to improve State highway pavements with few or no non-pavement items. The focus is on rural marked routes but urban marked routes and high-volume unmarked routes may be acceptable on a priority basis. Rural projects should be at least 1 mile (1.6 km) in length. No geometric revisions, no pavement widening, and no shoulder work are permitted, and acquisition of right-of-way is not allowed except when required to implement a countermeasure to mitigate Five Percent Report locations. Structurally deficient or functionally obsolete bridges should be gapped and addressed through other programs. Avoid projects with roadside hazards where a 3R improvement would be more appropriate.

d. Environment. These projects almost always qualify as a categorical exclusion.

e. Review. The district will develop engineering information using the standard SMART Report form BDE 1203 (fill in the blanks, check-off items, and attachments),. Occasionally, a special analysis may be required to address environmental compliance requirements. The district is responsible for compliance with engineering policies. However, if design exceptions are proposed, the project should be presented at a district coordination meeting.

12-1.03 Functions

Phase I reports provide a systematic methodology for identifying and evaluating location, design, and environmental issues. The report provides a medium for documenting the decision-making process and communicating the reasoning for the proposed improvement need. In this capacity, the report fulfills many functions, including:

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1. Project Summary. Phase I reports summarize the coordinated efforts of both the district and Central Offices in determining the need for a project and how it will be designed.

2. Public Involvement. Phase I reports provide an organized document that can be used by the district to discuss improvements with the public and to ensure that the proposed project has been planned consistent with safety and cost-effective objectives.

3. Plan Preparation Guide. A Phase I report provides a reference guide for preparing construction plans and ensures that certain prerequisite design and environmental requirements have been met. This aids and expedites plan preparation, scheduling, environmental coordination, and construction.

12-1.04 Objectives

All Phase I engineering reports should meet the following general objectives:

- Present the study findings in clear, unambiguous language. As practical, the writing should be understandable to the general public.

- Do not duplicate information documented in other reports (e.g., environmental documents, Transportation Management Plan, Geotechnical Report, Preliminary Drainage Report, Bridge Condition Report). The Phase I Engineering Report should reference or summarize these other documents.

- Ensure all relevant information is included or referenced in the report so that the reader can understand the reasons for the design decisions.

- Ensure the level of detail in the report is commensurate with the conceptual objective of a Phase I study; i.e., limit the information to that needed to make major decisions.

12-1.05 Content

A Phase I engineering report should document the following, as applicable:

1. Prior Studies. List and analyze any prior studies relevant to the undertaking.

2. Project Need. Include all the necessary information, technical reports, and other materials to clearly demonstrate the study has adequately demonstrated the need for safe, fast, and efficient transportation. In addition, document the construction cost, traffic benefits, and public services provided by the highway improvement.

3. Local Conditions and Improvements. Briefly describe the highway/pavement conditions adjacent to the proposed action and any plans for future improvements. Coordinate these items between districts for route continuity when district boundary lines fall between logical termini.

4. Improvement Alternatives. Describe the alternatives considered and discuss the anticipated social, economic, and environmental effects of the alternatives, emphasizing the significant differences and the supporting reasons for the proposed location or design. In addition, analyze the relative consistency of each alternative with the goals and objectives of any adopted local or regional urban plan. Depending on the type of study, also include the following information:

   a. Corridor Studies. For Corridor Studies (see Section 11-4), describe the termini, the general type of facility, the nature of the service that the highway is intended to provide, and other major features of the alternatives.

   b. Design Studies. For Design Studies (see Section 11-5), describe the critical elements such as safety and crash patterns on the existing route, applicable design criteria (e.g., new construction, reconstruction, 3R), traffic volumes, number of traffic lanes, other cross-section elements, access control/access management features, method of locating horizontal alignment, vertical profile considerations, right-of-way requirements, pedestrian considerations, intersection designs, interchange designs, hydraulic information, bridges, and other structures.

5. Environmental Issues. Summarize or reference the discussion in the environmental document on the anticipated social, economic, and environmental effects as discussed in Part III "Environmental Procedures." Identify the adverse effects, develop appropriate measures to avoid, minimize, or mitigate these effects, and estimate the associated costs.

6. Policy and Design Exceptions. List any major design exceptions from IDOT policies and design criteria (e.g., engineering, environmental) together with supporting reasons, pertinent minutes of district coordination meetings, and relevant documentation of BDE coordination with FHWA, if appropriate. For geometric design exceptions, see Chapter 31.

7. Maps and Drawings. Include the appropriate maps or drawings of the location or design for which approval is requested.

8. Summary of Public Involvement. Provide a summary and analysis of the comments received from the public involvement process (see Chapter 19) and from the environmental analyses (see Part III "Environmental Procedures") based on:

   - coordination with the State's resource, recreational, planning, and historic agencies; and

   - those Federal and local public agencies, public officials, and public advisory groups that IDOT knows or believes are interested in and/or affected by the proposed action.

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9. Costs and Schedules. Estimate costs and tentative schedules for right-of-way acquisition and construction. For complex projects requiring more than one construction season, provide cost estimates for individual usable segments for construction staging. The multi-year highway improvement program can then be developed using the individual segment costs rather than an estimated proportional cost of the total project.

   If cost breakdowns for individual segments or improvement alternatives are necessary, use multiple columns on the cost-estimate sheet or provide multiple cost estimate sheets. For all cost estimates, indicate the base year and separate all construction, right-of-way, utility adjustment, and consultant PE costs to facilitate the programming of these items.

   See Section 12-4 for more information on cost estimates.

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12-2 REPORT FORMAT FOR MAJOR STUDIES

Section 12-2 presents the detailed outline format that can be used for a Corridor Report, Design Report, Combined Design Report, or State Improvement Report. Section 12-3 discusses specific requirements for report content of major and minor studies. Use the following format, as applicable, when developing reports for major studies:

I. INTRODUCTION

- A. Description and Location of Project
- B. History of Project
- C. Discussion of Design Criteria Used (e.g., new construction, reconstruction, 3R) and Highway Types Considered

II. PURPOSE AND NEED FOR THE IMPROVEMENT

- A. Conditions on Existing Highway Network
  1. Typical sections
  2. Extent of access control/access management
- B. Existing Traffic and Capacity Deficiencies
- C. Existing Crash Analysis/Five Percent Report Information
- D. Alignment and Profile Deficiencies
- E. Corridor Studies

III. EXISTING SETTINGS OR CONDITIONS

- A. Description of Project Area
- B. Project Limits (logical termini)
- C. Land Use (fire districts, school bus, and mail routes)
- D. Existing Bicycle/Pedestrian Generators
- E. Environmental Resources
- F. Sensitive Environmental Areas
  1. Parks and recreational areas (Section 4(f) properties)
  2. Floodplains and waterways
  3. Wetlands
  4. Historical sites
  5. Special waste sites
  6. Endangered species locations
  7. Natural areas
  8. Biologically significant streams

IV. ALTERNATIVES CONSIDERED

- A. Transportation Demand Strategies
- B. Mass Transit (if applicable)

C. Proposed Highway Design Guidelines
   1. Typical sections
   2. Design speed
      a. Horizontal alignment
      b. Vertical profile
   3. To remain in place criteria
   4. Proposed access control or access management
D. No Action (continued maintenance)
E. Widen Existing Roadway or Major Reconstruction of Existing Roadway
   1. Urban arterial improvement
   2. Expressway design
F. Construction on New or Existing Locations
   1. Freeway design
   2. Expressway design
   3. Bypass around towns
   4. New rural two-lane highway
G. Description of Intersections or Interchanges
   1. Locations and types
   2. Design features
   3. Level of service achieved
   4. Signal progression (if applicable)
   5. Uniformity of types
H. Description of Bicycle and Pedestrian Facilities

V. DESCRIPTION AND ANALYSIS OF ALTERNATIVES STUDIED IN DETAIL

A. Attainment of Purpose and Need
B. Traffic Service to Region
C. Engineering Considerations Including Aesthetics (e.g., combining horizontal and vertical alignments)
D. Important Social, Economic, and Environmental (SEE) Effects (mainly reference)
E. Utility Involvements/Drainage Considerations
F. Possible Mitigation Measures
G. Discussion of Costs and Benefits
H. Priority of Implementation

VI. COORDINATION ACTIVITIES

A. Local Governments/Metropolitan Planning Organizations
B. State and Federal Agencies
C. Property Owner Considerations

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VII. PUBLIC INVOLVEMENT ACTIVITIES

A. Advisory Committee and Working Groups (if desirable)
   1. Public interest groups
   2. Agricultural groups
   3. Growth and development groups
   4. Public officials groups
B. Informational Meetings/Property Owner Contacts
C. Design Public Hearing (open house meeting)
D. Analysis of Correspondence
E. Commitments

VIII. CONCLUSIONS/RECOMMENDATIONS

A. Recommended Design Alternative
B. Supporting Reasons for Alignment Recommendation and/or Design Features (be specific)
C. Discussion of Design Exceptions
D. Identification of Criteria for Implementing Next Step/Phase of Study
E. Proposed Interim Improvements or Stage Construction (if applicable)

IX. APPENDICES (Usually produced in an 11 in x 17 in format)

A. Quad Maps and County Maps
B. Proposed Typical Sections
C. Schematic Drawings Showing Traffic Data
D. Aerial Mosaics Showing Alternatives and Important Cultural Features
E. Environmental Survey Data Shown on Aerial Mosaics, As Needed
F. Topographic Mapping, As Needed, Showing Alternatives
G. Oblique Photographs and Photomontages (perspective view of a proposed highway)
H. Schematics of Interchange Designs and Approved Interchange/Intersection Design Studies (IDSs)

For major projects, prepare the Appendix as a separate document using 11 in x 17 in sheets. In this case, a separate Appendix improves the readability of the Report, allows design information to be examined more easily, and simplifies the conveyance of information to the design and land acquisition personnel.

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12-3 SPECIFIC PHASE I REPORTS

Major studies should follow the detailed outline format described in Section 12-2. Section 12-3 presents information specific to the content of individual Phase I engineering reports.

12-3.01 Corridor Reports

A corridor study is developed according to the guidance in Section 11-4. In addition to the information listed in Section 12-2, also include the following in the Corridor Report:

1. Structure of Report. Lay out the Corridor Report in the format as shown in Section 12-2. In addition, consider the following:

    a. Table of Contents. Provide a table of contents for the report that should list each separate report section, the figures and tables, and appendices.

    b. Page Numbers. Consecutively number the pages in the report including all exhibits and figures (i.e., do not renumber each major section).

    c. Exhibits. Show all exhibits as figures with figure numbering for easy referencing. Place figures, small maps, and tables at the back of the report and reference them in the text. Place large figures (11 in x 17 in format) in an Appendix to the report. Removing the figures and tables from the text allows for easier reading and review of the report, quicker access to a desired page number, and more effective positioning and access of materials that are used to support the text.

    d. Cross References. Provide cross-references to information provided elsewhere in the report (e.g., other sections, figures, appendices).

2. County Maps. Use 11 in x 17 in sheets and a scale of either 1 in = 1 mile (1:60,000 metric) or 1 in = 2 miles (1:120,000 metric). Indicate the following on these maps:

    - all corridors studied;
    - all acceptable corridors; and
    - existing and proposed land use including:
        + flood plains/floodways,
        + school districts,
        + fire protection districts,
        + recreational areas and lakes (existing and proposed),
        + airports,
        + historic sites,
        + cemeteries,
        + archaeological sites (only show on internal use maps),
        + Special Waste Sites (CERCLIS, RCRA and Brownfield sites, etc.),
        + wetland sites/natural resources, and
        + other pertinent information.

3. USGS Quadrangle Maps. Use 11 in x 17 in sheets and a scale of 1 in = 2000 ft (1:24,000 metric). This larger scale is used to provide more detail on the project and to show topography.

4. Traffic Data. Determine design year ADT volumes for all acceptable corridors. This data is used during the corridor selection stage. Prepare ADT volume data for other highways within the area of influence and determine the impacts the improvement will have on the entire system of highways in the area.

