UTILITY ACCOMMODATION POLICY

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Approval and Implementation

The Indiana Department of Transportation's (INDOT) Utility Accommodation Policy (UAP) provides procedures pertaining to the accommodation and relocation of utility facilities in the right-of-way to Indiana's state highway systems.

The UAP addresses the applicability, procedural, and state and federal guidelines responsible for coordinating the relocation of utility facilities when the work is initiated by or incidental to a highway improvement project. The UAP will assist INDOT employees, local public agencies, utilities, contractors, and those that have property interest in INDOT improvement projects.

The Utilities Division provided subject matter expertise, accountability, and authority on policy as it relates to their divisions.

This plan is effective June 1st 2019

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Record of Revision

Date	Reviser	Description	Effective Date
Nov 11 2014	JFG	Revised Appendix A: All lines under or within 5 ft of pavement or structure now buried 4.0 ft 2. All lines not under or within 5 ft of pavement now buried 3.0 ft 3. All lines under ditches now buried 4.0 ft deep. 4. Revised the notes	Nov 11 2014
June 12 2014	JFG	Revised definition of: 1. Gas line, high pressure 2. Gas line, low pressure 3. Gas line, medium pressure 4. OSHA Revised Gas Line, High Pressure: 1. Lines allowed for crossings now include 'fusion joined plastic lines'. Revised Gas Line, Low Pressure & Medium Pressure: 1. 1. Lines allowed for crossings now include 'fusion joined plastic lines'.	June 12 2014
Sept 2018	SA/TL/BP/KCD	Updated version 4.0	

UTILITY ACCOMMODATION POLICY

CHAPTER 1 INTRODUCTION

1.1 Purpose

INDOT's goal in managing the right-of-way is to preserve the integrity, safe operation, and function of the State highway system. The manner in which utilities occupy the right-of-way can affect the appearance, operation, construction, maintenance of the highway and the safety of the traveling public; therefore, any occupancy by a utility shall be authorized, and reasonably regulated and managed. The purpose of this Utility Accommodation Policy (UAP) is to establish the policy for managing utility facilities that are located, installed, maintained, repaired, removed, or relocated within the right-of-way of the State highway system. Refer to IC 8-1-9-2 and 105 IAC 13-2-7 for a list of utility facilities.

INDOT reserves the right to address other types of utility facilities in accordance with this policy or other policies

The UAP supersedes and replaces all previous policies or portions of policies pertaining to the accommodation of utility facilities in the right-of-way of the State highway system.

1.2 Prior Rights

The UAP is not intended to delineate whether or not prior rights exist. A utility with facilities on public right-of-way must relocate those facilities at their cost if they are in conflict with the proposed improvement project. A utility which has property interest will be accommodated via an Agreement, as allowed under state and federal law. Information regarding reimbursement of utility relocations can be found in IC 8-23-2-6(15), the INDOT Utility Coordination and Design Manual (UCDM) and the Federal Highway Administration Program Guide: Utility Relocation and Accommodation on Federal-Aid Highway Projects.
INDOT's authority with respect to jurisdiction over state highway right-of-way emanates from state and federal law.

1.3 Responsibilities

Federal and State law mandates that INDOT manage the State highway system responsibly, reasonably and cost effectively. Federal, state, and local statutes and implementing regulations establish authority for developing and maintaining the UAP. The following laws are the legal authority for this policy.

1.3.1 Federal Authority

a. 23 CFR 645 address issues related to reimbursements and compensations: https://www.ecfr.gov/cgi-bin/text-idx?SID=06ef07211d6c60404d337ce73d6f74a3&tpl=/ecfrbrowse/Title23/23cfr645_main_02.tpl

b. 23 U.S.C. deal specifically with utilities
   - 23 U.S.C. 109(l) addresses the accommodation of utilities on the right-of-way of federal-aid highways. https://www.fhwa.dot.gov/map21/docs/title23usc.pdf
   - 23 U.S.C. 123 addresses reimbursement for the relocation of utility facilities necessitated by the construction of a project on any federal- aid highway. https://www.fhwa.dot.gov/map21/docs/title23usc.pdf

