CHAPTER 104

Utility Coordination

Design Memorandum	Revision Date	Sections Affected
21-03	Mar. 2021	All sections revised.

The design memorandum applicable revision date as noted in brackets next to each section heading below.

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CHAPTER 104

UTILITY COORDINATION

104-1.0 GENERAL INFORMATION

104-1.01 Introduction

This Chapter provides guidance regarding utility coordination and accommodation. Coordination with utilities begins as soon as a project scope has been developed and continues throughout construction until the project, including utility work, has been completed. The design of a project should occur simultaneously with the utility coordination process and integration of utility accommodation. This chapter includes utility coordination general information, miscellaneous information and policies, utility coordination procedure, design considerations, reimbursement and agreements, risk analysis, and definitions.

Highway safety is important in accommodating utility facilities within highway right-of-way. The designer and Certified Utility Coordinator (UC) must consider this in reviewing the existing and proposed locations of the utility facilities. The design and location of the utilities' use and occupancy of highway right-of-way should be in accordance with the Utility Accommodation Policy (UAP) and the policies of the highway agency to provide and maintain an adequate roadside clear zone. Other factors including constructability, operations, and maintenance are also important in accommodating utility facilities safely within the right-of-way.

The project team should factor into the project schedule the time that utility companies will need to accomplish relocation design and construction. The time needed to accomplish the utility's design and relocation can take many months or years. The time needed for a utility company to design and relocate its facilities will affect the desired project schedule and must be reported accurately to the project manager.

104-1.02 Responsibilities

The purpose of this Section is to provide the authorities and responsibilities the Indiana Department of Transportation (Department) is given and assigned for utility coordination.

104-1.02(01) Code of Federal Regulations

Code of Federal Regulations 23 CFR 645 includes requirements regarding utility relocation and accommodation based on 23 USC.

Additional Federal training resources can be found at https://www.fhwa.dot.gov/federal-aidessentials/catmod.cfm?id=9.

104-1.02(02) Indiana Code

A synopsis of Indiana Codes relevant to utility relocation is listed below.

1. IC 8-1-9-2 defines utility, cost of relocation, and highway.

2. IC 8-1-26-7 defines facility.

3. IC 8-1-26-15 requires the operators of underground facilities to record the location of such facilities with the appropriate county recorder.

4. IC 8-1-26-16 requires contacting Indiana 811 prior to excavation or demolition.

5. IC 8-1-26-18 identifies the information that Indiana 811 must provide once it receives a notice of intent to excavate or demolish.

6. IC 8-1-26-18(d) establishes the color coding of utility locate markings.

7. IC 8-1-26-20 establishes the duties of persons responsible for excavation or demolition with respect to underground facilities.

8. IC 8-1-26-21 determines what persons must do if they damage an underground facility

9. IC 8-23-1-22.5 defines extraordinary cost.

10. IC 8-23-2-5 mandates that the Department adopt rules to manage the right-of-way of the State highway system.

11. IC 8-23-2-6(15) empowers the Department to reimburse a utility company for: extraordinary cost or unnecessary relocation, to the extent that a relocation is a taking of property without just compensation.

12. IC 8-23-7-2 allows the Department to acquire real property to relocate a utility facility within State right-of-way due to interference with a project.

13. IC 8-23-7-31 requires the Department to record utility companies' subordination agreements with the appropriate county recorder's office.

14. IC 8-23-26-2 authorizes the Commissioner to order a utility company to move its facilities if the Department determines that the location of such facilities will interfere with a planned project.

15. IC 8-23-26-5 allows the Department to negotiate an agreement with a utility company to reimburse it for extraordinary cost of facilities relocation caused by a project.

16. IC 8-23-26-7 establishes the conditions under which the Department may reimburse a utility company for the cost of unnecessary relocation.

17. IC 8-23-26-10, 11, 12, 13, 14 assign responsibility for planning, cost, and implementation of the work for the relocation of customer service facilities.

18. IC 8-23-26-15(b) states that if a utility company locates new facilities on a highway included in the National System of Interstate Highways after June 30, 1991, the company shall bear the cost of all future relocations and adjustments of its facilities caused by the highway or bridge construction.

104-1.02(03) Indiana Administrative Code

105 IAC 13 provides the rules to manage the State highway system right-of-way as required by IC 8-23-2-5 and defines the utility relocation coordination process.

104-1.03 Roles

Utility coordination is accomplished with multiple participants, each of which is performing a different role during the coordination process. Some participants include but are not limited to the UC, utility oversight agent, utility administrator, utility authorized representative, utility designated project representative, project manager, designer, and surveyor. A summary of each of these roles is given below. Common tasks for each role throughout the utility coordination process is found in Section 3 of this Chapter.

The Indiana Department of Transportation (Department) Project Manager is the primary person responsible to deliver all aspects of a project including the utility relocations. For the project manager to be successful in that task, the designer and UC must provide accurate reporting of the options, status, estimated costs, and action plans of the utility coordination efforts. This reporting will allow the project manager to make appropriate business decisions to keep a project on schedule and under budget.

104-1.03(01) Certified Utility Coordinator

The Certified Utility Coordinator (UC) is responsible for all work relating to coordinating with utilities on a project. The UC is responsible for initially determining what utility companies could be in the area, sending letters and coordinating with the company throughout the project as explained in Section 3 of this Chapter, and completing the utility coordination certification and special provision 107-R-169. The UC should keep project team members informed throughout the project regarding the utility coordination schedule and budget, particularly the project manager. The UC should also regularly ask for updates regarding the project design, plan development, and overall schedule from the designer and project manager to ensure they have the most current information and documents. The UC attends relevant project meetings and invites utility company representatives when applicable. The UC updates the Department's Utility Tracking Application (UTA) throughout the length of the project to track the coordination process with each utility.

Responsibilities of the UC do not end when a project has gone to Ready for Contracts (RFC) or letting, but rather continue through construction to ensure all utility companies are known about and completely relocated for the project. The UC for a project can be a Department employee or consultant but regardless must be certified through the Department's Utility Coordinator Certification process. Requirements for and the process of becoming a Certificated Utility Coordinator can be found on the Department website. In addition to the certification process, performance evaluations may be applicable.

104-1.03(02) Utility Oversight Agent

The Utility Oversight Agent serves as a second set of eyes for the utility coordination process. Though not involved in day-to-day project activities, the Utility Oversight Agent helps to periodically ensure a project is on schedule and key project locations are being addressed appropriately. The Utility Oversight Agent can also serve as a resource for evaluating design alternatives and policy requirements. The Utility Oversight Agent performs duties associated with reimbursable utility relocations not able to be performed by a consultant. This includes but is not limited to involvement in reviewing reimbursability, reviewing exhibits and cost estimates, agreement development and processing, requesting a purchase order, performance evaluations and approving and processing utility invoices. The Utility Oversight Agent is typically, but not always,

a Department employee. If the Utility Oversight Agent is not a Department employee, a Department employee must still be involved for any part of utility coordination regarding agreements or money.

104-1.03(03) Utility Administrator

Utility Administrators (Administrators) are Department staff involved with and responsible for statewide guidance and policy regarding utility coordination. The Administrators assist on projects by being a subject matter expert on utilities, the Utility Accommodation Policy, 105 IAC 13, and this manual. The Administrators also assist the Department Director of Utilities and Railroads with application and changes to the same documents. The Administrators must review and/or approve certain policy and procedure documents including but not limited to utility relocation agreements, certifications with exceptions and Utility Accommodation Policy exceptions.

104-1.03(04) Utility Authorized Representative

The authorized representative is the individual designated by the utility company to be its official first point of contact, in accordance with 105 IAC 13-2-2 and 105 IAC 13-3-1(a). The initial notice for each project should be sent to the authorized representative. After receiving the initial notice or a subsequent letter, the authorized representative may, in response, assign a designated contact person as the point of contact for a specific project. Future utility coordination will occur with the designated contact person. The authorized representative will provide written notice for all changes to the designated contact person.

The authorized representative information for each utility may be found on the Department Utility and Railroad website. If a utility company is identified that is not in the database, contact the Office of Utilities and Railroads to receive assistance with identifying the correct authorized representative's information. All such information that is errant should be forwarded to the Office of Utilities and Railroads so that the contact information may be updated.

The Utility Authorized Representative must, not later than January of each year, submit to the Department its authorized representative's name and contact information, per 105 IAC 13-3-1(a).