5. Corridor Report Discussion. Discuss the following items:

   a. General Description. Describe the following for each alternative:

      - purpose and need of the project,
      - logical termini,
      - general type of facility,
      - nature of service which the highway is intended to provide, and
      - other major features.

   b. Prior Studies. Discuss any prior studies relevant to the undertaking (e.g., feasibility studies) and a reaffirmation of the need for the improvement.

   c. Eliminated Alternatives. Discuss the alternative corridors considered but not studied further, and describe the reason(s) the alternatives were discounted. Identify and discuss the environmental factors (as discussed in Part III "Environmental Procedures") that were considered in the preliminary investigation but were not considered significant determinants among the alternatives.

   d. Compatibility with Highway System. Discuss the compatibility of the alternatives studied with the existing street and highway plans or related comprehensive plans. Where these plans do not exist, discuss the extent of coordination with local officials concerning highway needs.

   e. Compatibility with Other Plans. Discuss the compatibility of the alternatives studied with the plans and objectives of all agencies affected by the improvement.

   f. Advantages and Disadvantages of Final Alternatives. Discuss the advantages and disadvantages of the final acceptable corridors, including the no-action alternative. Discuss the issues of primary concern to the Department such as construction costs, right-of-way acquisition, highway maintenance, traffic operations, type of access control, and any other pertinent engineering aspects (see Section 11-4) of the improvement. Also, when applicable, discuss other transportation facilities in the corridor.

   g. Environmental Considerations. Discuss the socio-economic and environmental advantages and disadvantages of the final acceptable corridors, including the no-action improvement alternative. Discuss the environmental considerations as they

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relate to each alternative (see *Part III "Environmental Procedures"*). Identify the adverse effects, appropriate measures to avoid, minimize or mitigate the adverse effects, and the costs to do so.

h. Impacts on Existing Communities. In addition to the general factors mentioned above, discuss the impacts on existing communities where a corridor passes near or through an urban area. Include the following in the discussion:

- change in travel patterns;
- the estimated number of people, dwelling units, and business establishments being displaced and the economic effects on the communities;
- the potential for land use change and the likelihood of joint development; and
- the relative consistency of the alternatives with the goals and objectives of any urban plan adopted by the community concerned.

These factors will often significantly impact the selection of the corridor location in densely populated areas. Ensure that the proposed corridor adequately reflects the urban transportation planning process.

i. Public Involvement and Environmental Coordination. Include a summary and analysis of the views received as a result of public involvement activities and environmental coordination.

j. Recommended Corridor. Identify the recommended corridor and provide a synopsis of the determinants used in making the final selection.

6. Estimate of Cost. Include a general estimate of right-of-way and construction costs for those corridors that have not been eliminated. The estimate should reflect the effects the proposed improvement will have on the existing transportation system in conjunction with other needed proposed improvements in the corridor.

7. Map Exhibits. In the discussion, reference all exhibits used in the study. As needed, develop map exhibits and other exhibits on 11 in x 17 in sheets. If a large number of exhibits are planned for the report, prepare a separate Appendix for the report. A separate Appendix provides a more useful format.

12-3.02 Feasibility Study Reports

A feasibility study is very similar to the details described for a corridor study and, in many cases, the feasibility study is documented in a similar format as a Corridor Report. See Sections 11-1.01(c) and 12-1.02 for typical situations where a feasibility study is initiated.

12-3.03 Design Reports

A design study is developed according to the guidance in Section 11-5. In addition to the information listed in Section 12-2, consider the following items in the preparation of the Design Report:

1. Structure of Report. Lay out the Design Report in the format as shown in Section 12-2. In addition, consider the following:

    a. Table of Contents. Provide a table of contents for the report that should list each separate report section, the figures and tables, appendices, and other reports included with the Design Report.

    b. Page Numbers. Consecutively number the pages in the report including all exhibits and figures (i.e., do not renumber each major section).

    c. Exhibits. Show all exhibits as figures with figure numbering for easy referencing. Place figures, small maps, and tables at the back of the report and reference them in the text. Place large figures (11 in x 17 in format) in either Appendix A or B. Removing the figures and tables from the text allows for easier reading and review of the report, quicker access to a desired page number, and more effective positioning and access of materials that are used to support the text.

    d. Technical Reports. Provide a summary or reference the information provided in the technical reports.

    e. Cross References. Provide cross-references to information provided elsewhere in the report (e.g., other sections, figures, appendices).

    f. Checklist. Section 12-3.09 provides a checklist that may be used to ensure all applicable project information, certifications, coordination, and other requirements are covered in the Design Report.

2. Design Report Discussions. Include the following discussions in the Design Report:

    a. Summary of Need and Location. Provide a summary of the need for the improvement and reasons supporting the general location of the highway as described in the Corridor Report.

    b. Prior Studies. Include an analysis and listing of prior studies relevant to the improvement.

    c. Plausible Alternatives. Discuss the plausible alternatives considered but not studied in depth, and provide a detailed explanation of why these alternatives were eliminated. Also, address the “no-action” alternative.

    d. Major Design Features. Provide a detailed explanation of how major control points (e.g., interchange locations, river crossings, topography) were selected for the

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location of alignments on mapping; how the alignment best satisfies the geometric needs of an intersection or interchange; selected median types; and how the profile relates to the intersections and interchanges so that driver decision points are not hidden or cause visual obstructions. Also, provide a detailed explanation of aesthetic considerations for combining alignment and profiles; see Chapter 33.

e. Compatibility with Highway System. Discuss the compatibility of the alternatives studied with existing street and highway plans including any necessary detours. Also, discuss the compatibility of alternatives with comprehensive urbanized plans or, where these plans do not exist, the extent of coordination with local officials concerning their highway needs.

f. Environmental Considerations. Present the social, economic, and environmental advantages and disadvantages of the final alternatives studied, including the "no-action" alternative. *Part III "Environmental Procedures"* discusses environmental considerations.

g. Final Alternatives. Discuss the advantages and disadvantages of the final alternatives studied with respect to:

- purpose and need;
- traffic service, safety and operations;
- construction and maintenance considerations and costs; and
- other pertinent aspects (e.g., those revealed by engineering analyses); see Section 11-2.

h. Public Involvement and Environmental Coordination. Provide a summary and an analysis of comments and concerns received as a result of public involvement activities and environmental coordination.

i. Temporary Traffic Control. If applicable, discuss the management of existing traffic during construction; see Chapter 13.

j. Commitments. Provide a list of commitments made during the public involvement process and interagency coordination. This list should eventually be discussed with the Phase II design squad and then transmitted to construction personnel.

k. Recommended Alternative. Identify the recommended design alternative and present a synopsis of the determinants for its selection. Demonstrate that the recommended alternative best meets the purpose and need of the project with consideration of its social and environmental impacts.

3. Estimate of Costs. Prepare a cost estimate for all final alternatives developed by usable segments. A usable segment is suitable for traffic operations and construction phasing. The estimate format should follow that shown in Section 12-4 and Chapter 65.

4. Typical Sections. Provide typical sections for all proposed and affected roadways. Include pavement cross sections from approved pavement designs.

5. Base Maps. Use county maps or USGS Quadrangle Maps as a base map to show all alternatives considered initially, the final alternatives advanced for detailed study, and the termini of the design study.

6. Aerial Photography. Use uncontrolled photography in rural areas and controlled aerial photography in urban areas. Indicate the access control limits and sensitive environmental features for the alternatives advanced for detailed study. Prepare these exhibits on 11 in x 17 in sheets and place them in a separate Appendix A. This Appendix is used in conjunction with an EIS or EA and for the overall design study. Section 11-2.03 and Chapter 35 discuss access control features. Include in the Design Report a discussion on the specific access control features of the project. The Report should analyze and justify road closures and access features on expressways and freeways; see Sections 11-7.02 and Chapter 44.

7. Mapping Exhibits. Reduce original mylar sheets of mapping at 1 in = 50 ft (1:500 metric) or 1 in = 200 ft (1:2500 metric) scales by 50% to 1 in = 100 ft (1:1000 metric) and 1 in = 400 ft (1:5000 metric), respectively. Prepare mapping exhibits as plan and profile sheets for reduction on 11 in x 17 in sheets. Show the following on the mapping sheets:

   - State plane coordinates for all control points,
   - right-of-way limits,
   - preliminary design data,
   - structure locations,
   - horizontal alignment,
   - proposed frontage roads and service drives, and
   - current ADTs for all intersected or affected roadways.

   Use a vertical scale of 1 in = 20 ft (1:250 metric) with 1 in = 200 ft (1:2500 metric) mapping and a vertical scale of 1 in = 5 ft (1:50 metric) with 1 in = 50 ft (1:500 metric) mapping. Combine the complete design of the highway as shown on the mapping sheets with the profile to make the final plan and profile sheets. Place these final reduced sheets into a separate Appendix B.

8. Intersection/Interchange Design Studies. Include approved IDSs for all interchanges and major intersections for each studied alignment carried to a public hearing. Prepare Intersection Design Studies in accordance with Chapter 14 and Interchange Type and Design Studies in accordance with Chapter 15. Include reduced-size copies of approved IDSs in Appendix B.

9. Public Involvement Document. On large complex projects, a considerable volume of letters is received from the public and different agencies concerning the need for the project and the possible impacts. For guidance on responses, refer to Section 19-5.04, Section 24-2, and Section 25-2. To organize this information and to make it more useful for future reference in case of litigation or questions concerning environmental issues, the

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letters and their responses are included together in a separate volume. When a large number of similar comments are received, it may be advantageous to prepare a newsletter and mail to public meeting participants.

12-3.04 Combined Design Reports

The Combined Design Report is prepared where the corridor or location is predetermined due to the design of the proposed project. See Section 12-1.02 for a listing of typical projects in this category. At a minimum, the Combined Design Report should include the items listed in Section 12-2 and the following:

1. Structure of Report. Lay out the Combined Design Report in the format as shown in Section 12-2. In addition, consider the following:

    a. Table of Contents. Provide a table of contents for the report that should list each separate report section, the figures and tables, appendices, and other reports included with the Combined Design Report.

    b. Page Numbers. Consecutively number the pages in the report including all exhibits and figures (i.e., do not renumber each major section).

    c. Exhibits. Show all exhibits as figures with figure numbering for easy referencing. Place figures, small maps, and tables at the back of the report and reference them in the text. Place large figures (11 in x 17 in format) in either Appendix A or B. Removing the figures and tables from the text allows for easier reading and review of the report, quicker access to a desired page number, and more effective positioning and access of materials that are used to support the text.

    d. Technical Reports. Provide a summary or reference the information provided in the technical reports.

    e. Cross References. Provide cross references to information provided elsewhere in the report (e.g., other sections, figures, appendices).

    f. Checklist. Section 12-3.09 provides a checklist that may be used to ensure all applicable project information, certifications, coordination, and other requirements are covered in the Combined Design Report.

2. Functional Classification. Identify the functional classification of the highway proposed for improvement and for all affected roadways.

3. Typical Sections. Provide typical sections for the proposed improvement and all side roads. Include pavement cross sections from the approved pavement design.

4. Traffic Volumes. Include the current and design year traffic volumes for the proposed facility and for all crossroads; see Section 11-2.02.

5. Area Map. Provide an area map that indicates the general location of the improvement.

6. Existing Conditions and Alternative Features. Present the existing conditions and features along the proposed improvement. This information may be shown on a county map, city map, or photographic aerial mosaic, as needed, to adequately illustrate differences and termini. Prepare these exhibits on 11 in x 17 in sheets.

7. Major Design Features. Indicate the criteria used (e.g., new construction, reconstruction) and present, on appropriate exhibits such as topographic mapping, the proposed design for the project. Include horizontal and vertical alignment revisions, intersections, entrances, any grade separations, drainage structures, and other major design features. The original mylar sheets of mapping with proposed design features are reduced 50% and prepared on 11 in x 17 in sheets for the report. If an extensive number of exhibits are necessary, place them in an Appendix to the report. Also, include the appropriate information from any engineering analyses; see Section 11-2.

8. Right-of-Way Requirements. Provide an indication of the right-of-way to be acquired in sufficient detail to inform an individual of the effect on his or her property. This is usually shown on topographic mapping for the project. Also, discuss the resolution of any encroachment or utility adjustment problems.

9. Intersection/Interchange Design Studies. Include approved Intersection Design Studies (Chapter 14) or Interchange Type and Design Studies (Chapter 15) for all major intersections. Use an 11 in x 17 in reduced size sheet format.

10. Estimate of Costs. Provide cost estimates by usable segments, if applicable, or for an isolated project in accordance with the format in Section 12-4 and Chapter 65.

11. Combined Design Report Discussion. Discuss the following items:

    a. General Description. Describe the need for the improvement, the general type of facility, the nature of service which the highway is intended to provide, and the adjacent highway sections including any plans for improvements on adjacent sections.

    b. Corridor Feasibility. Discuss the reasons that no other corridor or location is feasible.

    c. Alternatives and Environmental Considerations. Discuss any plausible alternatives considered and the reasons why these alternatives were eliminated. Use the EA checklist to identify the social, economic, and environmental considerations. For large complex projects, an EA or EIS may be required; see *Part III "Environmental Procedures."*

    d. Compatibility with Highway System. Discuss the compatibility of the alternatives studied with existing street and highway plans including related comprehensive urban plans and pedestrian facilities. Where these plans do not exist, discuss the extent of coordination with local officials on highway needs.