1.3.2 State Authority

- Indiana Code Title 8 http://iga.in.gov/legislative/laws/2018/ic/titles/001
- 105 IAC Article 13 http://www.in.gov/legislative/iac/T01050/A00130.PDF

1.3.3. Other Requirements

The utility will comply with all other applicable requirements including but not limited to those specified in the following documents:

- INDOT Utility Coordination and Design Manual (UCDM)
- INDOT Standard Specification.
- INDOT Standard Drawings.
- INDOT Permit General and Special Provisions.
- *Indiana Manual on Uniform Traffic Control Devices* https://www.in.gov/dot/div/contracts/design/mutcd/2011rev3MUTCD.htm
- INDOT *Design Manual* including but not limited to, the following chapters.
  - Roadside Safety
  - Geometric Design of Existing Non-Freeways
  - Traffic Control Plans/Designs
  - Temporary Erosion and Sediment Control
- OSHA Standards.
- All other relevant industry standards for the type of facilities being installed.
- All other relevant laws and regulations.

CHAPTER 2 PERMITS

2.1 Requirements and Process

A utility that desires to occupy the State highway right-of-way shall submit a permit request to INDOT. INDOT will review the permit request to ensure compliance with all requirements. A permit does not grant property interest. INDOT may deny any permit request that does not comply with this policy or other applicable requirements. INDOT may also deny a permit request if the utility has a history of non-compliance with regulations, rules, standards, policies or any other applicable requirements. If INDOT approves the request, a permit will be issued. The utility will be electronically notified if the permit request is denied.

The utility is responsible for obtaining any other applicable permits or authorizations required for the installation or relocation of its facilities. Recommended agencies to contact regarding other required permits include, but are not limited to, the U.S. Army Corps of Engineers, the Indiana Department of Natural Resources, the Indiana Department of Environmental Management, and local public agencies.

The utility will notify the INDOT office that issued the permit within one month of a facility ownership change. The new owner will have all the obligations and privileges granted to the former owner. The utility with a change in legal status remains bound by the permit and its provisions.

INDOT reserves the right to revoke any and all permits to do any work within the state right-of-way if the following utility accommodation provisions are not met. INDOT also reserves the right to request AS-BUILTS to verify the utility is within permitted location. Underground communication lines will refer to telephone and telegraph lines, not communications through Internet Protocol enabled services.

It is INDOT's intention that this policy is applied to all utility facilities, as described in this section and in IC 8-1-9-2 and 105 IAC 13-2-7, and the utilities that own or operate them in a nondiscriminatory manner and that all such utilities and utility facilities have equal access to, and are subject to equal requirements and regulations regarding, right-of-way owned, controlled, or managed by INDOT without regard to type of utility facility.

2.2 Permit Categories

Utility Initiated: A utility that desires to install or relocate any facility within the public right-of-way will present a permit application to the appropriate INDOT district office. The utility will submit a permit application through the Electronic Permitting System (EPS) http://www.ai.org/indot/2727.htm. Applicable fees and a permit bond may be required in accordance with INDOT policy governing the specific permit type sought.

INDOT Initiated**:** A utility required by INDOT to relocate any facility to accommodate a proposed highway improvement project will be approved by INDOT before relocating. No fees nor permit bond is required.

CHAPTER 3 EXCEPTIONS

3.1 Policy

Deviations to this policy, either in whole, part, or otherwise not covered by, is considered an Exception. Exceptions to this policy may be allowed if due to extreme hardships or unusual conditions as long as the exception doesn't violate state and federal statutes.

INDOT will thoroughly and individually consider exceptions to the UAP on a case-by-case basis where it can be demonstrated that there are no reasonable and prudent alternatives to the strict compliance of this policy.

The INDOT Commissioner or its designated representative(s) has the authority to review and approve exceptions to this policy on a case by case situation. An approved exception will not set precedent for any subsequent request.

To obtain a UAP Exception a utility shall submit a permit request through EPS. Attach a justification document to the permit request, on company letter head, addressed to INDOT Utilities and Railroad Director.

3.2 Process

The justification document should describe the following:

- Identify the specific provision being addressed in the UAP and desired revision.
- Outline any unusual conditions or hardships.
- The impacts on traffic safety and highway operations.
- The impacts resulting from the alternative when the policy is followed and for the requested exception to the policy.
- How the facilities will be maintained and the impact on highway maintenance including drainage, pavement preservations, and possible highway improvements.