104-1.03(05) Utility Designated Project Representative

The Utility Designated Project Representative is the utility employee assigned as the contact for a Department project. The Utility Designated Project Representative responds to letters sent out by the UC and completes documents required by the utility for the project such as the work plan. When an issue arises during construction, the Utility Designated Project Representative should be contacted.

104-1.03(06) Project Manager

The project manager is responsible for all aspects of the project and coordinating the specific technical components of each task delivered by the relevant Department or consultant task group. This is done by having consistent communication, often through meetings, with the various task groups. The project manager also is responsible for the project schedule, budget, and funding.

104-1.03(07) Designer

The designer is responsible for all work related to the design of a highway improvement project.

The designer of the project plans may or may not be the same person or company who performs the utility coordination. Familiarity with all aspects of the utility coordination process and how it relates to the design can make a difference in the successful completion of a project on time and within budget. A designer that is actively involved with utility companies and the UC throughout the design of a project can often avoid utility relocation issues during construction.

A goal of the designer throughout the utility coordination process must be to minimize the number of conflicts with utility facilities, yet still accomplish the design goals of the highway improvement project. The designer must consider safety, project budget, traffic operations (permanent and during construction), and the project schedule while attempting to achieve this goal.

The designer must display all required utility information in the project plans, including surveyed facilities and any SUE performed. The designer must keep the UC updated on the plan development process and provide updated plans to the UC when available. Any significant changes to the plans particularly late in the process should also be discussed with the UC. The designer may need to assist the UC in providing plans to the utility companies as part of the letters.

Often the Department owns and is responsible for lines within project limits including but not limited to ITS, signals, or power to lighting. If it is determined by the UC that the Department may have lines within the project limits, the designer must work with the Department line contact to incorporate any relocations required into the project plans. The designer should keep the UC updated regarding the Department lines and any proposed changes to them. The designer must also work with the UC to ensure a utility company is providing a service point for Department lines where necessary.

104-1.03(08) Surveyor

The surveyor is responsible for all work relating to measuring and recording the locations of the existing project area, including utility facilities. The level of detail for utility-related survey information varies by project and is the responsibility of the surveyor to coordinate with the project team.

104-2.0 MISCELLANEOUS INFORMATION AND POLICIES

104-2.01 Utility Coordination on Local Public Agencies (LPA) Projects

The Department is required to have some involvement on an LPA project when federal dollars are involved. Department staff will be advisory except for the Department PM. This section provides an overview for LPA Utility Coordination. The Utility Coordinator primarily responsible for the utility coordination work must be a certified utility coordinator through the Department.

The process should primarily follow the Department process, manuals, and code as described for state projects. The LPA and Utility Coordinator must follow the Utility Accommodation Policy whenever the Department right-of-way is involved.

The LPA must concur with, approve, and sign reimbursable and subordination agreements. They must approve and pay all invoices. Using the state agreements as a template for LPA projects is acceptable. However, the agreements are between the LPA and the utilities and should reflect such. The language in the LPA agreements should keep all required Federal Highway language in them.

104-2.02 Buy America Requirement

All contracts, whether financed entirely or partially with State or Federal funds, must comply with IC 5-16-8 and the 23 CFR 635.410. Except for pig iron and processed, pelletized, and reduced iron ore, steel must be made in the United States by the open hearth, basic oxygen, electric furnace, Bessemer, or other steel making process. Except for pig iron and processed, pelletized, and reduced iron ore, all steel and cast-iron materials and products permanently incorporated in the contract must be manufactured in the United States. Manufactured 90 products include those which are rolled, formed, shaped, drawn extruded, forged, cast, or fabricated. The United States includes all territories, continental and insular, subject to the jurisdiction of the United States of America. Except for pig iron and processed, pelletized, and reduced iron ore, no steel or cast-iron products produced in the United States may be modified in a foreign country and still comply with the Buy America Requirement.

A Buy America Certification must be submitted and received for each product or source of material prior to being incorporated into the contract in accordance with INDOT Standard Specifications and the INDOT Construction Memorandum 17-04. An example of the certification form can be found in the INDOT Standard Specifications.

104-2.03 Utility Coordination Records

The UC will maintain detailed records of their utility coordination work. The State Agency Records Retention and Disposition Schedule mandates that all documents related to utility coordination on a state project be transferred to the Indiana Archives within three years after project completion. The best practice to ensure this mandate is followed is to upload the documents into UTA or ERMS (all documents uploaded to UTA are automatically uploaded into ERMS).

104-2.04 Broadband Facilities Coordination

All broadband facilities within state right-of-way are required to follow the Broadband Access Policy (BAP) rather than the Utility Accommodation Policy. If a broadband facility is located within an existing or proposed broadband corridor, a broadband agreement may be required. The Department Broadband Division should be contacted as soon as possible for guidance on necessary procedures. Broadband corridors, the BAP, and additional information regarding broadband facilities can be found on the Department website.

104-2.05 Planning Cost Estimates

Planning cost estimates are expected costs to relocate certain facilities. The project team will use a planning cost estimate to establish a reasonable budget for reimbursable utility relocations. The project manager needs to provide funding in the project budget for reimbursable utility facility relocations. At the start of the project, the information on which planning cost estimates are based is relatively undefined. As the design and utility coordination progresses, the information on which planning costs estimate are based becomes more defined and the costs estimate may become more accurate.

104-3.0 UTILITY COORDINATION PROCEDURE

The following is more in-depth detail regarding utility coordination procedure and different responsibilities.

104-3.01 Identification and Notification

Identification and notification is the first step in the utility coordination procedure. The intent of the identification and notification is to determine the project scope and names of the utility companies that have facilities located within the project limits, as described in 105 IAC 13-3-1(b)(1). Emphasis must be placed on identifying existing utility facilities within or near the area of the proposed project limits as early as the initial scoping phase. Utility identification accomplished prior to the survey phase will help the surveyor to efficiently and effectively coordinate for facility locates and measure and record the locations of the facilities.

104-3.01(01) Identification – Project Scope

The geographical limits of the improvement project define the limits of expected utility company involvement. Start the identification process of the project scope by obtaining the project information as follows.

1. Route number, or road or street name.

2. Beginning and ending roadway reference post numbers.

3. For a project on a new alignment, the beginning and ending points in reference to the tie-in points with existing roads.

4. County.

5. Congressional township and range, and civil township.

6. Type of work being done for the project.

7. Schedule of project milestones, including various plan sets, Ready for Contracts date, and letting date.

8. Budget.

9. Team members and contact information, including project manager and designer.

This information can be obtained from the project manager, SPMS schedule, field review, or historical plans. Reference post information appears on https://secure.in.gov/indot/3049.htm.

When identifying project scope, the UC should also determine whether the project will be classified as a major or minor project for utility coordination. A project is classified as major or minor based on the duration of the design process, per 105 IAC 13-2-14 and 105 IAC 13-2-15. A design process of 12 months or longer constitutes a major project. A design process of less than 12 months constitutes a minor project. The classification of a project as major or minor for utility coordination is independent of the project designation in the project development process.

The Department can classify a project as major or minor based on criteria other than duration of the design process. The level of effort required by utility companies to provide all necessary information and documents should be considered in the determination. The project manager makes the final decision on the classification of a project as major or minor for utility coordination with input from the UC. The designation of the project as major or minor for utility coordination affects the time allowed for the various stages of the utility coordination process.

The purpose of utility coordination certification is to affirm what level of utility coordination was completed on a project and the current status of that coordination. All project DES's require a utility certification unless given special approval to forgo by Central Office. However, the level of certification and associated coordination services varies based on project type, location, and any prior knowledge of utilities. The utility coordinator should work with the project team to determine the applicable certification early in the project process because it will affect all future coordination steps. These steps are defined in each utility coordination certification's template, available on the UTA.

A certification type should only be used on projects that fall within the parameters of that utility coordination certification's template, available on the UTA. The UC prepares the utility coordination certification form. By signing the certificate, the UC affirms that they have completed all the requirements for utility coordination.

104-3.01(02) Identification – Utilities

The utility identification steps may be done in any order. However, all steps should be taken by the utility coordinator for each project. Record the information after each step. Be sure to update the UTA with all pertinent contact information.

Reviewing Information Provided by Indiana 811

Complete an Indiana 811 design ticket to obtain a list of all utility companies with underground facilities in the project limits, in accordance with 105 IAC 13-3-1(b)(1)(D). Contact information is sometimes available for each utility on an Indiana 811 design ticket result as well. Aerial facilities are not necessarily included in the Indiana 811 design ticket result and Department facilities are never included in the Indiana 811 design ticket result.