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e. Final Alternatives. Discuss the advantages and disadvantages of the alignment or cross section alternatives studied with respect to the following:

- purpose and need;
- traffic service, safety, and operations;
- maintenance and protection of traffic during construction;
- the need for bridge improvements;
- the need for traffic signals and progression;
- access control or access management considerations;
- construction costs and right-of-way impacts; and
- other pertinent aspects (e.g., those revealed by an engineering analysis); see Section 11-2.

f. Recommended Improvement. Provide a summary of facts leading to the recommended improvement, including the consideration of the "no-action" alternative and an analysis of all comments received as a result of public involvement (see Chapter 19) and environmental coordination (see *Part III "Environmental Procedures"*).

g. Commitments. Provide a list of commitments made during the public involvement process and interagency coordination. This list should eventually be discussed with the Phase II design squad and then transmitted to construction personnel.

12. Public Involvement Document. On large complex projects, a considerable volume of letters is received from the public and different agencies concerning the need for the project and the possible impacts. For guidance on responses, refer to Section 19-5.04, Section 24-2, and Section 25-2. To organize this information and to make it more useful for future reference in case of litigation or questions concerning environmental issues, the letters and their responses are included together in a separate volume. When a large number of similar comments are received, it may be advantageous to prepare a newsletter and mail to public meeting participants.

12-3.05 State Improvement Reports

A State Improvement Report is a combined engineering/environmental document prepared for a State-only or State and locally funded project. This report is used when the scope of the project is major in nature and a programming decision is made that no Federal funds will be used for planning, right-of-way, or construction of the project. See Section 12-1.02 for a description of typical projects. Environmental information, agency coordination, and public involvement coordination are included in the report. Consider the following when preparing State Improvement Reports:

1. Format. The format of a State Improvement Report generally will be similar to that of a Combined Design Report; see Section 12-3.04.

2. Structure of Report. Lay out the State Improvement Report in the format as shown in Section 12-2. In addition, consider the following:

   a. Table of Contents. Provide a table of contents for the report that should list each separate report section, the figures and tables, appendices, and other reports included with the State Improvement Report.

   b. Page Numbers. Consecutively number the pages in the report including all exhibits and figures (i.e., do not renumber each major section).

   c. Exhibits. Show all exhibits as figures with figure numbering for easy referencing. Place figures, small maps, and tables at the back of the report and reference them in the text. Place large figures (11 in x 17 in format) in either Appendix A or B. Removing the figures and tables from the text allows for easier reading and review of the report, quicker access to a desired page number, and more effective positioning and access of materials that are used to support the text.

   d. Technical Reports. Provide a summary or reference the information provided in the technical reports.

   e. Cross References. Provide cross-references to information provided elsewhere in the report (e.g., other sections, figures, appendices).

   f. Checklist. Section 12-3.09 provides a checklist that may be used to ensure all applicable project information, certifications, coordination, and other requirements are covered in the State Improvement Report.

3. Functional Classification. Identify the functional classification of the highway proposed for improvement and for all affected roadways.

4. Typical Sections. Provide typical sections for the proposed improvement and all side roads. Include pavement cross sections from the approved pavement design.

5. Traffic Volumes. Include the current and design year traffic volumes for the proposed facility and for all crossroads; see Section 11-2.02.

6. Area Map. Provide an area map that indicates the general location of the improvement.

7. Existing Conditions and Alternative Features. Present the existing conditions and features along the proposed improvement. This information may be shown on a county map, city map, or photographic aerial mosaic, as needed, to adequately illustrate differences and termini. Prepare these exhibits on 11 in x 17 in sheets.

8. Right-of-Way Requirements. Provide an indication of the right-of-way to be acquired in sufficient detail to inform an individual of the effect on his or her property. This is usually shown on topographic mapping for the project. Also, discuss the resolution of any encroachment or utility adjustment problems.

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9. Intersection/Interchange Design Studies. Include approved Intersection Design Studies (Chapter 14) or Interchange Type and Design Studies (Chapter 15) for all major intersections. Use an 11 in x 17 in reduced size sheet format.

10. Content. The content of a State Improvement Report will be based on project complexity:

    a. Design Features. These projects are major reconstruction or new construction type of improvements that may or may not involve an existing highway alignment or street. List and discuss the design guidelines used for the proposed improvement.

    b. Environmental Information. Use the Abbreviated Environmental Assessment (BDE 2401 Template) to determine the potential project impacts. Most projects will be the Categorical Exclusion type or occasionally will require an Environmental Assessment type analysis. Include a summary and analysis of the environmental impacts.

    c. Public Involvement. Include a summary and analysis of the comments and concerns received as a result of public involvement. One or two informational meetings should be held and an offer to hold a public hearing should be made.

    d. Estimate of Costs. Provide cost estimates by usable segments, if applicable, or for an isolated project in accordance with the format in Section 12-4 and Chapter 65.

12-3.06 Project Reports

A Project Report documents a construction project which uses an existing alignment, roadway, and right-of-way or, possibly, some minor relocations. It could be prepared for a Federal or State-only funded project. These types of projects typically qualify as Categorical Exclusions and, therefore, the environmental documentation is included in the Project Report. Also, see Section 12-1.02. When preparing a Project Report, consider the following:

1. Format. The Project Report should have the following generalized format:

    - table of contents;
    - Phase I Report Approval (BDE 1201);
    - text of report; and
    - exhibits (e.g., plan and profile sheets, aerial photograph, maps) located in the back of the report on 11 in x 17 in sheets. Designate each different exhibit as a “Figure” and, if figures are depicting the same information but at different locations, label each exhibit as Sheet ____(No.)___ of ___(No.)___.

2. Page Numbering. Provide consecutively numbered pages for the report. Also, provide page numbers for all figures in the exhibit sections.

3. Cross References. Make cross-references between related areas and to figures contained in the exhibit section of the report.

4. Content. Information placed in a Project Report should reflect appropriate engineering and environmental investigations and should indicate compatibility with current Department criteria. The project study should meet the requirements for public involvement (Chapter 19), environmental analyses (*Part III "Environmental Procedures"*), and engineering analyses (Section 11-2). Figure 12-3.A provides an outline of the information, as applicable, that should be included in a Project Report. Also, review the items listed on the Fact Sheets for an Abbreviated Project Report as shown in Section 12-3.07.

5. Checklist. Form BDE 1210 provides a checklist that may be used to ensure all applicable project information, certifications, coordination, and other requirements are covered in the Project Report.

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FOR PROJECT REPORT

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Title Sheet
Table of Contents
Phase I Report Approval Form (BDE 1201)

I. NEED FOR IMPROVEMENT

A. Project Location and Termini
1. Functional classifications and local name(s)
2. Regional location — Note the project/route location with respect to other major routes, municipalities, and geographical markers
3. Limits, county, municipality, maintenance jurisdictions (who owns road)
4. Separate classifications (e.g., SRA, truck routes, NHS)

B. Description of Existing Conditions
1. Land use (along route and in project vicinity)
a. Residential, commercial, industrial
b. Historical sites
c. Schools, parks, forest preserves, etc.
2. Existing Cross Section
a. Number of lanes, parking, shoulders and/or curb and gutter, sidewalk, median (type), and right-of-way (see Item VII.B. Typical Cross Sections); typical sections should also include pavement composition
b. Existing drainage (brief description of open/closed system and record of flooding)

C. Operational and Safety Analyses
1. Why project was initiated (need)
a. Safety concerns - include brief crash summary (e.g., number of crashes, predominant crashes and causes, Five Percent Report)
b. Pavement condition
c. Operational concerns/capacity
d. Existing geometry and profile
e. Structural deficiencies
f. Local interest
2. Relationship to other projects (past, current, future)

D. Project Purpose/Identified Deficiencies (general statement)

Note: Table of Contents may be modified as necessary depending on the proposed improvement.

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II. DESCRIPTION OF PROPOSED IMPROVEMENT (only include items relevant to project)

A. Introduction
This section is not intended to be lengthy, but should include the following:
1. General scope of work
2. Relationship to the purpose and need for improvement

B. Design Criteria Utilized
Note design criteria (e.g., 3R, reconstruction) used in developing improvement. For example: Chapter 49 "3R Guidelines for Rural and Urban Highways"

C. Geometric Improvements
Include reasons for each of the following:
1. Typical roadway template (proposed cross section)
2. Intersections
3. Vertical alignment — lower or raise the profile (safety and drainage)
4. Horizontal alignment — correct sight distance problem/deficient curves, revise superelevation, correct broken back alignments, etc.
5. Unique considerations

D. Approved Pavement Design/Rehabilitation
1. Need for Geotechnical Survey
2. Documentation for pavement design or rehabilitation of pavement
3. Statement if cold milling is proposed

E. Pavement Drainage
1. Describe existing system and any proposed improvements
2. Reference Preliminary Drainage Study or Hydraulic Report, as applicable

F. Design Exceptions
Include all design exceptions/waivers as approved by BDE and/or FHWA. Typically, these are discussed and concurrence is received at district coordination meetings.

G. Right-of-Way
1. Acquisition required
   a. Total parcels
   b. Land use summary
   c. Total area

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2. Permanent easements required
   a. Total parcels
   b. Land use summary
   c. Total area
3. Temporary easements required
   a. Total parcels
   b. Land use summary
   c. Total area
4. Residential/business displacement (see Plan Sheets and Part III "Environmental Procedures" for discussion)
5. If no ROW acquisition is required, then include a statement to this effect.

H. Structures

This section is to be more detailed than Section I, Need for Improvement, and will function as a "quick-look" reference area (see Bridge Condition Report (BCR) and information listed in Abbreviated Project Reports):

1. Feature carried
2. Feature crossed and adjacent land use
3. Structure number
4. Existing structural deficiencies
5. Proposed scope of work and cross section (e.g., deck replacement, superstructure replacement, bridge removal/replacement, in-stream work, widening)
6. Vertical clearances — deficient or the need for restrictions on resurfacing projects
7. Indicate whether foundation borings requested and/or completed. If completed, include in Project Report (supplement)
8. Include memo from Bureau of Bridges and Structures approving BCR
9. Reference coordination meeting with BDE for cross section concurrence

I. Traffic Signal Modernization/Installation

1. Location(s)
2. Description of work (e.g., modernizing, interconnect, pre-emption, railroad crossing, installation)
3. Reference signal warrants(s) met
4. Local participation (e.g., construction costs, maintenance responsibility, maintenance costs, energy costs).

J. Lighting

1. Existing conditions (Lighting Survey)
2. Maintenance responsibility

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3. Proposed improvement
4. Funding responsibility

K. On-Street Parking
1. Existing conditions (e.g., parallel/diagonal, peak-hour restrictions, metered), include limits, municipality, and parking use (e.g., residential, commercial)
2. Proposed improvement — Describe whether parking lanes are removed, replaced, resurfaced, reconstructed, or relocated
3. Local participation

L. Sidewalks/ADA Requirements
1. Existing conditions (e.g., width, continuous, location)
2. Proposed improvement (e.g., new, repair, width, location, local coordination, accessible for disabled persons)
3. Local participation
4. If no sidewalks exist and/or no new sidewalks requested, include statements to this effect

M. Bikeways/Trails
1. Note if route is a recommended road bicycle route or if there is another recommended (alternative) route in the proximity of the improvement
2. Existing trails in the proximity of the improvement
3. Bicycle generators in the area
4. Local coordination to determine any planned facilities
5. How project addresses bicycle usage (include specific improvements such as wider lanes, separate path, etc.)
6. If the improvement does not accommodate bicycle use, then complete the Bicycle Checklist as discussed in Chapter 17

N. Pedestrian Overpass/Subways/Other Facilities
1. Existing — Describe pedestrian generators, crashes, and other features that would necessitate a grade separated pedestrian facility
2. Proposed — Discuss proposed work and how it will accommodate pedestrians and provide benefits (e.g., safe access to parks/schools/public facilities/ commuter stations/bus stops, aesthetics, safety)

O. Mass Transportation
1. Existing services (e.g., bus, train, shuttle (include route numbers))
2. Describe existing facilities (e.g., pedestrian accessible, park and ride lots, kiss and ride locations, commuter stations, bus stops (near side/far side))

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3. Will project improve access to mass transportation (e.g., bus turnouts, bus pads, shelters, signal work)

P. Utility Conflicts
1. Identify utilities that were contacted and those that responded to having facilities within the project limits
2. Describe conflicts with these utilities due to the proposed improvement (e.g., changes in horizontal and vertical alignment, widening, replacement of bridge deck or superstructure, trenching, boring for conduits, storm sewer)

Q. Encroachments
1. Existing (e.g., illegal parking, ROW infringements)
2. Proposed remediation of encroachments
3. Reference letters sent to property owner about encroachments

R. Mail Delivery
1. Type of drop-off (e.g., locations, door-to-door, streetside)
2. Hazardous mailbox supports (reference letters sent to property owners); see Chapter 58
3 Improvement's impact on mail delivery (need to contact local postmaster)
4. Mailbox turnouts (shoulder section versus curb and gutter); see Chapter 58

S. Landscape/Roadside Development
1. Note all areas disturbed by construction to be restored to turf cover
2. Note all tree and other plants removed for construction and which will be replaced; see Chapter 59
3. Summarize the results of the vegetation assessment survey

T. Construction Site Stormwater Pollution Control
If soil is exposed to displacement, include construction site stormwater pollution control documentation; see Chapter 41

U. At-Grade Railroad Crossings
1. Location and rail line (e.g., Union Pacific, Wisconsin Central, CTA "L").
2. Existing conditions
   a. railroad crossing flashers, gates, and pedestrian gates
   b. proximity of train stations or stops
   c. number of tracks and alignment of crossing
   d. crash history at crossing

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3. Proposed improvement — In addition to roadway work, include the results of the coordination with the Railroad Unit to determine proposed improvements (e.g., rail replacement, rehabilitation, changes in gate/flasher (preemption) timing).
4. Train interruptions/detour routes
5. Proximity of traffic signals and preemption. Include results of discussions with the district Bureau of Operations to identify signal sequence and preemption at the crossing. Describe existing (or the need for) near side traffic signals that stop traffic in advance of the crossing; see Section 36-8.
6. Coordination with Illinois Commerce Commission

V. Surveillance
1. Existing surveillance within or in the proximity of the proposed improvement (e.g., changeable message signs, detector loops, volume/speed loops, video detection/monitors)
2. Proposed surveillance for the improvement
3. Results of coordination with the district Bureau of Operations (Bureau of Traffic, District 1), where necessary

W. Pump Stations
The electrical requirements associated with pump stations are determined and designed by the Bureau of Electrical Operations (District 1) and Bureau of Operations in other districts. The roadway collection system, pump capacity, pump discharge, storm water storage, and outlet evaluation are detailed in the Hydraulics Report prepared by the Hydraulics Unit in the district. For this section of the Project Report, provide the following general information, while referencing the Hydraulics Report for the more detailed, technical information:
- pump station number and location,
- roadway limits that are drained by the pump station,
- outfall location, and
- proposed improvements as directed by Hydraulics Unit.