CHAPTER 4 DRIVEWAY CONFLICTS

4.1 Driveways

Construction, reconstruction, modification or relocation of a driveway on highway right-of-way may require relocation of utility facilities. All work within state right-of-way is subject to INDOT approval.

4.2 INDOT Initiated

INDOT is responsible for coordinating the relocation of utility facilities when the work on the drive is initiated by or incidental to a highway improvement project. The division of costs for this work will be resolved between INDOT and the utility in accordance with state law.

4.3 Private Owner Initiated

The property owner is responsible for coordinating the relocation of utility facilities when the work on the drive is initiated by the private owner. The division of costs for this work will be resolved between the owner of the drive and the utility.

CHAPTER 5 PRIVATE FACILITIES

INDOT does not allow private facilities to be located on public right-of-way unless they are private service lines which extend from the main line. The utility will request and coordinate the installation and relocation of any such utility service line.

CHAPTER 6 SERVICE LINES

Generally, it is in the public interest for transverse installations of service lines owned by a public utility to be located on the State highway right-of-way because they connect the main line directly to the customer. INDOT may allow transverse installation of such service lines on state highway right-of-way in accordance with this policy. Also, INDOT reserves the right to permit installation of longitudinal runs of service lines when a public interest is demonstrated and approved in accordance with Chapter 3.1 of this policy. A utility that requires the property owner to install a service line will co-sign the permit. All work within state right-of-way is subject to INDOT approval.

CHAPTER 7 ACCESS CONTROL

7.1 INDOT Authority

INDOT has the authority to control and regulate access to all highways under its jurisdiction. Access control is used to limit the degree of interference with vehicular traffic from other vehicles or pedestrians which are entering, exiting or crossing the highway.

The level of access control determines the type and extent of utility facility installations that are allowed on public right-of-way. The access control line may also be the same location as the right-of-way line. Contact the coordinating INDOT district for access control information for a specific location.

7.2 Three Access Control Categories

Non-Limited Access. INDOT regulates the locations and details of access, but INDOT has not purchased access control rights from adjoining properties. This access is common to most highways with frequent driveways and intersections.

Partial Limited Access. INDOT has declared or purchased access control rights from adjoining property owners. Access is controlled to give preference to vehicular traffic, but there may still be some intersecting streets at grade and some driveway connections. This access is common to many divided highways with some intersections and driveways.

Full Limited Access. INDOT has declared or purchased access control rights from adjoining property owners. Access is controlled to give priority to mainline vehicular traffic by providing access to other vehicles and pedestrians only from selected public roads, by prohibiting crossings at grade and by prohibiting driveway connections. This access is common to interstate highways and some divided highways.

CHAPTER 8 GENERAL FACILITY LOCATION

Utilities will install and relocate facilities with due consideration for the safety, operation, maintenance and aesthetic characteristics of the highway and other users of the highway. Facilities shall be located to minimize relocation due to future highway improvements, to enable future installation of additional facilities on the highway, to enable facility maintenance, repair and upgrade with minimum hazards and minimum interference with highway traffic.

The location of above ground facilities within the highway right-of-way will be in accordance with the Roadside Safety Chapter of the INDOT *Design Manual*. New or relocated above ground facility installations will be located outside the clear zone.

Facilities will cross roadways at right angles or as nearly as practical to right angles. Reasonable latitude may be exercised for existing facilities which are otherwise qualified to remain in place. Where practical aerial lines should not cross

the roadway within 100 feet of a small structure, large culvert (over 48” diameter), or bridge structure to aid in future construction projects.

Subject to INDOT permit guidelines, facilities crossing limited and partial access highways will have all supporting structures and above ground appurtenances located outside the access control line and preferably, outside the right-of-way line. Additionally, subject to INDOT permit guidelines, access for installation, maintenance and relocation of facilities will be from outside the access control line and preferably, outside the right-of-way line of the limited access roadway.