Researching Permit Files

Review Department permit files to determine the names of utility companies that have facilities within the project limits, in accordance with 105 IAC 13-3-1(b)(1)(A). To check Department permit files, utilize the Department Electronic Permitting System (EPS) accessible via the INDOT Technical Applications Pathway (ITAP), along with the UTA system or possible individual permit files stored at each district.

Reviewing Map Files Maintained by the Department

Review plans from previous projects to determine the names of utility companies that have facilities within the vicinity of the project, in accordance with 105 IAC 13-3-1(b)(1)(B).

Historical plans are available on http://www.in.gov/indot/2345.htm.

Investigation of Field Conditions

Visit the site to determine utility facilities within the vicinity, in accordance with 105 IAC 13-3-1(b) (1) (C). Utility company names could appear on above ground appurtenances such as placards, stickers, warning signs, property signs, and castings. Example indications of certain facility types include the following;

1. Communications. Pedestals, manholes, vaults, overhead cables, cell phone towers.

2. Electric. Poles, transformer boxes, overhead cables, meters, substations.

3. Natural Gas. Markers, vents, meters, valves, regulators, and pump transfer stations.

4. Petroleum Products. Markers, vents, pump transfer stations.

5. Sanitary Sewer. Manholes, lift stations, cleanouts.

6. Water. Fire hydrants, meters, valves, water towers and booster pump stations.

7. Department IT Facilities. Traffic loops, boxes, camera towers, weather sensors, light poles, and Department fiber.

Contacting Local Government Offices

Contact the local government of the county and nearby cities, towns, or state parks to identify the names of utility companies within the project limits, per 105 IAC 13-3-1(b)(1)(E). Beneficial contacts include the engineer, surveyor, street commissioner, street superintendent, or parks manager.

A source of contact names and telephone numbers of local government offices is Indiana LTAP. The LTAP Directory of Indiana State, County, City and Town Officials appears at https://docs.lib.purdue.edu/inltapdirectory/12/

Contact hospitals, schools, fire departments, governmental offices, or industries that are adjacent to the project area, as necessary. These entities may have private facilities within the right-of-way that can be impacted by the project.

104-3.01(03) Notification – Initial Notice

The initial notice is a letter used to inform a utility company of a proposed improvement project, as specified in 105 IAC 13-3-1(c). The utility company responds in writing to the initial notice with specific information, specified in 105 IAC 13-3-1(d).

The UC will prepare and send to each utility company identified in the identification phase an initial notice of the proposed improvement project. Use the standard initial notice letter template located in the UTA Template Library. Address the letter to the utility authorized representative.

The authorized representative must respond in writing within 30 days after receiving the initial notice, with the information as follows:

1. A declaration that the utility company does have facilities in the project area, with a description of the type and location of its facilities; or

2. A statement that the utility company has no facilities in the project area of the project; and

3. The name of the designated contact person for future communication regarding the project.

If it is determined the utility does not have facilities within the project limits, it is recommended to obtain a work plan completed and signed by them on page 1 to eliminate the need to do so later in the project.

For the type of facility, the utility company should provide information on the size, material, service, or commodity supplied. For the location of the facility, the utility company should provide enough information so that all its facilities in the project area can be located during the project survey.

The UC will review the response to the initial notice from each utility company to verify that the required information is provided. Contact the authorized representative if all the required information is not provided, or if a response is not received within 30 days from the date the utility company received the initial notice. Report to the project manager and the designer all utility facilities which can have a significant impact on the project cost, right-of-way, or construction. Provide the information from the responses to the surveyor and the utility oversight agent.

Department Owned Lines

At the same time the UC sends initial notice letters to utility companies, the UC should send a modified initial notice letter to Department line contacts. The modified initial notice letter and list of Department contacts can be found on UTA. If it is determined the Department owns lines within the project, the Department can have those lines marked in the field prior to survey if given sufficient notice. The designer should work with the Department line contact to incorporate any necessary relocations to the lines owned by the Department into the project plans. No work plan is obtained for Department lines and the lines are not discussed in the utility certification or utility special provision except under unique circumstances.

104-3.02 Survey and Depiction of Findings on Plans

The survey is used to determine, measure, and record the locations of all utility facilities. The surveyor should request through Indiana 811 to have utility facilities located within the project limits, per 105 IAC 13-3-1(e) and IC 8-1-26. The surveyor should refer to the information included in the responses to the initial notices to ensure that buried facilities are located and marked for the survey. The surveyor should measure and record the horizontal location of the buried facilities once the locations are marked in the field.

The IAC rule states that the Department and the utility may agree on another mutually acceptable format or schedule for the exchange of location information. Frequently, as-built plans are provided as an alternate acceptable format.

The designer should show all the utility facilities and Department facilities on the plans. The designer should use the survey information, as-built plans information, or SUE information to accomplish this task. At a minimum, the utility facilities should be shown on the plan and profile sheets.

104-3.03 Verification

A verification letter is used to request a utility company to verify that its facilities are shown correctly on the plans, in accordance with 105 IAC 13-3-2(a). In response to the letter, the utility company is required to respond with specific information, per 105 IAC 13-3-2(b).

The UC will send a verification letter and plans to each utility company with facilities in the project area. The letter template can be found in the UTA. Also, the UC will send a verification letter and plans to each company that did not respond to the initial notice. The UC will address the letter to the Authorized Representative or the designated contact person if appointed in the response to the initial notice.

The utility company will review the accuracy of the plans as to the location of its existing facilities and respond within 30 days after receipt of the verification letter and plans with the information as follows:

1. A written statement that the utility facilities are shown accurately or are not shown accurately; and

2. If shown inaccurately, a detailed written description or identification on the plans.

The UC will review the response to the verification letter from each utility to determine if the required information is provided. If all the required information is not provided, or if a response is not received within 30 days from the date the utility company received the verification letter, the UC will contact the utility company. If the utility company identifies inaccuracies in the information shown on the plans, the UC will work with the utility company and the designer to resolve the inaccuracies. The UC will provide the information from the verification responses and resolutions to the designer. The designer will show the corrected information on the plans.

104-3.04 Subsurface Utility Engineering (SUE)

Subsurface utility engineering is the practice of investigating the location and condition of subsurface utility facilities. The primary source document is ASCE 38-02, *Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data*. Additional references are 23 CFR 645 and the FHWA website www.fhwa.dot.gov/programadmin/sueindex.cfm The FHWA encourages SUE for each federal-aid project, and considers it an integral part of preliminary engineering.

Subsurface utility information is gathered throughout the development of a project to help determine the impact of utility facilities. By utilizing the SUE information, the designer can make reasonable adjustments to the proposed design which can eliminate the need to relocate utility facilities. This process can help reduce total project costs by avoiding costly delays due to conflicts with utilities, eliminating costs of reimbursable utilities, and streamlining the construction process because the contractor has precise information on critical utility locations.

Subsurface utility engineering is divided into recognized levels of quality, from the lowest level D to highest level A, as follows:

1. Quality Level D (QL-D). The most basic level of information for utility locations originates solely from existing utility records or verbal recollections. It can provide an overall assessment for the congestion of utilities but is often limited in terms of comprehensiveness and accuracy.

   Quality Level D information is collected during the utility identification phase as required by 105 IAC 13-1-1. Also, Quality Level D information can be provided by the utility company in response to the initial notice letter.

2. Quality Level C (QL-C). The most commonly used level of information which involves surveying visible utility facilities such as manholes and valve boxes and correlating this information with QL-D information.

   Quality Level C information is gathered during the project survey when all visible utility facilities are measured and recorded.

3. Quality Level B (QL-B). This involves the application of appropriate surface geophysical methods to determine, or designate, the existence and horizontal position of facilities within the project limits. The information obtained in this manner is surveyed to project control. QL-B addresses problems caused by inaccurate utility records, abandoned or unrecorded facilities, and lost references.

   Quality Level B information is obtained during the project survey or later in the project when determined necessary.

4. Quality Level A (QL-A). This involves the use of non-destructive digging equipment at critical points to expose, or locate, an underground utility facility so as to determine its precise horizontal and vertical position, as well as the type, size, condition, material, and other characteristics. It offers the highest level of accuracy currently available and requires the full use of subsurface utility engineering services. Critical points can include locations where existing utility facilities will cross, or will be adjacent to, areas of excavation for ditches, retaining walls, footings, drainage structures, piling, etc. Areas of increased fill over a utility facility can also be a critical point.