X. Retaining Walls
a. Existing retaining walls within and/or affected by the improvement.
b. Proposed retaining walls that are required as a result of improvement (e.g., profile adjustments, regrading near bridge abutments, sidewalk separations). Walls over 10 ft (3 m) high are either designed by Bureau of Bridges and Structures or the design is reviewed by Bureau of Bridges and Structures.

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c. Provide information on length and height (exposed) so that the design squad can determine need for consultant services.
d. Indicate whether foundation borings requested/completed. If completed, include as supplement.

Y. Public Educational Facility Entrances [See Section 11-2.08(h)]
a. Existing entrances to route
b. Existing conditions
c. Proposed improvement, if any

III. ENVIRONMENTAL RESOURCE SUMMARIES

For documentation requirements in the Project Report, see Section 12-3.09.

IV. TRANSPORTATION MANAGEMENT PLAN AND RECOMMENDATIONS

See Chapters 13 and 55 to determine type and cost of traffic management for proposed improvement.

V. ESTIMATE OF COSTS

See Section 12-4 and Chapter 65 for details on cost estimates for Project Reports.

VI. COMMITMENTS

A. Environmental (e.g., permits, restricted areas, tree cutting, mitigation)
B. Property owner/local/forest preserve/transit company
C. Other agencies (e.g., IDNR, Agriculture, US Army Corps of Engineers)

These commitments require review by the Project and Environmental Studies Section Chief and by the Environmental Unit Head in District 1 and by the Project Engineer and Environment Studies Supervisor in other districts. Discuss these commitments with Phase II design squad and with construction personnel.

VII. EXHIBITS

A. Location Maps
B. Typical Cross Sections
C. Traffic Diagrams of Overall Street Network
D. Existing Conditions (Aerial Photography)
E. Proposed Conditions (Plan and Profile Sheets in 11 in x 17 in format)

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F. Approved Intersection Design Studies (Reduce to 11 in x 17 in format)
G. Overall Schematic of Horizontal Control and Curve Data
H. Vertical Curve Data

VIII. COORDINATION/DOCUMENTATION

Provide copies of correspondence, coordination, minutes of meetings, and a summary of public involvement needed and completed.

A. Environmental Correspondence/Permits
B. District Coordination Meeting Minutes
C. Coordination
1. Municipalities/counties
2. Parks and forest preserves
3. Mass transit agencies
4. Other agencies (utilities, railroads, etc.)
D. Public Involvement
1. Property owner letters or contacts
2. Other correspondence
3. Summary of Informational Meetings/Public Hearings
E. Pavement design approval memorandum

IX. TECHNICAL REPORTS

A. Air Quality
B. Noise/Construction Noise
C. Crash Analysis
D. Vegetation Assessment/Survey
E. Bridge Condition Report
F. Geotechnical Survey
G. Transportation Management Plan (TMP)
H. Pavement Design Analysis
I. Other

X. PRELIMINARY DRAINAGE STUDY

If needed, prepare as a separate technical report.

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12-3.07 Abbreviated Project Reports

For some 3R type projects and replace-in-kind reconstruction projects, an Abbreviated Project Report format may be used to document the results of a Phase I engineering study. This format eliminates considerable writing and provides an easy-to-follow checklist, fill-in-the-blanks, and attachments type report.

Only use an Abbreviated Project Report when the environmental and engineering impacts of a project can be adequately described by completing the Fact Sheet and by use of attachments. However, if the project information as described in *Part III "Environmental Procedures"* requires the preparation of a narrative type report for adequate coverage, then use the Project Report format described in Section 12-3.06.

The recommended format of an Abbreviated Project Report can be found in the following figures as applicable:

- Figure 12-3.B, Fact Sheet (Roadway Improvement); and
- Figure 12-3.C, Fact Sheet (Total Structure or Superstructure Replacement).

As an exhibit, include a copy of the applicable district coordination meeting minutes. This documentation describes the proposed improvement and lists the decisions made at those meetings. A typical example of these meeting minutes is shown in Figure 12-3.D.

12-3.08 3P and SMART Projects

12-3.08(a) Report Format and Content

To assist the districts in documenting 3P and SMART improvements, see forms BDE 1202 and BDE 1203, respectively. At the discretion of the district, all 3P and SMART projects may be presented at coordination meetings. These meetings provide the means to discuss design exceptions, how Five Percent Report locations will be addressed, and the need for additional right-of-way. However, 3P or SMART projects are only required to be presented at coordination meetings when any of the following conditions apply:

- design exceptions are being requested by the district (see Section 31-7),
- the proposed project will have a location(s) not fully compliant with current ADA standards, requiring completion of form BDE 3101 "ADA Statement of Maximum Extent Practicable" (see Section 31-7.03(c)),
- the project is (or will be presented to be) classified as a Federally Approved Categorical Exclusion, or
- there are issues related to the project's scope that would benefit from discussion.

Also, see Section 12-1.02 for further information on 3P and SMART Reports and Chapters 52 (SMART) and 53 (3P) for further design details on pavement resurfacing.

ABBREVIATED PROJECT REPORT

ILLINOIS DEPARTMENT OF TRANSPORTATION

1. PPS (Project Planning System) No.: _____

2. Contract No.: _____

3. State Job No.: _____

4. Highway Functional Classification: _____

5. Truck Route Classification: _____

6. Type of Improvement: _____ W & RS or _____ RS

   If other type of improvements, attach description: _____

7. Proposed Project Funding (Must be compatible with selected design guidelines.): _____

8. Current ADT: _____ % Trucks in ADT: _____

9. Surrounding Land Use: _____

10. Existing Right-of-Way Width: _____ Proposed: _____

11. Existing No. of Lanes: _____ Proposed: _____

12. Existing Roadway Width: _____ Proposed: _____

13. Existing Traveled Way Width: _____ Proposed: _____

14. Pavement Surface Condition (CRS): _____ (Year): _____

15. Existing Shoulder or Curb Type: _____ Proposed: _____

16. Existing Clear Zone Width: _____ Proposed: _____

17. Describe existing conditions or proposed highway improvements adjacent to project limits: _____

    _____

18. Are there any bridges in this construction section? _____ Yes _____ No. Can they all remain in place? _____ Yes _____ No. Give description of what must be done to each bridge in this segment and when work will be accomplished (See Figure 12-3.C): __

    _____

19. What has the field check indicated for culvert extensions, side road culvert improvements, and other safety work: _____

FACT SHEET
(Roadway Improvement)

Figure 12-3.B
(Page 1 of 4)

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_____

_____

Use a straight-line diagram or schematic plan to indicate proposed work including culvert extensions, guardrail, etc.

20. Will ditch cleaning be necessary with this improvement? _____ Yes _____ No

21. What has a review of crash data shown? _____

_____

_____

22. Existing Rural Posted Speed: _____ Urban Posted Speed:_____

23. Proposed Rural Design Speed: _____

Proposed Urban Design Speed: _____

24. Check design policy used:

_____ 3R criteria for arterial highways and bridges for other than expressways and freeways on the Federal-aid Highway System (See Chapter 49)

_____ 3R criteria for highways and bridges on unmarked routes of the State Highway System (See Chapter 49)

_____ Other (list): _____

25. List and indicate reasons for any design exceptions: _____

_____

_____

Does existing highway geometry meet IDOT criteria?

Horizontal: _____ Yes _____ No

Vertical: _____ Yes _____ No

If “No” is checked, discuss what will be done: _____

_____

_____

FACT SHEET
(Roadway Improvement)

Figure 12-3.B
(Page 2 of 4)

Is resurfacing thickness in accordance with Department pavement rehabilitation criteria (see Chapter 53)?

_____ Yes _____ No; Reason(s) _____

26. How will traffic be maintained during construction? _____

27. RR Data: Trains/Day _____ # Tracks _____ Speed of Trains _____

28. RR Crossing Protection: Existing: _____ Changes Proposed: ____ Yes ____ No

29. Type of proposed improvements at RR crossing: _____

30. Sidewalks: Existing: _____ Proposed: _____

31. Parking: Existing: _____ Proposed: _____

32. Will signals be installed or modernized? _____

33. Lighting: _____

34. Utilities/Encroachments: _____

35. Drainage (flood plain, detention, flooding over the roads, etc.): _____

36. Any Section 4(f) sites on Federal-aid projects? _____ Yes _____ No

37. Is an environmental survey request required by Department policy? _____ Yes _____ No

38. If applicable, Metropolitan Planning Organization approval date: _____

39. Permit Status (Sections 404, 402, and 10 Permits, 401 Certification, etc.): _____

40. Have any special erosion control or tree retention commitments been made?

___ Yes ___ No

If yes, has the district Landscape Architect/Specialist reviewed the commitments?

___ Yes ___ No

41 If soil is exposed to displacement, include construction site stormwater pollution control documentation (see Chapter 41).

42. Are there any existing public educational facility entrances onto the route?
[See Section 11: 2.08(h)]

___ Yes ___ No

FACT SHEET
(Roadway Improvement)

Figure 12-3.B
(Page 3 of 4)

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43. Roadway Exhibits: Page No.

- Completed Estimate of Costs (see Figure 12-4.B): ..... _____
- Concurrence Letter for Funding Participation: ..... _____
- IDOT TIP Sheet: ..... _____
- Location Map and Aerial Photography (use 11 in x 17 in format): .. _____
- Profile Gradelines of Existing Alignment, Any Corrections, and Topographic Mapping for Alignment and Profile Changes: ..... _____
- List of Existing Horizontal Curvature From Road Plans and Superelevation Rates From Field Check (if applicable): ..... _____
- Typical Roadway Cross Sections (existing and proposed): ..... _____
- BDE Approval Memorandum on Resurfacing Thickness Deviation (if applicable): ..... _____
- Crash Analysis and Schematic Drawing of Crashes (Collision Diagram) for Previous Three Years: ..... _____
- Wet-Weather Skid Crash Analysis: ..... _____
- Resolution of Any Encroachments on ROW: ..... _____
- Archaeological/Biological Sign-off (where applicable) or Evidence of the Results of Surveys and Related Coordination: ..... _____
- Noise Statement for Projects with Alignment Changes or Noise Abatement: ..... _____
- Coordination and US Army Corps of Engineer, Section 404 Permit Status If Bridges are Involved: ..... _____
- Route Improvement Plans for Adjacent Districts: ..... _____
- Agency Coordination Letters: ..... _____
- Utility Coordination: ..... _____
- District Coordination Meeting Minutes (See Figure 12-3.D): ..... _____
- Public Involvement Comments and Responses (if applicable): ..... _____
- Discussion of Mailbox Supports: ..... _____
- List Commitments with Discussion of Each: ..... _____
- Airport Clearance Coordination (if applicable): ..... _____
- Drainage/Hydraulic Reports (summary): ..... _____
- Approved Intersection Design Studies: ..... _____
- Transportation Management Plan (TMP) and Approval Memorandum: ..... _____

FACT SHEET
(Roadway Improvement)

Figure 12-3.B
(Page 4 of 4)

ABBREVIATED PROJECT REPORT
ILLINOIS DEPARTMENT OF TRANSPORTATION

1. PPS (Project Planning System) No.: _____
2. Contract No.: _____
3. State Job No.: _____
4. Highway Functional Classification: _____
5. Truck Route Classification: _____
6. Is project eligible for HBP funds? _____ Yes _____ No
7. Current ADT: _____ % Trucks in ADT: _____
8. Name of Stream or Crossing: _____
9. Surrounding Land Use: _____
10. Existing Approach Roadway Width: _____ Proposed: _____
11. Existing Traveled Way Width: _____ Proposed: _____
12. Existing Shoulder Type: _____ Proposed: _____
13. Existing Shoulder Width: _____ Proposed: _____
14. Existing Clear Roadway Bridge Width: _____ f-f Proposed: _____f-f
15. Are sidewalks warranted? _____ Yes _____ No
16. Existing Posted Speed: _____
17. Proposed Rural Design Speed: _____ Proposed Urban Design Speed: _____
18. Check Design Policy Used:

    _____ 3R criteria for arterial highways and bridges for other than freeways and expressways on the Federal-aid System (see Chapter 49)

    _____ 3R criteria for highways and bridges on unmarked routes of the State Highway System (see Chapter 49)

    _____ Other (List): _____

19. Does existing highway geometry meet IDOT criteria?

    Horizontal: _____ Yes _____ No (discuss): _____

    Vertical: _____ Yes _____ No (discuss): _____

FACT SHEET
(Total Structure or Superstructure Replacement)

Figure 12-3.C
(Page 1 of 4)

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20. List and indicate reasons for any design exceptions: _____

_____

_____

21. Are proposed clear roadway bridge width and alignment compatible with existing and proposed bridge widths within adjacent roadway sections assuming logical segments?