   Quality Level A information can be collected during the design process by a SUE consultant where more exact data is required at critical conflict locations.

The information obtained from subsurface utility engineering test holes will be shown on the plans. On the plan and profile sheets' plan portion, each test hole will be numbered, and the test-hole symbol will be placed at the location where the test hole was made. On the plan and profile sheets' profile portion, each test hole will be numbered, and the test-hole symbol will be placed at the location where the facility appears. On the cross sections sheets, the horizontal and vertical location of each utility facility will be marked and labeled with the utility name. On the utility-matrix sheets, the specific information from each test hole will be reported including the test-hole number, size and type of facility, northing, easting, existing top elevation, existing cut, reference elevation, and comments.

Research shows that the use of subsurface utility engineering can reduce the cost, time, and impact of utility facility relocations. The determination to use subsurface utility engineering is a risk management decision. The project team should work together to determine an appropriate quality level of utility data for a given project area at the appropriate time within the project planning and design process. Such advice will consider such items as type of project, expected utilities, available rights-of-way, project timetables, and so forth. If SUE was not a part of the original RFP and the designer and UC determine that there is a need, they should work with the project manager to determine a method to include SUE in the project.

Considerations in evaluating the need to obtain Quality Level B and Quality Level A information using SUE include but are not limited to the following.

1. Is the project in an urban or suburban area with dense development?

2. Will the project have excavation that can impact underground utility facilities?

3. How much right-of-way is available to accommodate utility facility relocation?

4. Will there be areas where one utility facility should be relocated near another utility facility that may remain?

5. Are there utility facilities that can have major impact on the project schedule or budget? Are there substations or indications of transmission pipelines?

6. How sensitive is the project to cost increases or time schedule?

7. How much confidence is there in the identified location of the utility facilities using utility records as compared to surveyed information?

8. Are there locations where knowing the exact elevation of a utility facility is critical?

104-3.05 Conflict Review

The Conflict Review Letter is used to request that a Utility determine if there are conflicts between its facilities and the project, per 105 IAC 13-3-3(a). In response to the letter, the utility company is required to respond with specific information, per 105 IAC 13-3-3(a). This stage is not the time for a utility company to prepare a relocation work plan or a relocation drawing.

The UC will send each utility with facilities in the project area and those that did not respond to the verification letter a Conflict Review Letter and a copy of the most current plans. Use the standard Conflict Review Letter which appears in the UTA. Address the letter to the authorized representative or the designated contact person.

The Conflict Review Letter may be sent to the Utility at the same time as the verification letter. The UC will determine if this is a prudent action based on available time, and the status of plan development. If the verification letter and Conflict Review Letter are sent at the same time, the time allotted under 105 IAC 13 for each letter will run concurrently not sequentially.

The Utility will review the plans for potential conflicts of its existing facilities with the project limits. The Utility will respond within 30 days for a minor project, or within 60 days for a major project, after receipt of the Conflict Review Letter and plans with the information as follows:

1. A written statement that there are no conflicts between its facilities and the proposed project, or that there are conflicts between its facilities and the proposed project; and

2. If shown inaccurately, a detailed written description or identification on the plans.

The UC will review the response to the conflict review letter from each utility to determine if the required information is provided. Contact the Utility if all of the required information is not provided or if a response is not received within 30 days for a minor project, or 60 days for a major project, from the date the utility company received the Conflict Review Letter and plans. Provide the information from the conflict review responses to the designer and the project manager. The utility company, utility coordinator, designer, and project manager can find alternatives to minimize impacts to the proposed construction, utility facilities, and project schedule.

104-3.05(01) Conflict Types

The three types of utility conflicts that a UC needs to be familiar with during their coordination process are: Direct Location Conflict, Regulatory Conflict, and Constructability Conflict.

A Direct Location conflict occurs when a utility facility occupies the proposed location of the project infrastructure.

A Regulatory Conflict occurs when a utility facility will no longer comply with the Utility Accommodation Policy, OSHA standards, or other industry standards because of the project.

A Constructability Conflict occurs when a utility facility is not a direct location conflict with the project, but either:

1. construction of the project cannot be completed without utility facility relocation, or

2. the utility has an easement with requirements that will no longer be achievable including but not limited to accessibility, maintenance, or exclusive land rights.

104-3.05(02) Conflict Remediation Using Structures

There are several common ways for designers to remediate utility conflicts with storm sewers, but this would have to be agreed to by the utility because of the impact these remediation's have on maintenance and operation. The team may do one of the following:

1. Design a conflict structure – This is a structure that can be used to transport one type of product through a storm structure. The designer will have to determine what is being transported through the structure and how it impacts the flow of the storm sewer.

2. Design/Create a utility cradle (Sewers only) – This is a cradle of concrete that typically separates two pipes as they cross. This works well with storm or sanitary sewers but does not work well with water or gas lines because both products will cause movement which can rub holes in the lines creating leaks.

3. Design a pipe concrete encasement – This type of design is meant to protect a sanitary or storm sewer line that is too shallow and needs to be protected from the use above the pipe.

104-3.05(03) Conflict Remediation by Designing Around

There are other ways for Utility Coordinators to help designers avoid utility conflicts. Examples of questions the Utility Coordinator can ask the designers include but are not limited to the following:

1. Can the storm sewer configuration be designed around a utility conflict?

2. Can the inlet/manhole selection be changed to avoid a utility conflict?

3. Can the ditch offset/side slopes be moved to avoid a utility conflict?

4. Can noise wall posts be adjusted to avoid a utility conflict?

5. Can bridge piers or abutments be realigned/relocated to avoid a utility conflict?

6. Can the signal layout be changed to avoid a utility conflict?

7. Can the retaining wall configuration be revised to avoid a utility conflict?

8. Can the maintenance of traffic plan be reconfigured to avoid a utility conflict?

104-3.06 Work Plan

The work plan is the document that identifies existing utility facility locations, what will be done with those facilities, and any proposed relocation work for the project. The work plan is a plan for the Utility to carry out facility relocation to accommodate the project. A Utility with facilities in the project area will provide a work plan as required by 105 IAC 13-3-3(b). A work plan should include the narrative, the relocation drawing, a cost estimate, easement documents, and other related attachments as applicable.

The UC will send a letter requesting a work plan to each utility with facilities in the project area and to each utility that has not responded to previous inquiries. The UC will use the standard letter template found on the UTA. The UC will send the most current plans to the Utility or coordinate with the designer to send the plans to the Utility. Work plan request letters should be sent at a time that is after previously required letters, early enough to meet project deadlines, and late enough that no major changes are anticipated to the plans. The letter and plans will be sent to the utility's authorized representative or designated representative person if previously identified.

The UC may hold utility coordination meetings to synchronize the relocation of all utility facilities. The UC may develop a plan to reserve certain areas for certain utility work to manage the highway right-of-way more effectively. The UC may assemble a master plan showing all existing and proposed utility facilities within the project area. The UC will contact the authorized representative if the designated representative is non-responsive regarding the development of a work plan. The UC will then contact the project manager and the utility oversight agent if the utility company is non-responsive regarding the development of a work plan. The work plan description of facilities and drawing attachment must be of sufficient detail to have confidence of where the existing and proposed facilities are located. If the work plan submitted by the Utility is incomplete or does not contain sufficient detail, the Utility Coordinator must ask the Utility to revise accordingly. A Utility that has no proposed facility relocation may omit the relocation drawing from its work plan if the project plans correctly depict its facilities and the description in the work plan is detailed.

The utility company will prepare the work plan for the relocation of its facilities and submit a signed copy to the UC for review. The UC will review the work plan for each utility for conformance with 105 IAC 13, the Utility Accommodation Policy, and other Department standards. The UC will cross reference all utility work plans to ensure that there are no conflicts in proposed facility locations or relocation schedules. Evaluate the relocation drawing to determine if the existing or proposed facilities will impact construction of the project.

The work plan may need to be reviewed by the utility oversight agent. It is required to be signed by the UC and the Project Manager.

The UC will request a permit be prepared by the utility oversight agent for any relocations occurring within Department right-of-way once a work plan is complete. If the utility coordinator is a Department employee, the permit should be completed directly by them. The utility oversight agent will prepare the permit and provide the completed permit to the UC. The UC will send the permit, approved work plan, notice to proceed, and signed agreement to the utility company at the appropriate time. Notice to proceed for a relocation should not be sent to the utility until the following are complete without special approval:

1. The permit and work plan are executed.

2. Any applicable agreements and purchase orders are executed.

3. The utility coordinator is confident no future roadway design or schedule changes will require changes to the work plan.

4. The start of roadway construction is not in the unreasonably distant future.

5. Any proposed right-of-way where relocation work will take place is secured.

6. All work required by others before the utility can begin according to the work plan are complete.

104-3.07 Changes to Approved Work Plan

A change to an approved work plan may be required due to unforeseen conditions or a change in scope. The Utility will provide, as appropriate, a revised drawing, a revised cost estimate, a description of the change, and the reason for the change. The UC will evaluate the requested change and determine the impacts to the project and the existing and proposed utility facilities. The UC will obtain a concurrence from those parties that may be impacted by the proposed change. The UC will then prepare a permit addendum letter for the revision to the work plan. The permit addendum letter will be sent to the utility oversight agent for signature. All revisions to the approved work plan will be attached to the permit letter. The UC will distribute copies of the permit letter with all revisions to all the parties that can be impacted.

104-3.08 Utilities Special Provision

The purpose of the utility special provision is to inform the contractor of the status of all utility companies near the project. The utility special provisions must contain information that is of a general nature for the project and specific information that pertains to each utility in the area of the project, regardless of if the utility is relocating or not. The UC will complete the appropriate recurring special provision from the most current template on the Department website. Inapplicable sections of the template should be deleted and any sections that need to be added should be added. A complete recurring utility special provision example is available in the UTA. The Utility Special Provision is an exhibit to the Certification and will be a contract document.

Much of the information required for each utility in the special provision can and should be obtained from the utility work plan. The special provision must include the following for each utility within the project limits:

1. The name of the Utility.

2. A statement indicating that the Utility is or is not in conflict with the project.

3. The name, email, and telephone number of the designated representative.

4. Activities that must happen before the Utility can begin construction, the plan as to who is performing the work required prior to the utility beginning their construction, and the number of days following that action before the Utility will commence construction activities.

5. The expected duration of their relocation work in calendar days.

6. The general location of their existing facilities.

7. The general scope of their required relocation work and the predecessor activities that are required with any lag time required between work activities for, but not limited to, mobilization and material procurement, etc.

8. Work Plan approval date.

104-3.09 Completing and Submitting Utility Coordination Certification

The applicable utility coordination certificate should be completed by the UC. The purpose of utility coordination certification is to affirm what level of utility coordination was completed on a project and the current status of that coordination. Only utility coordinators certified by the Department are eligible to complete and sign utility coordination certifications. Utility coordination certificates are available in the UTA. Utility certificates should always have the project's utility special provision attached to it.

On standard utility certifications, identification of if the project must let with or without exceptions is required. Letting without exceptions occurs if all work plans have been executed and no utilities are in conflict with the project or any utilities in conflict have completed relocation at the time of submission. Letting with exceptions occurs if one of the following conditions apply:

1. A utility that needs to be relocated is not completely out of conflict at the time of submission.

2. A work plan is not approved at the time of submission for at least one utility that exists within the project limits.

On bundled contracts, non–lead DES certifications and their corresponding special provision are completed by the DES utility coordinator and submitted to lead DES utility coordinator. The lead DES utility coordinator is responsible for developing a certification for the contract as a whole. To do so, a separate certification is completed that identifies the lead DES and all other related DES's in the contract. The corresponding special provisions are also combined into one contract document and organized by separate DES number. Developing the certification for the contract as the lead DES utility coordinator does not make them responsible for the coordination of the non-lead (also known as related) DES's. Responsibility remains with non-lead DES coordinator.

If any of the DES's on the contract require a standard certification, a standard certification is required for the contract as a whole. This is true regardless of if the lead DES required a standard certification. If any of the DES's on the contract require to let with exception, the contract is required to let with exception regardless of if the lead DES required such. If the contract certification is required to let with exceptions, the contract certification along with special provision and all contract work plans should be submitted to the district utility coordinator/oversight agent who then submits to the Authorized Approver / Utility Administrator for approval and final signature. As the status of utility coordination or exceptions required changes after submission but prior to three weeks before letting, the contract utility coordination certificate and special provision should be revised. The revised certificate must be re-reviewed and approved by the Authorized Approver / Utility Administrator.

104-3.10 Contract Documents

According to the schedule desired by the project team but no later than the ready for contracts date, the UC will provide to the designer digital copies of; the utility coordination certificate, the utility special provisions, and all approved work plans including those with facilities in the project limits and not relocating with attachments. Signed work plans with utility facilities not in area do not need to be included with final tracings but should be uploaded in the UTA. The documents will be named in accordance with the naming conventions established by the Department.

The designer will include the documents with the final tracings submission to the Contract Administration Division. Revisions to these documents will be in accordance with the Division's requirements.

104-3.11 Utility Coordination through Construction

UC responsibilities after Certification include but are not limited to the following:

1. Ensure to receive an invitation to the preconstruction meeting and attend if utility relocations are pending, on complex projects, or at the project team's request. Invite relevant utility companies to the preconstruction meeting as well.

2. Update PM of all utility activities and utility relocation schedule.

3. Attend Progress Meetings, as needed.

4. Inform utility companies of project schedule and delays.

5. Review utility-related change orders for eligibility.

6. Confirm Utility Relocation is complete and notify project team.

7. Review reimbursable utility invoices and provide to Oversight as needed.

8. Remind field workers that there is a hand-dig zone of ±2 ft. from where the actual locate is marked. See Indiana Code 8-1-26 for further information concerning Indiana 811 and the accuracy of survey information.

104-4.0 DESIGN CONSIDERATIONS FOR UTILITIES

The designer will receive feedback from the UC about the design impacts on utility facilities throughout the project. The UC will work with the designer to consider alternatives that may require additional construction cost if they significantly reduce the cost or time required for utility facility relocations. The design changes can include those to the design of right-of-way determination, traffic maintenance, traffic signal installation, bridges, drainage, and subgrade treatment and pavement.

104-4.01 Right-of-Way (ROW)

The cumulative cost and impact of the Department's project and the relocation of utilities within easements must be accounted for. The UC and the design team must meet with all utilities prior to the establishment of the Department's ROW to determine and account for placement of all utilities in the area. Designers can make adjustments to decrease or increase ROW as directed by the project manager to address impacts to landowners and environmental constraints. The Department has the authority to procure additional right-of-way to accommodate the relocation of utility facilities, IC 8-23-7-2. The procurement of right-of-way occurs early in the design process. The purchase of additional right-of-way as part of the design process can offset the potential impacts from a utility company to procure additional right-of-way at a later stage of project development.

In developing right-of-way requirements, the UC and designer will consider the following:

1. Provide right-of-way or account for easement space so that above ground utility facilities and their appurtenances will be outside the clear zone.

2. Provide right-of-way or account for easement space at each horizontal curve to accommodate the placement of utility facilities, including guy wires, overhead lines, etc.

3. Provide right-of-way or account for easement space to accommodate utility facilities at each signalized intersection.

4. Avoid abrupt changes in right-of-way that will disrupt the continuity of linear utility facilities.

In setting the lines for access-control right-of-way, the designer will consider the following:

1. Perpendicular crossings of utility facilities are allowed on a limited-access highway.

2. Department policy excludes the longitudinal run of a utility facility within limited-access right-of-way.

3. The Department can move the limited-access right-of-way line in from the actual edge of the property, thus allowing such actual edge to be designated as standard right-of-way. This allows a utility company to place its facility parallel to and outside the limited-access right-of-way.

104-4.02 Traffic Maintenance

In developing a traffic maintenance plan, the UC and designer will consider the following:

1. Utility facility locations are to be considered in determining which side of the road a temporary runaround will be placed.

2. The UC and designer can limit the use of temporary pavement widening to reduce the number of utility facility relocations required due to such temporary widening.

3. The UC and designer can stage construction schedules to either avoid utility relocation or to accommodate utility relocation construction schedules.

104-4.03 Power to Department Devices

Many of existing or proposed devices owned by the Department within project limits including but not limited to traffic signals and lighting require power. The designer must work with the utility coordinator and nearby power company to ensure a service point for Department devices is available where necessary. The connection from the service point to the Department device is typically performed by the contractor as part of the project. If so, this must be incorporated into the plans, special provisions, and estimates accordingly. The contractor must also work with the Department and utility company to ensure billing and payment for power is planned for going forward.