_____ Yes _____ No, Discuss: _____

22. Any crash problems on or adjacent to bridge: _____ Yes _____ No, Discuss: _____

_____

23. Is channel work required? _____ Yes _____ No

24. Hydraulic Information or Attach Waterway Table (where applicable).

a. Drainage Area: _____ acres (hectares)

b. Existing Opening: _____ sq ft (m^2)

c. Required Opening: _____ sq ft (m^2)

d. Proposed Opening: _____ sq ft (m^2)

e. Q ( ): _____ cu ft/s (m^3/s)

Discuss Results: _____

25. Has Bureau of Bridges and Structures concurred in Proposed Bridge Drawings and Bridge Condition Report? _____ Yes _____ No

26. Has district Bridge Engineer made a recent field inspection of abutments and piers? _____ Yes _____ No

27. Comments on Field Check: _____

28. Is an environmental survey request required by Department policy? _____Yes _____ No

a. Any Wetlands Involved in Reconstruction: _____ Not Applicable: _____

b. 4(f)/106 Involved on Federal-aid Projects: _____ Not Applicable: _____

FACT SHEET
(Total Structure or Superstructure Replacement)

Figure 12-3.C
(Page 2 of 4)

c. Illinois Department of Natural Resources, Office of Water Resources:

Status of Flood Plain Permit: _____ Not Applicable: _____

29. Are Sections 404, 402, and 10 Permits and Section 401 Certification required for channel work, runaround detours, etc.? _____ Yes _____ No Status of Permit: _____

30. Status of Other Permits (see Chapter 28): _____

31. Is this a historic bridge? _____ Yes _____ No If yes, discuss: _____

32. If applicable, Metropolitan Planning Organization approval date: _____

33. What method will be used to detour or maintain traffic during construction (Transportation Management Plan)?_____

34. Have any special erosion control or tree retention commitments been made?

_____ Yes _____ No

If yes, has the district landscape architect/specialist reviewed the commitments?

_____ Yes _____ No

If soil is exposed to displacement, include construction site stormwater pollution control documentation (see Chapter 41).

35. Structure or Superstructure Replacement Exhibits: Page No.

- Completed Estimate of Costs (See Figure 12-4.B): ..... _____
- Concurrence Letter for Funding Participation: ..... _____
- IDOT TIP Sheet: ..... _____
- Location Map and Aerial Photography (use 11 in x 17 in format): .. _____
- Profile Gradeline of Existing Alignment, Any Corrections and Topographic Mapping for Alignment and Profile Changes: ..... _____
- List Existing Horizontal Curvature From Road Plans and Super-elevation Rates From Field Check (if applicable): ..... _____
- Proposed Bridge Drawings and Memorandum Approving Each Bridge Condition Report(s): ..... _____
- Color Photographs of Existing Bridge(s): ..... _____
- Other Items for Approach Roadway (if applicable): ..... _____

FACT SHEET
(Total Structure or Superstructure Replacement)

Figure 12-3.C
(Page 3 of 4)

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- Crash Analysis Schematic Drawing of Crashes (Collision Diagram) 0.5 miles (800 m) on Each Side of Bridge: ..... _____
- Wet-Weather Skid Crash Analysis: ..... _____
- Resolution of Any Encroachments On ROW: ..... _____
- Archaeological/Biological Sign Off (where applicable), or Evidence of the Results of Surveys and Related Coordination: ..... _____
- Noise Statement for Projects with Alignment Changes or Noise Abatement: ..... _____
- Coordination With US Army Corps of Engineer, Section 404 Permit Status: ..... _____
- Agency Coordination Letters: ..... _____
- Utility Coordination: ..... _____
- District Coordination Meeting Minutes (see Figure 12-3.D: ..... _____
- Public Involvement Comments and Responses (if applicable): ..... _____
- List Commitments With Discussion of Each: ..... _____
- Airport Clearance Coordination (if applicable): ..... _____
- Transportation Management Plan (TMP) and Approval Memorandum: ..... _____
- Drainage/Hydraulic Reports (summary): ..... _____

36. Are there any existing public education facilities entrances onto the route? [See Section 11: 2.08(h)]

_____ Yes _____ No

If yes, will they be improved? _____ Yes _____ No

FACT SHEET
(Total Structure or Superstructure Replacement)

Figure 12-3.C
(Page 4 of 4)

ILLINOIS DEPARTMENT OF TRANSPORTATION

COORDINATION MEETING MINUTES DISTRICT 3 CONFERENCE ROOM			TOPIC NO. 9
DATE OF MEETING:	January 29, 1998	FUNDING SOURCE:	STP
ROUTE:	FAP 41		
MARKED ROUTE:	Illinois 17	DESIGN GUIDELINES USED:	3P
LOCAL NAME:	N/A	FUNCTIONAL CLASSIFICATION: East of CH 6 - Urban Other Principal Arterial West of CH 6 - Rural Minor Arterial	
SECTION:	(11, 12) RS-3	DESIGN SPEED:	60 mph (100 km/h)
COUNTY:	Kankakee	POSTED SPEED:	55 mph
ADT:	Herscher Rd. to Warner Bridge Road - 3,850/1997/10.4 Warner Bridge Road to Kankakee City Limits - 9,400/1997/5.4		

1. **LIMITS OF PROJECT:** The project begins approximately 0.75 miles (1.2 km) east of Herscher Road and extends east approximately 9.13 miles (14.7 km) to the west Kankakee city limits.

2. **PREVIOUS DATES OF DISCUSSION**: None

3. **PROJECT DESCRIPTION:** The length of roadway to be improved is approximately 9.13 miles (14.7 km). It was originally constructed in 1924 to a width of 18 ft (5.5 m) with a pavement design of 9 in-6 in-9 in (229 mm-152 mm-229 mm) portland cement concrete and earth shoulders.

   In 1961, the roadway was widened to 24 ft (7.32 m) with 9 in (229 mm) portland cement concrete and overlaid with 3.25 in (82 mm) of bituminous asphalt. In 1975, bituminous shoulders 9 in (229 mm) at a width of 1.5 ft (457 mm) were added to each side and the entire roadway given a bituminous overlay of 3 in (76 mm) and aggregate shoulders. In 1986, the shoulders were widened an additional 1.5 ft (457 mm) with 6 in (152 mm) of bituminous concrete to allow for a bituminous shoulder of 3 ft (914 mm). Turn lanes of 12 ft (3.66 m) were also constructed at Lehigh and Limestone Roads with 9 in (229 mm) of bituminous base course. The existing roadway was cold milled 0.625 in (16 mm) and the entire roadway was given a bituminous overlay of 2 in (51 mm). Aggregate shoulders 5 ft (1.52 m) were also added.

   The proposed improvement includes a bituminous concrete overlay of 0.75 in (19 mm) leveling binder and a bituminous concrete overlay of 1.5 in (38 mm) surface course. A 5 ft (1.5 m) aggregate wedge will also be placed. Mr. John Doe of the Bureau of Design and Environment concurred with the scope of work and with the project being processed as a State Approved Categorical Exclusion.

4. **TRAFFIC CONTROL:** This project will be constructed using applicable traffic control standards with one lane open to traffic at all times during construction.

5. **REVIEW OF CRASH DATA:** A total of 102 crashes have occurred on this segment of Illinois Route 17 from January 1993 to December 1995. The highest crash pattern was in clear and dry conditions (69 percent). The most common type was animal related (28 percent). No Five Percent Report locations were noted in the project limits.

6. **EXPLANATION OF DESIGN EXCEPTIONS:** No exceptions required.

7. **ENVIRONMENTAL ACTIONS DESIRED:**

   - **NATIONWIDE 404 PERMITS:** N/A
   - **ENVIRONMENTAL SURVEY REQUEST:** N/A
   - **CATEGORICAL EXCLUSION**: State Approved CE Concurred 1-29-98

8. **ADDITIONAL RIGHT-OF-WAY NEEDED**: N/A

9. **ATTACHMENTS**: Location Map(s) attached.

EXAMPLE OF DISTRICT MINUTES
(Coordination Meeting Minutes)

Figure 12-3.D

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12-3.08(b) Five Percent Report Locations

Every effort should be made to incorporate Five Percent Report (FPR) locations into the design of 3P and SMART projects. The following discusses when to incorporate FPR locations into a 3P or SMART project.

There are two levels of FPR investigations and analysis that determine a FPR's impact on a resurfacing improvement. Figure 12-3.E should be used to assist in making these determinations. Each investigation and analysis requires engineering judgment and the documentation of conclusions. Also, examine and analyze the following:

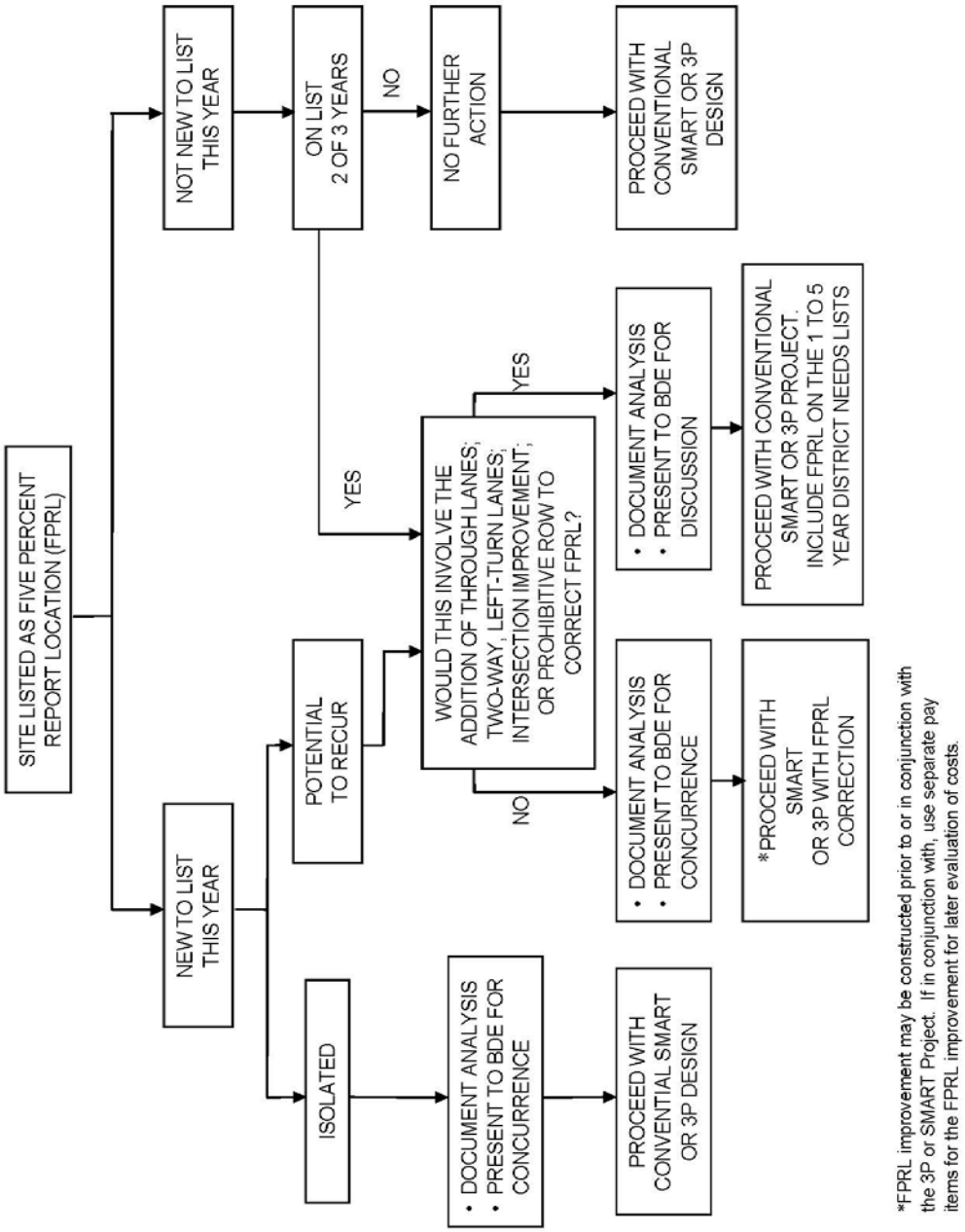
- frequency of crashes;
- severity of crashes;
- crash rate;
- delta change;
- predominate type of crashes;
- type of area;
- pertinent history of past improvements;
- an event near or at the location which might have contributed to its being listed as a FPR location;
- existing geometrics (e.g., alignment, roadway width, ROW, turn lanes); and
- results of capacity analysis.

To incorporate a FPR location into a 3P or SMART project, the location must be considered to be recurring when:

- it has been on the FPR list for two out of the last three years; or

- where in the first year on the FPR list, an analysis determines that there is a potential for recurrence (not an isolated occurrence).

If it is determined not to incorporate a FPR location into the resurfacing improvement, the location must be an isolated occurrence, considered not to be correctable as part of the resurfacing project, or the safety improvement will be completed using other means (e.g., field maintenance crew, future project of differing scope).



GUIDANCE TO INCLUDE FPR LOCATIONS INTO 3P OR SMART PROJECTS

Figure 12-3.E

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12-3.09 Phase I Checklist

The Checklist for Phase I Reports (Figure 12-3.F) has been removed and replaced by BDE 1210 (Phase I Checklist), please view the form on the Forms Master List for the most recent version. This form is optional for inclusion in Phase I Engineering Reports.

12-3.10 Phase I Report Exemptions

There are certain projects that are not complex from an engineering standpoint. In addition, they do not cause sufficient impacts to require the preparation of a Phase I report. In this case, the district prepares a set of documents designated as the Plans, Specifications, and Estimates (PS&E).

The following project types (and combinations thereof) that are constructed within existing right-of-way will not require Project Reports and, therefore, are intended to expedite processing and design approval:

1. traffic signal modifications and installations of new signals;
2. signing;
3. pavement markings not affecting the number of through traffic lanes;
4. anti-skid treatments and pavement reprofiling;
5. curb and/or gutter repairs and construction of curb ramps for the disabled;
6. bridge repairs, which do not require traffic detours or runarounds, including:*
    a. bridge rail replacement;
    b. bridge deck overlay and waterproofing;
    c. expansion joint replacement;
    d. bearing replacement;
    e. repairs to deck, partial or full depth;
    f. repairs to damaged rails, corroded or damaged structural steel members, and deteriorated areas of concrete elements including sidewalks, curbs, water tables, girders, and portions of the substructure above ground or water;
    g. painting of structural steel; and
    h. individual stringer replacement for a portion of a superstructure;

**Note: All items under Number 6 require coordination with the Bureau of Bridges and Structures prior to preparation of final plans. Additionally, Item 6a requires TSL plan approval and Item 6e requires approval of a "Bridge Deck Condition Report."*

7. the following lighting and electrical work:

    a. continuous and tower lighting,
    b. tunnel lighting,
    c. temporary lighting,
    d. bridge lighting,
    e. pedestrian lighting,
    f. pumping station,
    g. highway advisory radio,
    h. control systems for changeable lanes,
    i. traffic monitoring systems, and
    j. changeable message signing;

8. landscaping;

9. the following stormwater control within existing right-of-way:

    a. slope repair,
    b. ditch and culvert cleaning, and
    c. miscellaneous storm sewer work to eliminate ditch (which does not reduce necessary urban runoff storage/retention);

10. impact attenuator and glare screen installations;

11. the following isolated highway-railroad grade crossing improvements:

    a. repair/rehabilitation of crossing proper,
    b. rehabilitation of immediate roadway approaches to crossing, and
    c. upgrading of crossing protection;

12. the following restoration projects:

    a. retaining wall repair (coordinate with Bureau of Bridges and Structures),
    b. fencing,
    c. guardrail repair,
    d. pavement and shoulder patching/sealing,
    e. intermittent resurfacing, and
    f. repairs to drainage structures not requiring traffic detours or runarounds;

13. installation of turning lanes within an existing median;

14. junkyard screenings;

15. upgrading safety features (e.g., signing, striping, guardrail end terminals)

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16. approval of utility installations along or across a transportation facility, excluding longitudinal installations within the access control lines of Interstate and freeway rights-of-way;

17. activities included in the highway safety plan developed pursuant to *23 USC 402*;

18. alterations to existing buildings to provide for noise reduction and/or the installation of noise abatement barriers;

19. emergency repairs under *23 USC 125* that do not substantially change the design of the facility and are commenced during or immediately after the occurrence of a declared national disaster;

20. acquisition of scenic easements;

21. minor improvements to existing rest areas and truck weigh stations that do not require changes to the geometrics or to the number of parking stalls;

22. installation of noise barriers;

23. approval of air space agreements; and

24. disposal of excess right-of-way.

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12-4 ESTIMATE OF COST FORMATS

12-4.01 Corridor or Feasibility Studies

These studies are general in nature and are usually comparing alternative corridors or locations. Therefore, the cost estimate is generalized and is made on a per-mile (per-kilometer) basis or by assigning lump-sum dollar amounts to major items.

The format of the cost estimate sheet should only cover major items plus a contingency figure. As a guide in preparing generalized estimates, see Chapter 65 or the latest instructional manual for preparing an Interstate Cost Estimate.

12-4.02 Design Reports, Combined Design Reports, and State Improvement Reports

Figure 12-4.A presents the cost items normally used for complex projects. See Section 12-1.02 for a description of typical projects in this category. Items may be added or further divided as necessary to properly identify costs on specific projects. Individual cost estimate sheets are usually necessary for each construction segment, which then make up the total cost of each alternative. This segment type format allows the project to be easily programmed for multi-year construction and to provide for usable highway segments. Individual major elements such as interchanges or bridges are listed separately to identify their location and costs. For additional guidance, see Chapter 65.

12-4.03 Project Reports and Other Reports

Figure 12-4.B presents a sample cost estimate form with work classification elements considered appropriate for a Project Report or Abbreviated Project Report. This form may be copied and inserted directly into reports or may be modified to fit a specific improvement.

For other reports (e.g., 3P Reports, SMART Reports), the cost estimate is completed on work sheets and the total cost for the project is listed in the report; see forms BDE 1202 and BDE 1203. For improvements not requiring a Project Report (i.e., Phase I Report Exemptions, see Section 12-3.10), the cost estimate is prepared at the same time as the PS&E package and itemized by pay items.

COST ESTIMATE

Date: _____ Designer: _____

Route: _____ City/County:: _____

Section: _____ Base Year: _____

WORK CLASSIFICATION	Estimated Costs in $1000's Segments					
	1	2	3	4	5	Totals
1. Clear and Grub (Minor removal items and demolition)						
2. Earthwork						
a. Mainline grading and drainage (minor structures).						
b. Frontage road grading and drainage (minor structures).						
3. Pavement						
a. Mainline subbase, base, surface, and shoulder						
b. Frontage road, subbase, base, surface, and shoulder						
4. Grade Separations						
a. Railroads						
b. Highway grade separations, including earthwork and pavement (without ramps). List each separately.						
c. Structure removal						
5. Interchanges (structure, crossroad and ramp earthwork, and crossroad and ramp pavements). List each separately. (Do not include mainline grading or pavement.)						
6. Structures						
a. Drainage (major structures)						
b. Walls (retaining or reinforced earth)						
7. Miscellaneous Items						
a. Guardrail, fencing, and lighting						
b. Traffic control						
c. Traffic signals (modernization or new)						
d. Signing						

COST ESTIMATE FORMAT
(Complex Projects)

Figure 12-4.A
(Page 1 of 2)

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e. Railroad Crossing Improvements						
f. Field Office and Laboratory						
8. Other Items						
a. Construction Site Stormwater Pollution Control						
b. Landscaping						
c. Rest areas or other amenities						
d. Environmental mitigation						
9. Transportation Management Plan Costs						
a. Crossovers						
b. Temporary roadways						
c. Detours						
10. Subtotal (Categories 1 - 9)						
11. Contingencies (____% of Line 10). (Should not exceed 20%).						
12. Total Construction Cost (Lines 10 and 11)						
13. Right-of-Way						
a. Residential property and relocations						
b. Farm and business property and relocations						
14. Utility Adjustments						
15. *Preliminary Engineering (____% of Line 12).						
16. *Construction Engineering (____% of Line 12)						
17. Total Project Cost (Lines 12 - 16)						
18. Local Participation						

*Note: *If consultant work is anticipated for preliminary engineering or construction engineering, these items should be listed separately in submission of costs for programming purposes.*

COST ESTIMATE FORMAT
(Complex Projects)

Figure 12-4.A
(Page 2 of 2)

COST ESTIMATE

Date: _____ Designer: _____

Route: _____ City/County:: _____

Section: _____ Base Year: _____

WORK CLASSIFICATION	Estimated Costs in $1000's
1. Clearing; Minor Removal Items	
2. Earthwork	
3. Construction Site Stormwater Pollution Control	
4. Drainage	
5. Subbase, Base, Surface, Shoulders	
6. Guardrail, Roadside Safety	
7. Traffic Signals (Modernization or New)	
8. Detours, Temporary Traffic Control - Roadway	
9. Railroad Crossing Improvements	
10. Field Office and Laboratory	
11. Environmental Mitigation/Incidental Items	
12. Roadway Subtotal (Categories 1-11)	
13. Structure Removal	
14. Major Culverts	
15. Bridges	
16. Structures for Detours and Temporary Traffic Control	
17. Structure Subtotal (Categories 13 - 16)	
18. Roadway and Structure Subtotal (Lines 12 and 17)	
19. Contingencies (__% of Line 18) (should not exceed 15%)	
20. Total Construction Cost (Lines 18 and 19)	
21. Utility Adjustments	
22. Land Acquisition and Relocations	
23. *Preliminary Engineering (__% of Line 20)	
24. *Construction Engineering (__% of Line 20)	
25. Total Project Cost (Lines 20 - 24)	

*Note: *If consultant work is anticipated for preliminary engineering or construction engineering, these items should be listed separately in submission of costs for programming purposes.*

COST ESTIMATE FORMAT
(Project Reports)
Figure 12-4.B

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12-5 PROCESSING AND APPROVAL OF PHASE I REPORTS

12-5.01 Corridor and Feasibility Study Reports

For Corridor and Feasibility Study Reports, the following will apply:

1. Submittal of Reports. Before the report is submitted for approval, the Secretary of IDOT and the Director of the Office of Planning and Programming should be contacted on their desire for a briefing meeting. The designer will submit the Corridor and Feasibility Study Reports to BDE for approval. BDE will approve a highway corridor only after the following has occurred:

- The requirements of Chapter 11 and other applicable laws and regulations (e.g., *Part III "Environmental Procedures"*) have been met.
- The public involvement activities as required by Chapter 19 have been fulfilled.
- Coordination and involvement with BDE and the FHWA has been completed. This is usually accomplished at district coordination meetings or at special district meetings. Include the minutes of these meetings in the report.
- The District has submitted three copies of a Corridor Study Report or Feasibility Study Report and any separate appendices to the Report to BDE.
- The District has written a detailed memorandum to BDE describing the reasons for selecting the recommended corridor, the items submitted, and requesting corridor approval.

2. Corridor Study and Feasibility Study Approval. The Bureau Chief of Design and Environment will grant corridor approval and feasibility approval (for feasibility studies which involve a corridor) with concurrence of the Director of the Division of Highways.

3. Feasibility Study Approval not Involving a Corridor. For feasibility studies which do not involve a corridor, concurrence of the recommendations will be by the Bureau Chief of Design and Environment. Concurrence of the Director of the Division of Highways and coordination with the Secretary of IDOT and the Director of the Office of Planning and Programming is not necessary.

12-5.02 Design Reports

For Design Reports, the following will apply:

1. Submittal of Reports. Before the report is submitted for approval, the Secretary of IDOT and the Director of the Office of Planning and Programming should be contacted on their desire for a briefing meeting. The designer will submit the Design Report to the Regional Engineer for approval, except those involving major new alignment, which should be submitted to the BDE Location and Environment Section for approval.