104-4.04 Other Considerations

104-4.04(01) Bridge

The bridge type and substructure elements should be selected to minimize impacts to underground utility facilities. Substructure type and placement can conflict with underground facilities. Pile driving and crane construction operations can conflict with both overhead and underground facilities. The setting of beams can conflict with overhead electric facilities. Grading, ditching, and the use of an MSE wall around a bridge and approaches can impact underground facilities. The schedule and costs for temporary relocations, temporary outages, OSHA requirements, and other such safety measures during bridge construction must be discussed and accounted for in utility work plans.

104-4.04(02) Drainage

Select the location, shape, and grade of each ditch to minimize impacts to utility facilities. Select the location, size, and grade of storm-sewer elements to minimize impacts to utility facilities. A storm-drain system should be located at least 10 ft from a parallel potable-water line. A storm-drain system should be located at least 1'-6" from a crossing potable-water line.

104-4.04(03) Pavement Section and Subgrade Treatments

The relocation of a utility may be avoided by changing the pavement section or the subgrade treatment. Also, the utility may ask for some limitations on the methods of construction of the pavement section or subgrade treatment to avoid relocation. To coordinate changes to or limitations on the construction of the pavement section, contact the Pavement Engineering Section of the Department. To coordinate changes to or limitations on the construction of the subgrade treatment, contact the Geotechnical Section of the Department. To communicate the limitations on the construction of the pavement section or the subgrade such information will be placed in the utility special provision. These cost saving opportunities must be discussed with the project manager.

104-4.04(04) Traffic Signals, Signs, and Lighting

The locations of signals, signs, or lighting can impact utility facilities by a direct conflict or by a conflict caused by a lack of separation between the two. Consider the impact on utility facilities when selecting the location of traffic signal supports, signs, or lighting fixtures to minimize impacts to utility facilities.

104-4.04(05) Erosion Control

The UC needs to determine the types and location of erosion control measures to minimize impacts to utility facilities. A sediment control basin and other erosion and sediment control items can require a spot lowering of an underground facility.

104-4.04(06) Noise Abatement Walls

Installation of a noise abatement wall can affect overhead and underground facilities. The UC and designer need to consider the impact of the location and construction of the noise abatement wall on overhead and underground facilities. Due consideration needs to be given to the safety offset requirements for electrical lines based on distance and voltage in accordance with OSHA standards. Support posts can be positioned to avoid impact on underground facilities.

104-5.0 UTILITY REIMBURSEMENT AND AGREEMENTS

104-5.01 Reimbursement

The Department is authorized to reimburse a utility for the relocation of its facilities as allowed under IC 8-23-2-6(a)(15), which appears on www.state.in.us/legislative/ic/code. A utility may be reimbursed for the relocation of its facilities based on the following:

1. Property Interests;

2. Extraordinary costs;

3. Interstate Projects;

4. Unnecessary relocation; and

5. Customer service line

If a utility is found to be reimbursable, the Department may reimburse the utility for costs to functionally restore its facilities so that it can continue to provide service to its customers as they were able to do so prior to relocation. Increased costs for a utility to satisfy current industry standards are also eligible for reimbursement. Increased costs resulting from satisfying specific utility company standards beyond industry standards are not considered eligible for reimbursement.

The policies, procedures, and reimbursement requirements for adjustment and relocation of a utility facility on a federal-aid project is addressed in 23 CFR 645. The Department follows 23 CFR 645 and the corresponding program guide as normal practice regardless of the source of funding.

104-5.01(01) Reimbursement for Property Interests

Indiana law provides utilities with only a qualified right to be situated within the Department right-of-way. As a result of this qualified right, utilities bear the financial burden to relocate their facilities unless they hold property interests which preempt (or have priority over) the Department's right-of-way. Utilities have the burden to prove to the Department the existence and sufficiency of the property interests held, at least for relocation and reimbursement purposes. The determination of whether the particular property interest held by the utilities qualifies for relocation and reimbursement will be made by the Department on a case-by-case basis.

The Department will reimburse a utility for the expense of relocation of facilities based upon the property interest held by the utility as verified by the Department. A utility that is directed by the Department to relocate facilities that are situated within an existing easement or comparable property interest previously acquired by the utility for such purpose is eligible for reimbursement. This is true regardless of whether the facilities are relocated within or outside of the proposed Department right-of-way. A utility company that is eligible for reimbursement for any such verified property interest remains eligible for reimbursement for subsequent projects in the same location.

The most common types of property interests found to be eligible for reimbursement include fee simple interest and express (written) recorded easements. Fee simple interest is where the utility holds actual title to the real estate underlying the right-of-way and is often times sufficient for reimbursement as the utility has previously acquired (at its own expense) all rights, title, and interests in the underlying real estate. Express (or written) recorded easements are often sufficient for reimbursement as the utility has previously acquired (at its own expense) a separate and distinct right to maintain its facilities within the easement area. As a threshold matter, any such property interest would have to be shown to pre-date and preempt the Department's right-of-way to be eligible for reimbursement by the Department.

Interests in property created via permits, licenses, and franchises are generally not sufficient for reimbursement as the rights granted therein are qualified, conditioned, or otherwise limited by their explicit terms or applicable law.

The utility that desires reimbursement for the cost of relocation for facilities due to property interests will submit a request for reimbursement to the Department. The request will be accompanied by a drawing showing the proposed relocation, a detailed cost estimate to relocate the facilities, and documents that support their claim of property interests. If the utility is located in their own easements, then a copy of the easement documents will be provided. If the Department is reimbursing the utility, the utility will also be required to subordinate or release their underlying property interest in the Department's right-of-way upon relocation as provided in Section 104-5.02 of this Chapter.

104-5.01(02) Reimbursement for Extraordinary Costs

The Department may assist a utility with relocation expenses that are determined to be extraordinary, as allowed in IC 8-23-26-5 and IC 8-23-1-22.5. Extraordinary costs are the costs to a utility to relocate existing facilities that are either more than 10% of the total operating revenue received by the utility during its most recent full fiscal year; or more than 50% of the total estimated cost of the project. There is a calculation worksheet in the UTA that can be used as a resource for this purpose.

A utility that desires reimbursement for extraordinary cost must request approval for reimbursement. The Department may consider that the portion paid by the utility company be applied to more than one project if the scheduled letting dates are within one year of each other.

The utility will submit a letter to the project team at the earliest opportunity, on its letterhead, requesting reimbursement for extraordinary costs. The letter will be accompanied by the following:

1. A financial statement for the most recent full fiscal year, which indicates the total annual operating revenue;

2. A cost estimate for the proposed relocation; and

3. A sketch on Department drawings or description of the proposed relocation using Department stationing and offsets.

The UC will review the letter for sufficiency and forward the request and attachments to the utility oversight agent. The utility oversight agent will review and discuss the request with the Utility Administrator. If the Department approves the request, an agreement will be generated under which the Department will reimburse the utility company for its eligible expenses.

104-5.01(03) Reimbursement for Interstate Project

The Department will reimburse a utility for expenses due to the relocation of facilities for an improvement project on the National System of Interstate and Defense Highways as allowed by IC 8-1-9-1 and according to IC 8-23-26-15. Whenever a utility locates new facilities on a highway included in the national system of interstate highways after June 30, 1991, the utility should bear the cost of all future relocations and adjustments of the facilities caused by highway or bridge construction or improvements. This does not apply to a relocation included in the national system of interstate highways if the placement of the facilities was made solely to cross the highway.

A utility that desires reimbursement for the cost of relocation for facilities on the National System of Interstate and Defense Highways will submit a request for reimbursement to the Department. The request will include a drawing showing the proposed relocation and a detailed cost estimate to relocate the facilities. If the utility is seeking reimbursement for relocation of a facility not placed solely to cross the highway, the utility must provide documentation proving the facility was installed prior to June 30, 1991.

104-5.01(04) Reimbursement for Unnecessary Relocation (Second Time Relocation or No Project Completed)

The Department will reimburse a utility for expenses incurred due to an unnecessary relocation of facilities as allowed in IC 8-23-26-7. The more common case for unnecessary cost occurs when the Department changes the project work and requires the utility to move the facilities a second time to accommodate the improvement project. The less common case for unnecessary cost occurs when the Department fails to let a contract for the improvement project within two years of the relocation work being completed.

A utility that desires reimbursement for unnecessary cost will submit a request to the Department with an explanation for the basis of the claim. For both cases the utility will provide documents that demonstrate that the utility had a relocation plan, was directed by the Department to execute the plan, the relocation work was completed, and a detailed itemized cost for the facility relocation. Additionally, for the case where the Department changed the project work, the utility will provide documentation that substantiates that claim.