The Regional Engineer (or BDE) will approve a Design Report only after the following has occurred:

- The corridor has been approved.
- The applicable requirements of Chapter 11 and other applicable laws and regulations (e.g., *Part III "Environmental Procedures*") have been met.
- The Record of Decision (ROD) for projects requiring an Environmental Impact Study (EIS) has been signed; the Finding of no Significant Impacts (FONSI) for projects requiring an Environmental Assessment (EA) has been approved; or the Categorical Exclusion (CE) has been approved for projects qualifying as being exempt from the requirement to prepare and EIS or an EA.
- The District has submitted two copies of the Design Report and appendices including copies of any technical reports [see the partial list in Section 11-5.04(h)], if applicable, to BDE when the project involves a major new alignment.
- The Bureau of Design and Environment's Bicycle Coordinator has been notified. See Chapter 17 for Bicycle and Pedestrian Accommodation.
- The public involvement activities as required by Chapter 19 have been fulfilled.
- Coordination and involvement with BDE and the FHWA has been completed. Projects requiring Federal Actions such as EIS/ROD approval, EA/FONSI approval, and Federal Approved CE are required to be discussed at district coordination meetings. Actions qualifying as a State Approved CE are not required to be discussed at district coordination meetings (see Section 22-5.03), unless there are issues related to the project's scope, design exceptions, or meeting ADA standards to the maximum extent practicable. The district may choose, however, to present at the coordination meeting additional projects qualifying as a State Approved CE at their discretion. Include the minutes of these meetings in the report.
- BDE and/or FHWA has concurred with and approved any design exceptions to the project as discussed in Chapter 31.
- The district has written a memorandum to the Regional Engineer (or BDE if applicable) describing the reasons for selecting the recommended alignment and design features, the items submitted, and requesting design approval.

2. Design Approval. The Regional Engineer or the Bureau Chief of Design and Environment, (for large-scale projects on new alignment) with concurrence of the Director of the Division of Highways, will grant design approval for Design Reports. The district will retain the final approved report. When the Regional Engineer approves the report, a copy of form BDE 1201 is submitted to the BDE Location and Environment Section upon report approval. A sample design approval sign-off sheet is shown in Figure 12-5.A.

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12-5.03 Combined Design Reports

For Combined Design Reports, the following will apply:

1. Submittal of Reports. Before controversial projects are submitted for approval, the Bureau Chief of Design and Environment and the Director of the Division of Highways should be contacted on their desire for a briefing meeting before design approval is granted. The designer will submit the Combined Design Report to the Regional Engineer for approval. The Regional Engineer may approve a proposed improvement in a Combined Design Report only after the following has occurred:

   - The applicable requirements of Chapter 11 and other applicable laws and regulations (e.g., *Part III "Environmental Procedures"*) have been met.

   - The Record of Decision (ROD) for projects requiring an Environmental Impact Study (EIS) has been signed; the Finding of no Significant Impacts (FONSI) for projects requiring an Environmental Assessment (EA) has been approved; or the Categorical Exclusion (CE) has been approved for projects qualifying as being exempt from the requirement to prepare an EIS or an EA.

   - The public involvement activities as required by Chapter 19 have been fulfilled.

   - Coordination and involvement with BDE and the FHWA has been completed. Projects requiring Federal Actions such as EIS/ROD approval, EA/FONSI approval, and Federal Approved CE are required to be discussed at district coordination meetings. Actions qualifying as a State Approved CE are not required to be discussed at district coordination meetings (see Section 22-5.03), unless there are issues related to the project's scope, design exceptions, or meeting ADA standards to the maximum extent practicable. The district may choose, however, to present at the coordination meeting additional projects qualifying as a State Approved CE at their discretion. Include the minutes of these meetings in the report.

   - BDE and/or FHWA has concurred with and approved any design exceptions to the project as discussed in Chapter 31.

   - The District has written a memorandum to the Regional Engineer describing the reasons for selecting the recommended alignment and design features, the items submitted, and requesting design approval.

2. Design Approval. On most projects involving a Combined Design Report, design approval will be granted by the Regional Engineer. The district may request concurrence from BDE if project complexities warrant BDE involvement. The district will retain the final approved report. Submit form BDE 1201 to the BDE Location and Environment Section upon report approval.

FEDERAL AID PRIMARY ROUTE 413
FROM INTERSTATE ROUTE 270 AND INTERSTATE
ROUTE 255 INTERCHANGE IN MADISON COUNTY
TO ILLINOIS ROUTE 267 NORTH OF ALTON, ILLINOIS
IN MADISON COUNTY

FINAL DESIGN REPORT

Prepared by
the Illinois Department of Transportation

August 1998

The proposed action is the construction of approximately 21 miles (34 km) of four-lane, fully access-controlled, divided highway. The proposed highway extends from the directional interchange of I-270 and I-255 west of Glen Carbon to Illinois Route 267 north of Alton.

This Design Report addresses the no-action alternative and the option of improving existing highways in the study area. Detailed studies for five build alternatives are also presented in this document.

An Environmental Impact Statement has been prepared and the Record of Decision signed in conjunction with this Design Report and assesses the potential social, economic, and environmental effects of the various alternatives. The recommended alternative for construction is Alternative C.

Design Approval _____ _____
Regional Engineer or Bureau of Design & Environment Date

EXAMPLE OF DESIGN APPROVAL SHEET
(Major Type Project)

Figure 12-5.A

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12-5.04 State Improvement Reports

For State Improvement Reports, the following will apply:

1. Submittal of Reports. Projects in this category are similar to those covered in a Combined Design Report (major improvements) except that a decision was made during the programming process not to use Federal funds on the project. For controversial projects, the Bureau Chief of Design and Environment and the Director of the Division of Highways should be contacted on their desire for a briefing meeting before design approval is sought.

2. The Regional Engineer approves projects in this category after the following has occurred:

   - The applicable requirements of Chapter 11 and other applicable laws and regulations (e.g., *Part III "Environmental Procedures*") have been met.

   - The public involvement activities as required by Chapter 19 have been fulfilled.

   - Environmental information and documentation have been completed. Use the EA record form as a checklist to determine potential project impacts. Include a summary and analysis of impacts as a separate section in the report.

   - BDE has concurred with and approved any design exceptions to the project. However, regardless of the funding, if the project involves the Interstate, FHWA must approve any Level One design exceptions.

   - The district has written a memorandum to the Regional Engineer describing the reasons for selecting the recommended design alternative, the items submitted, and requesting design approval.

3. Design Approval. Design approval for State Improvement Reports will be granted by the Regional Engineer. The district will retain the final approved report. Submit form BDE 1201 to the BDE Location and Environment Section upon report approval.

12-5.05 Other Types of Reports

The Regional Engineer gives design approval for Project Reports, Abbreviated Project Reports, 3P Reports, and SMART Reports. For all of these report types, submit form BDE 1201 to the BDE Location and Environment Section upon report approval.

Before any reports can be finalized, the district and the BDE Regional Field Engineers must determine if any design exceptions on the project are required and, if so, concurrence of the exception must be approved by the BDE Regional Field Engineer, or, if necessary, the FHWA, through discussions at a district coordination meeting. See Chapter 31 for guidelines on design exceptions.

12-5.06 Regional Engineer Delegation of Approval Authority and Quality Reviews

The Regional Engineer may only delegate project approval authority to the district Program Development Engineer. To ensure the approval authority outlined above for Regional Engineers is being exercised uniformly on a statewide basis and to provide consistency in project development procedures, quality reviews will be conducted annually by BDE and FHWA. The quality reviews will also allow the Department to maintain the integrity of its Stewardship and Oversight Agreement with FHWA.

The projects selected for the annual quality review may be selected at random or may be those projects of unique features or of unusual circumstances which were completed in that year of review. For each annual quality review, BDE will provide, as appropriate, written findings, guidance, training, revised procedures, and specific recommendations for District action for addressing any identified deficiencies or concerns.

Copies of the annual quality review reports will be submitted to the Director of Highways/Chief Engineer and the Secretary of Transportation. The Deputy Director/Regional Engineer will be required to provide a written reply to the BDE Bureau Chief indicating corrective actions the District will take in response to the recommendations provided. BDE is not precluded from reviewing any portion of the phase I process at any time, especially when unique features or unusual circumstances are involved.

If an annual quality review determines that a District's geometric designs are unsatisfactory, The Deputy Director/Regional Engineer and the Director of Highways/Chief Engineer will be notified immediately of the deficiencies. Further, BDE will randomly review the District's designs for the next year. If further shortcomings arise, the District's geometric qualification may be rescinded by the Director of Highways/Chief Engineer.

FHWA will participate in all annual quality reviews conducted pursuant to these procedures and recommend corrective actions when needed. Best practices identified through the BDE annual quality review will be shared with all Districts.

12-5.07 Reports for Local Public Agency Projects

When a local public agency has a project on the State highway system, or on a local highway system that affects a state highway, the following sections, as well as the *Bureau of Local Roads and Streets (BLRS) Manual*, will apply. Note: Projects that qualify as a State Approved CE would be approved by the district BLRS.

12-5.07(a) Local Public Agency Lead Projects on the State Highway System

For Federal-aid projects, generally use the procedures outlined in Section 12-5-05 and Section 12-3.10. In addition, consider the following:

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1. Projects Not Involving a Jurisdictional Transfer (JT). The following applies to all State routes, marked or unmarked:

   a. District Coordination Meetings. Discuss all projects at district coordination meetings before finalizing and submitting any reports.

   b. Geometric Review. If a local public agency or their consultant is preparing the report for any marked or unmarked State highway, the district Geometric Engineer will review the highway geometrics and cross-section design during the development of preliminary alternatives stage. Once the geometrics and cross-section designs are approved, the district BLRS will forward the report to CBLRS.

   c. Submittal of Reports. Reports prepared by the district (or their consultant) or the local public agency (or their consultant) should be submitted to the Central Office Bureau of Local Roads and Streets (CBLRS) for information, review, and/or approval, in conformance with CBLRS policies. When the need for design exceptions is determined on routes under State jurisdiction, CBLRS will coordinate and discuss the design exceptions with BDE prior to approval action.

2. Projects Resulting in a Jurisdictional Transfer (JT) to a Local Public Agency (not including Present Worth Value (PWV) JT's. The following will apply:

   a. Federal Funds. Regardless of which agency initiates a project, submit the project report to the CBLRS for review and approval. When the State is providing matching funds, the CBLRS will coordinate the design requirements with BDE prior to approval.

   b. State-Only Funds. The preparation of a project report will usually be required. Submit the report to CBLRS for review and approval. The local public agency should coordinate the proposed design with the district BLRS before submitting the report to the CBLRS.

   c. District Coordination Meetings. For jurisdictional transfers using either Federal funds or State-only funds, it is imperative that these projects be discussed at the district coordination meetings. This will allow BDE and CBLRS to become aware of proposed design features and costs and to determine if the project scope is appropriate.

   d. Agreements. Ensure all joint projects conform with the Department's participation policies for joint agreements; see Chapter 5.

   e. Review of Agreements. After joint agreements are finalized by the district and submitted to the CBLRS, CBLRS will forward agreements to BDE for their review and concurrence. In addition to the normal review by the BDE Preliminary Engineering Section, the BDE Regional Field Engineers will also review the agreement for proper design content.

12-5.07(b) Local Public Agency Projects on Combined Systems

For local public agency projects that have substantial work on both highway systems, or for systems under joint jurisdiction with the State, process the project report through the district to CBLRS. CBLRS will coordinate design requirements with BDE.

12-5.07(c) Local Public Agency Projects on the Local Highway System

See the *Bureau of Local Roads and Streets (BLRS) Manual for procedural requirements*.

12-5.07(d) Modified Procedures

Where special or unusual situations arise during project development, modified review and processing procedures may be necessary. In these cases, the district, CBLRS, and BDE should agree on the modified procedures to use.

12-5.08 Project Reports for the Highway Safety Improvement Program

The Highway Safety Improvement Program (HSIP) is intended to make moderate cost improvements, addressing specific site-related crashes, and eliminating over-represented crash patterns. These projects will typically require an Abbreviated Project Report or may be exempt from the preparation of a report; see Section 12-3.10.

In many cases, the improvements may be short-term until major reconstruction can be undertaken. Any additional work not directly related to the specific crash problem is not eligible for Highway Safety Improvement Program funding, unless it can be justified as being appropriate or necessary due to its relationship with the basic crash history.

In addition to the guidelines in Section 12-3.07, Project Reports for safety improvements will include the Regional Engineer's concurrence of the project in the Highway Safety Improvement Program. Project Reports should include the following information:

- project priority numbers for the annual District Highway Safety Improvement Program;
- project locations showing county, route, and limits of construction;
- descriptions of work as determined by the District Highway Safety Committee;
- estimated costs and benefit/cost ratios; and
- district Highway Safety Committee member titles, their bureaus, and signatures together with the Regional Engineer's concurrence.