If the Department approves the request, an agreement will be prepared to reimburse the utility for their eligible expenses.

104-5.01(05) Reimbursement for Customer Service Lines

The Department will reimburse a utility for the relocation of customer service lines as allowed by IC 8-23-26-11 and IC 8-23-26-12. The possibilities for such reimbursement are as follows.

1. Line that is located where the Department purchases new right-of-way for a project. A facility which is within the newly acquired right-of-way is fully reimbursable regardless of ownership.

2. Line that is located where the Department owns the existing right-of-way. A facility which is within the existing right-of-way is fully reimbursable if the utility does not own the service line. A facility which is within the existing right-of-way is not reimbursable if the utility company owns the service line.

The utility company should submit a request to the Department for reimbursement if desired. The request will be accompanied by documents showing the ownership of line (or IURC Section Terms & Conditions for the utility specific to service lines), a drawing showing the location of the lines, and a detailed cost estimate for relocation of the line.

104-5.02 Utility Agreements

A utility reimbursement agreement is a document signed by the utility and the Department that provides the terms of reimbursement for reimbursable utility facility relocations. A utility that desires to enter into a highway utility agreement will submit a request to the Department prior to any work being performed. The agreement identifies the work to be performed, the estimated reimbursable costs for the work, and the administrative process to make payments for the work. The types of agreements are listed below. Additionally, the agreements are further subdivided based on who is performing the work; either work by utility or work by state (a.k.a. work in contract). For example, an agreement may be identified as an Extraordinary Cost – Work In Contract agreement.

1. Preliminary Engineering Agreement. This is used if a utility company desires reimbursement for eligible preliminary engineering or design expenses incurred while developing the finalized plan and cost estimate for a standard agreement. This can be used for a utility company that is eligible for reimbursement for property rights, interstate route project work, or customer service lines. The agreement will have an attached preliminary engineering cost estimate provided by the utility.

2. Standard Agreement. This is used if a utility company desires reimbursement for utility relocation construction expenses eligible for reimbursement for property rights, interstate or defense highway work, or customer service lines being done by the utility. It can include preliminary engineering expenses in lieu of a preliminary engineering agreement. The agreement will have an attached relocation drawing, preliminary engineering cost estimate (if applicable), and a construction cost estimate for the proposed relocation, all provided by the utility.

3. Extraordinary Cost Agreement. If the relocation expense is greater than 10% of the utility's total operating revenue or greater than 50% of the anticipated highway improvement cost, the Department may bear the cost of the relocation work. The utility will request and receive approval from the Department for the use of extraordinary cost before the agreement is prepared. This can be used for either work by the utility company, or work in a state contract. The agreement will have attached a relocation drawing, a preliminary engineering cost estimate (if applicable), construction cost estimate, and verification of available utility funds (when required), all provided by the utility.

4. Unnecessary Relocation Agreement. This is used if a utility company desires reimbursement for unnecessary utility relocation expenses. The agreement will have an attached original relocation drawing, a drawing of the proposed relocation, a preliminary engineering cost estimate (if applicable) and construction cost estimate of the proposed relocation, all provided by the utility.

5. Subordination Agreement. This is used if a utility company has property rights related to an existing easement regardless of the type of agreement used as the basis for reimbursement. It is used to subordinate the rights of the utility to its easement to the rights of the Department within the right-of-way the Department purchased for the project. The agreement will have attached copies of all easement documents, or a letter of affidavit for each property crossed by the utility facility.

104-5.02(01) Utility Relocation Work in Contract

The Department may prefer to include utility facility relocation work as part of the highway contract, particularly if the work is eligible for reimbursement or would require extensive coordination with the Department contractor. Work done in contract would primarily consist of water or sewer work. The project manager, along with agreement from the utility, will make the final decision to include utility facility relocation work as part of the highway contract.

A utility that desires its facility relocation work to be part of the highway contract will notify the UC. The utility company will provide a planning cost estimate to the UC. The UC will forward the information to the project manager and utility oversight agent for review. The project manager has the option to request a Des. No. specifically for the utility relocation work.

The utility will provide to the UC, for their proposed work, a work plan, final stamped plans, specifications, engineer's estimate, list of quantities, and the signed agreement. The UC will provide the utility work plan(s) and other applicable documents to the project manager and utility oversight agent for review and approval. The UC will provide a copy of the approved work plan(s) to the utility company.

After approval, the UC will provide to the designer the final stamped plans, specifications, engineer's estimate, and list of quantities for inclusion in the Department contract.

104-5.02(02) Preparing a Utility Reimbursement Agreement

An agreement template should be selected by the utility oversight agent based on the particular circumstances of reimbursement for the utility company. Agreement templates are available in the UTA and should not be modified other than the utility oversight agent completing the appropriate sections of the agreement as needed.

Each agreement will be accompanied by exhibits. The required exhibits are defined in the agreement. Label each page as appropriate, such as Exhibit A. Identify each exhibit's page as appropriate, such as, p 1 of 5 p.

104-5.02(03) Processing a Utility Reimbursement Agreement

Once the agreement is prepared by the utility oversight agent for signatures, it along with the required exhibits should be sent for signature to the utility. Check with the utility company on the status of the agreement if a signed copy of the agreement is not returned within 30 days. Follow up with the utility company until the signed agreement is returned. If the designated representative is non-responsive after 60 days, contact the authorized representative.

Once the signed agreement is returned, the agreement should be reviewed by the utility oversight agent to ensure that the signature page is properly completed and nothing else was modified from what was sent to the utility. If the agreement is not properly completed, it should be returned to the utility for correction. If the agreement is properly completed, it should be forwarded with attachments to the Utility Administrator for further processing. After the agreement is fully executed, a purchase order should be opened through the utility oversight agent. Invoices will also be sent to, reviewed by, and processed through the utility oversight agent.

104-5.02(04) Consultant and Contractor Approval

A utility may perform the relocation work with their forces, also known as force account work, or with a consultant or contractor. The Department will review the selection of the consultant or contractor hired by a utility if the work is reimbursable. The Department performs this review by examining supporting documents provided by the utility company. The intent of the review is to determine that appropriate selection procedures were followed, verify that costs are reasonable and to ensure that the contract will be awarded to the lowest qualified bidder according to state and federal laws.

A utility may elect to hire a consultant to perform preliminary engineering services or construction engineering services in support of the utility facility relocation. The UC will inform all utility companies with facilities in the project area that the Department will review their selection of a consultant if the work is anticipated to be reimbursable. The utility will submit a request to the UC asking for concurrence in use of the consultant that it desires to hire. The request will be provided on company letterhead, and will include the name of the recommended consultant, the reason it was selected, a description of the proposed scope of work, and the schedule of rates in accordance to 23 CFR 645.109. The UC will prepare a letter to approve or deny the selection of the consultant and send the letter, the supporting documents, and their recommendation to the utility oversight agent. The utility oversight agent will review the documents, sign the letter, and return it to the UC for distribution.

A utility may elect to use a contractor to perform construction services in support of the utility facility relocation. The UC will inform all utility companies in the project area that the Department will review their selection of a contractor if the work is reimbursable. The utility company will submit a request to the UC asking for concurrence in use of the contractor that it desires to hire. The request will be provided in writing on company letterhead, and will include the name of the recommended contractor, the reason it was selected, a description of the proposed scope of work, and the schedule of rates or bid tabulations. The UC will review the documents to ensure that they are complete. The UC will prepare a letter to approve or deny the selection of the contractor and send the letter, the supporting documents, and their recommendation to the utility oversight agent. The utility oversight agent will review the documents, sign the letter, and return it to the UC for distribution.

A utility may perform the relocation work using an existing continuing contractor. The utility must provide the rate sheets from their continuing contractor for the review of the UC or the oversight agent prior to commencement of construction. The UC or the oversight agent should notify the utility if the costs are reasonable. If the rates from their continuing contractor are not reasonable, the UC or the oversight agent should notify the utility to hire another contractor through a competitive bidding procedure.

If the utility is not willing to share documents with the UC for confidential or privacy reasons, the UC should provide the contract address of the oversight agent to the utility for them to communicate directly.

104-5.03 Cost Estimate for Reimbursable Work

The purpose of this section is to provide guidance to the project team regarding a cost estimate. A cost estimate is the most probable cost to relocate certain utility facilities. The estimate will include the cost to replace the facilities and provide the same level of service which existed prior to the undertaking of the project, as well as any costs for utility betterment on the project, as applicable. The UC will use a detailed cost estimate to prepare the reimbursable utility agreement. Additional guidance regarding cost estimates appears in 23 CFR 645.117 and the FHWA's *Program Guide: Utility Relocation and Accommodation on Federal Aid Highway Projects*.

104-5.03(01) Detailed Cost Estimate

A utility will provide a detailed cost estimate when submitting their relocation work plan and when requesting a reimbursement agreement for its planned facility relocation. A detailed cost estimate will be comprehensive and will provide sufficient detail to understand the scope of the proposed relocation work. The detailed cost estimate will identify reimbursable and non-reimbursable work. If the utility relocation work is not fully reimbursable, a cost summary will be included to define how much cost will be borne by each party.

A detailed cost estimate includes the major cost categories for each of the relevant items of work. These include the following:

1. Labor for engineering and construction;

2. Labor surcharges;

3. Materials and supplies by type and price;

4. Equipment by type, size, and rate;

5. Transportation;

6. Indirect costs;

7. Overhead, general and administrative;

8. Credits for salvage;

9. Credits for betterment; and

10. Accrued depreciation.

Expenses which are not reimbursable and are not to be included in the detailed cost estimates include, but are not limited to, costs associated with the following:

1. Commercial advertising;

2. Sale promotion;

3. Interest on borrowing;

4. The issuance of stock;

5. Bad debts;

6. Uncollected accounts receivable;

7. Contributions;

8. Donations;

9. Entertainment;

10. Fines;

11. Penalties;

12. Lobbying;

13. Tools or other durable items;

14. Training;

15. Taxes;

16. Luxuries; and

17. Research.

104-5.03(02) Preliminary Engineering Cost Estimate

A utility which is eligible for reimbursement may desire to be reimbursed for preliminary engineering costs. The preliminary engineering cost estimate will itemize those expenses anticipated to be incurred prior to the implementation of the relocation work plan. The detailed cost estimate for labor will include personnel hours by class and rate for both the utility company and the consultant. The major work items may include but are not limited to the following:

1. Researching existing easements;

2. Conducting preliminary studies;

3. Conducting surveys;

4. Reviewing plans;

5. Preparing work plans;

6. Preparing relocation drawings;

7. Developing cost estimates;

8. Reviewing agreements;

9. Appraising and acquiring easements;

10. Acquiring permits;

11. Preparation of bid documents; and

12. Evaluation of bids received.

104-5.03(03) Construction Cost Estimate

A utility which is eligible for reimbursement may desire to be reimbursed for construction costs. The construction cost estimate will include an itemized list of those expenses expected to be incurred during the implementation of the relocation work plan. The major work items may include but are not limited to the following:

1. Mobilization and demobilization;

2. Construction engineering;

3. Removal of existing facilities;

4. Inactivate existing facilities;

5. Installation of new facilities;

6. Erosion control and site restoration; and

7. Traffic maintenance.

104-5.03(04) Credits for Betterment, Salvage and Accrued Depreciation

The credits in a cost estimate are those for betterment, salvage, and accrued depreciation. Credits reduce the overall utility cost estimate to be paid by the Department.

Betterment is a credit on the detailed cost estimate. Betterment is an upgrading of the facility being relocated that is not attributable to the project or required to meet current standards. It includes increased number or size of facilities, improved quality of facilities, or acquisition of real property rights where none previously existed. A utility company that desires reimbursement that involves betterment should submit two cost estimates, one for a functionally equivalent replacement and one with betterment. The value of betterment is the difference between the two cost estimates. A change in state or national safety standards that is an upgrade to the systems is not a betterment.

Salvage is a credit on the detailed cost estimate. Salvage is facility components that are removed from the existing location that have continued value from resale or reuse. The utility company will estimate the value of salvage items based on current market prices.

Accrued depreciation is a credit on the detailed cost estimate. Accrued depreciation only applies to major operational utility facilities like plants, stations or buildings that are being replaced. Accrued depreciation will be determined based on the straight-line depreciation of the original cost of the facility and the expected service life.

104-5.03(05) Theoretical Cost Estimate

A utility company eligible for reimbursement that desires to relocate facilities in a way other than a direct replacement in kind will submit a theoretical cost estimate. A theoretical cost estimate is based on the most economical means to replace the existing facilities and provide service to the same customers. The UC will obtain and review the prices for other similar facility work to determine if the theoretical cost estimate is reasonable. The theoretical cost estimate is used to determine the amount of reimbursement to the utility company as a lump-sum payment. The theoretical cost estimate is developed in the same manner as a construction cost estimate.

104-5.03(06) Reimbursement Review

Some work by a utility company may not be reimbursable. The project team will review the work proposed by the utility company, determine the cost of work that is reimbursable and determine the cost of work that is not reimbursable. The project team will tabulate lists of reimbursable work and non-reimbursable work. The tabulation will include location; description including length, size, quantity, and materials; cost; reimbursable amount; and non-reimbursable amount. Amount of reimbursement can be determined via cost items as explained above or on a percentage basis.

104-6.0 RISK ANALYSIS

Risk Analysis is the review of risks associated with a particular event or action. In the world of Utility Coordination, risk analysis is being able to recognize potential project delays, issues, or complications, as early as possible. There are 4 steps to do proper risk analysis. They are as follows:

1. Risk Identification. List factors that could adversely impact the project schedule or budget.

2. Risk Mitigation Strategy. For each risk identified, develop one or two strategies to eliminate or minimize the risk.

3. Tactics. For each strategy, list specific action items (tactics) that can implement the strategy.

4. Communication. Methods for staying in contact depend on the situation; e-mail is a good form of communication, but a phone conversation is often a better method to ensure no miscommunication. Meetings (face to face) can be the best way to communicate when needing to share a lot of information and/or with multiple partners.

The UC is responsible for analyzing the risk on every project. The project manager needs to be kept informed as the project develops and the risks are managed. If the UC can help the designer design around utilities the project manager should be informed of the costs to the project. Ultimately it is the project manager's responsibility to manage the costs and schedule. The project manager must be provided with costs and schedule alternatives to determine what is best to move the project forward.

104-7.0 DEFINITIONS AND ACRONYMS

This section contains the definitions and acronyms that are used for utility coordination. Most definitions relevant to utility relocation appear in 105 IAC 13-2, Indiana code, the UAP or other chapters of this manual. The definitions shown in this section supplement those which appear in 105 IAC 13. Symbols and line styles used on plans appear in Chapter 103.

Betterment. An upgrade to a utility facility that is not attributable to highway construction and is made solely for the benefit of and at the election of the utility company.

CFR. Code of Federal Regulations.

Highway Utility Agreement. A document which provides the terms for compensating a utility company for relocating its facilities in support of a highway construction or maintenance project.

IAC. Indiana Administrative Code.

IC. Indiana Code.

Indiana 811. The agency that receives and distributes requests to locate underground utility facilities, formerly known as Indiana Underground Plant Protection Service, or IUPPS.

LPA. Local public agency.

Notice to Proceed or NTP. The official written notice from the Department or its representative that all items in the utility's work plan required to be completed prior to the utilities construction have taken place and the utility should mobilize their prescheduled crews and begin construction. This document is issued by the utility coordinator.

Reimbursable. The status when a utility is eligible to have their relocation costs paid in part or in full by the Department as it is completed.

SPMS. Scheduling Project Management System.

Subsurface Utility Engineering, or SUE. The engineering process that identifies, characterizes, and maps an underground utility facility to various quality levels.

USC. United States Code.

Utility Accommodation Policy. The Department policy that describes the requirements for the permitting and placement of utility facilities within Department right-of-way.

Utility Coordinator (UC). A person designated to complete the utility coordination responsibilities and who has completed and been certified to do utility coordination for Department projects.

Utility Oversight Agent. A Department employee or consultant designated with responsibility to deliver the utility tasks of the project by overseeing consultants who complete the utility coordination responsibilities and who is a certified Utility Coordinator.

Utility Relocation Permit. The required document including the permit number allowing a utility to place facilities within public ROW. This document is issued by a Department Utility Oversight Agent or Department Utility Coordinator when a work plan is approved.

Utility Relocation Permit Addendum. A letter that notifies a utility company that a change to its work plan is approved, assigns a permit addendum number, and notifies the company to start implementation of the change to the work plan.

Work plan: The work plan is the document that identifies existing utility facility locations, what will be done with those facilities, and any proposed relocation work for the project. The work plan is a plan for the Utility to carry out facility relocation to accommodate the project.