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When any significant revisions to the scope of work, estimated cost, or benefit/cost ratio are proposed for the annual District Highway Safety Improvement Program, the district Safety Coordinator must coordinate the revision through the Bureau of Safety Engineering.

Design approval procedures and the preparation of a project report for safety projects will continue to be in accordance with Section 12-5.05 or Section 12-3.10.

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12-6 CORRIDOR PROTECTION

12-6.01 Need

Section 4-510 of the *Illinois Highway Code* (605 ILCS 5/4-510) provides a means of protecting the right-of-way of "future additions" to State highways from future developments. This statute would apply to either new construction on new location or to additions or widening of the existing highway system under the reconstruction category.

Prior to initiating a corridor preservation project, the proposed improvement must be analyzed to determine the potential for development on future right-of-way needs. A proposed highway located in or near a rapidly developing urban area might require corridor protection soon after design approval is received, whereas a proposed highway in a rural area might have little likelihood of immediate development.

Not more than ten years after a protected corridor is established, and not later than the expiration of each succeeding ten year period, the Department shall hold public hearings to discuss the viability and feasibility of the protected corridor. The Department shall retain the discretion to maintain any protected corridor but shall give due consideration to the information obtained at the public hearing. If the Department in its discretion determines that the construction of the roadway is no longer feasible, the Department shall abolish the protected corridor.

12-6.02 Procedures

The Land Acquisition *Policies and Procedures Manual* describes the procedures and exhibits needed to file a Corridor Protection Map.

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12-7 ROUTE LOCATION DECISIONS

12-7.01 Purpose

A Route Location Decision is a legal declaration made by the Illinois Department of Transportation, establishing the location of a proposed State highway or revising the location of an existing State route, as required by Chapter 605 ILCS 5/4-204 of the *Illinois Highway Code*.

12-7.02 Applicability

Prepare a Route Location Decision where the following occurs on a State highway:

- a route will be developed on a new location;
- there is a change in the termini of an existing route;
- a portion of an existing route will be relocated for a length of 1 mile (1.6 km) or more;
- a portion of an existing route will be relocated a lateral distance of 0.5 miles (0.80 km) or more from the former location;
- a loop or spur will be added to an existing route;
- an existing route will be relocated due to the expansion of airport facilities; and/or
- in conjunction with an Order Establishing a Freeway, the freeway or expressway will be developed on a new location. Where a portion of an existing route will be declared a freeway, a Route Location Decision is not required.

12-7.03 Content

The Route Location Decision consists of a detailed legal description referenced to section corners, townships, ranges, and a map upon which the selected route location is shown.

Approximate scale values may be used in the description where field survey data is not available. A county map having a scale 1 in = 1 mile (1:60,000 metric) typically is used to show the route location.

A sample Route Location Decision is shown in Figure 12-7.A.

12-7.04 Preparation and Processing

Subsequent to the review of comments received at a public hearing or informational meeting and the disposition of comments, and after design approval of the location is given by BDE, prepare a Route Location Decision and forward it, in duplicate, to BDE. The Preliminary Engineering Section will review the location decision for form and content and will process it for execution.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE LOCATION DECISION

Along Federal-aid Route 155 from Henry Street in Alton, one block east of the Clark Bridge, in a generally southeasterly direction to a point near the intersection with FA Route 4 near Wood River in Madison County.

WHEREAS, the Department of Transportation of the State of Illinois has proceeded to select, lay out, and survey a part of Federal-aid Route 155 along a line as shown on the map attached hereto and made a part hereof, and on a location more particularly described as follows:

Commencing from a stone set at the northwest corner of Front Street and Henry Street, as said streets are now laid out on the plats of the City of Alton, thence South 84 degrees 19 minutes East along an easterly prolongation of the north line of Front Street for a distance of 99.00 feet (30.175 meters) to a point in the east line of Henry Street; thence South 6 degrees 12 minutes West along the east line of Henry Street for a distance of 864.60 feet (263.530 meters) to a point, said point being the POINT OF BEGINNING; thence South 80 degrees 48 minutes East along the centerline of FA Route 155 for a distance of 585.73 feet (178.531 meters) to a point of curve, ...

(*continuation of detailed legal description referenced to section corners, townships, and ranges*)

... for a distance of 266.82 feet (81.327 meters) to an intersection with the centerline of FA Route 4 (Business US 67); said point of intersection being the END OF ROUTE LOCATION DECISION; and being approximately 1000 feet (305 meters) South 68 degrees 17 minutes West from the east Line of NW 1/4 of Section 28, T5N, R9W of Third Principal Meridian, Madison County.

WHEREAS, the location of Federal-aid Route 155 within the above limits having been fully examined and observed and the width of right-of-way needed for developing and improving said route having been considered and determined; and

WHEREAS, it is required that a detailed description of the location of that part of Federal-aid Route 155 described above, and the width of right-of-way needed for development and improvement be entered of record in the Department of Transportation of the State of Illinois;

IT IS THEREFORE ORDERED, that that part of Federal-aid Route 155 extending from a point on Henry Street in Alton, one block east of the Clark Bridge, in a generally southeasterly direction to a point near the intersection with FA Route 4 near Wood River in Madison County be and is hereby located as described herein, and that the said location as described be and is hereby selected as the location of part of Federal-aid Route 155 and also, that there shall be acquired for this part of Federal-aid Route 155 a general right-of-way width of 200 feet (60.960 meters), except that such additional widths may be acquired as may be required for backslopes in cuts, downslopes in fills, frontage roads to serve built-up areas, and additional areas as may be required at intersecting streets or highways for providing traffic flow, safe-sight distances, and control of access to Federal-aid Route 155.

SAMPLE ROUTE LOCATION DECISION

Figure 12-7.A
(Page 1 of 2)

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IT IS FURTHER ORDERED that this map and order be filed as a part of the records of the Department of Transportation of the State of Illinois.

ENTERED THIS _____ day of _____ 20___.

_____
Secretary of Transportation

SAMPLE ROUTE LOCATION DECISION

Figure 12-.7A
(Page 2 of 2)

12-7.05 Execution

Upon execution of the Route Location Decision by the appropriate Department officials, an original copy of the document is returned to the district for recording in the Office of the County Clerk of each county in which the highway is located. Once the recording is complete, the Route Location Decision is returned to BDE for filing.

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12-8 ORDER ESTABLISHING A FREEWAY

12-8.01 Freeways and Expressways

1. New Locations. According to Chapter 605 ILCS 5/8-101 of the *Illinois Highway Code*, once it has been decided to control access on a State route, it is necessary to designate and establish the facility as an access-controlled highway. This action is initiated after design approval is obtained for the freeway/expressway. The Order Establishing a Freeway (Freeway Order) is a legal declaration made by the Department designating a highway as an access-controlled facility and delineating the extent of the freeway/expressway.

2. Revisions to Existing Orders. This situation is identical to “new locations” except that an existing Freeway Order is revised to describe a change in the originally approved access control limits; see Section 37-1.03 and Chapter 35.

12-8.02 Procedures

The Order must include the access limits along the mainline and the specific limits on all crossroads kept open to traffic. The Order contains a legal description of the freeway/expressway referenced to section corners, townships, and ranges. The Order is approved and signed by the Illinois Secretary of Transportation. An original copy of the fully executed Order is returned to the district for recording in the Office of the County Clerk of each county in which the freeway/expressway is located. Once the recording is completed, the Order is returned to BDE for filing. Figure 12-8.A illustrates a sample Order.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ORDER ESTABLISHING A FREEWAY

Along Federal-aid Route 155 from Henry Street in Alton, one block east of the Clark Bridge, in a generally southeasterly direction to a point near the intersection with FA Route 4 near Wood River in Madison County.

The Department of Transportation of the State of Illinois acting under authority conferred on it by "An Act authorizing the Department of Transportation, the County Board of any County, or the corporate authorities of any City, Village, or Incorporated Town to designate and establish existing and proposed highways under their respective jurisdiction and control as freeways, and to limit access thereto" designated as Chapter 605 ILCS 5/8-101, as amended, and the Department being of the opinion that the safety and convenience of highway traffic will be promoted and the public interest subserved thereby, does hereby designate and establish a FREEWAY along the general location of those portions of Federal-aid Route 155 described below, and does declare its intention of proceeding to improvement and develop said portions of Federal-aid Route 155 in a manner which will permit access between said FREEWAY and abutting lands only at entrances provided for that purpose, in accordance with the provisions of said Act:

Commencing from a stone set at the northwest corner of Front Street and Henry Street, as said streets are now laid out on the plats of the City of Alton, thence South 84 degrees 19 minutes East along an easterly prolongation of the north line of Front Street for a distance of 99.00 feet (30.175 meters) to a point in the east line of Henry Street; thence South 6 degrees 12 minutes West along the east line of Henry Street for a distance of 864.60 feet (263.530 meters) to a point, said point being the POINT OF BEGINNING; thence South 80 degrees 48 minutes East along the centerline of FA Route 155 for a distance of 585.73 feet (178.531 meters) to a point of curve, thence along a curve to the right, having a radius of 2864.79 feet (873.188 meters), for a distance of 1879.17 feet (572.771 meters) to a point of tangency; thence South 43 degrees 13 minutes East for a distance of 589.97 feet (179.823 meters) to a point of curve; thence along a curve to the left, having a radius of 3819.72 feet (1164.251 meters), for a distance of 1433.33 feet (436.879 meters) to a point of tangency; thence South 64 degrees 43 minutes East for a distance of 259.62 feet (79.132 meters) to a point of curve; thence along a curve to the right, having a radius of 5729.58 feet (1746.376 meters), for a distance of 2206.67 feet (672.593 meters) to a point of tangency; thence South 42 degrees 39 minutes East for a distance of 1241.69 feet (378.467 meters) to a point of curve; thence along a curve to the left, having a radius of 2864.79 feet (873.188 meters), for a distance of 970.00 feet (295.656 meters) to a point of tangency; thence South 62 degrees 3 minutes East for a distance of 2529.42 feet (770.967 meters) to a point on the westerly edge of east-half of Fractional Section 19, T5N, R9W, 3rd PM; said point being South 0 degrees 51 minutes East a distance of 498.40 feet (151.912 meters) from the center of said Section 19, thence South 62 degrees 3 minutes East for a distance of 791.51 feet (241.252 meters) to a point of curve; thence along a curve to the right, having a radius of 3819.72 feet (1164.251 meters), for a distance of 1631.11 feet (497.162 meters) to a point of tangency; thence South 37 degrees 35 minutes East for a distance of 319.90 feet (97.506 meters) to a point of curve; thence along a curve to the left, having a radius of 2864.79 feet (873.188

SAMPLE ORDER ESTABLISHING A FREEWAY/EXPRESSWAY

Figure 12-8.A
(Page 1 of 2)

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meters), for a distance of 1718.34 feet (523.750 meters), to a point of tangency; thence South 71 degrees 57 minutes East for a distance of 1111.06 feet (338.651 meters) to a point of curve; thence along a curve to the right, having a radius of 7473.04 feet (2277.783 meters), (for a distance of 1021.69 feet (311.411 meters) to a point of tangency; thence South 64 degrees 7 minutes East for a distance of 1256.64 feet (383.024 meters) to a point of curve; thence along a curve to the left, having a radius of 3819.72 feet (1164.251 meters), for a distance of 3173.33 feet (967.231 meters) to a point of tangency, thence North 68 degrees 17 minutes East for a distance of 266.82 feet (81.327 meters) to an intersection with the centerline of FA Route 4 (Business US 67); thence continuing North 68 degrees 17 minutes East along the centerline of SBI Route 3, being also the centerline of Ferguson Avenue, for a distance of 598.70 feet (182.483 meters) to a point, said point being approximately 40 feet (122 meters) South 68 degrees 17 minutes West from the east line of the NW 1/4 of Section 28, T5N, R9W of the Third Principal Meridan, Madison County, and the END OF THIS FREEWAY ORDER.

Notice is hereby given that, in accordance with the provisions of the Act referred to above, no owner of or persons having an interest in land abutting those portions of Federal-aid Route 155 hereby designated and established as a FREEWAY shall lay out, provide, or construct any new means or enlarge or extend any existing means of ingress to or egress from said abutting land from or to such FREEWAY except upon written consent of the Department of Transportation.

Notice is further given that, in accordance with the provisions of the Act referred to above, no new highway, road, street, alley, or other public way shall be opened into or connected with or be carried over or under those portions of Federal-aid Route 155 hereby designated and established as a FREEWAY except upon written consent of the Department of Transportation.

By Order of
The Department of Transportation

Secretary of Transportation Date

SAMPLE ORDER ESTABLISHING A FREEWAY/EXPRESSWAY

Figure 12-8.A
(Page 2 of 2)

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