Longitudinal installations of facilities, individual service connections and facility maintenance points will be located on a uniform alignment as near as possible to the right-of-way line to provide the maximum space for possible future highway construction or facility installations. Variance may be allowed on the distance from the facility to the right-of-way line in order to maintain a uniform alignment. Such variance often occurs where irregularly shaped portions of the right-of-way extend beyond the normal right-of-way limits. On highways with a frontage road, the preferred location for longitudinal installation is between the frontage road and the exterior right-of-way line.

Longitudinal installations of facilities, individual service connections and facility maintenance points on highways with partial access control are discouraged. Installations may be allowed where no other reasonable alternative exists. Factors to consider in evaluating the installation include terrain, cost, prior existence, environmental characteristics, and distance between distribution points. Other factors include access for maintenance from outside the access control line or from drive ways and the effect on agricultural land if not allowed.

Longitudinal installations of facilities on highways with full access control are not permitted. Exceptions may be issued when the facilities do not include individual service connections and the facilities are installed or serviced by direct access from outside the limited access control line.

Longitudinal installations of underground power lines, high pressure gas lines and petroleum lines will not be placed under travel lanes, shoulders or in the median. Longitudinal installations of all other types of facilities are discouraged from being placed under travel lanes, shoulders or in the median. On intersecting roadways, longitudinal installations under travel lanes, shoulders or in the median are discouraged where the road way crosses state right-of-way.

Utility facilities will not be installed on federally funded roadways within or adjacent to areas of scenic enhancement and natural beauty in accordance with 23 CFR, Part 645, Subpart B.

An existing utility facility within the right-of-way of an existing or proposed highway improvement project may remain provided it is in compliance with the INDOT UCDM and UAP or a UAP exception is approved. An existing utility facility that is in conflict with a proposed highway improvement project will be relocated in accordance with 105 IAC.

Locations that have a high potential to conflict with proposed construction, highway maintenance, roadway operations, highway safety or future highway improvements should be avoided. These include, but are not limited to, locations as follows:

- deep highway cut sections
- near footings of bridges or other highway structures
- diagonally across intersections
- cross-drains where flow of water, drift or stream bed load may be obstructed
- longitudinally in or under a ditch
- within a basin drained by a pump if the pipeline carries a liquid or liquefied gas
- within an underpass drained by a pump if the pipeline carries a liquid or liquefied gas
- wet or rocky terrain where minimum depth of cover would be difficult to attain;
- soft soils subject to excess settlement
- median installations

CHAPTER 9 FACILITY DESIGN

Each utility is responsible for its facility design including the preparation of work plan narratives, drawings, cost estimates and specifications. The drawing will be of sufficient detail and scale to show the proposed facility relocation. The relocation drawing will be on INDOT plans, show stations, offsets and elevations of the utility facilities and comply with the other requirements listed in the UAP Appendix B.

Utility facility installations within the highway right-of-way will comply with current industry standards including but not limited to the following requirements.

- Electric power facilities and communication facilities will be in accordance with the current National Electrical Safety Code.
- Water facilities will be in accordance with the current specifications of the American Water Works Association (AWWA) and Ten State Standards for Water Design.
- Pressurized pipelines will be in accordance with the current ANSI Code for Pressure Piping (ASME Code B31) and 49 CFR Parts 192, 193 and 195.
- Liquid petroleum pipelines will be in accordance with the current recommended practice of the American Petroleum Institute for pipelines under railroads and highways.
- Pipelines carrying hazardous materials will be in accordance with the rules and regulations of the U.S. Department of Transportation governing the transportation of these materials.

- All facilities will be in accordance with Occupational Safety and Health Administration (OSHA).

Facility installations and relocations within the highway right-of-way will be of durable materials, designed for long life expectancy, and minimize routine maintenance.

Facility installations and relocations will be designed to accommodate planned expansion of the facilities. Facilities will be designed to enable facility maintenance, repair and upgrade with minimum interference and hazard to highway traffic and other utilities.

If an exception is granted and utility lines are attached to an appurtenance, bridge, small structure, culvert or other drainage structure, shut off valves will be installed at both ends of the attachment.

Utility facilities crossing state highways underground will be installed without disturbing the existing pavement structure or paved shoulders. Open cut of pavement will not be considered unless it is demonstrated there is no reasonable alternate method available. Casing, pipe, or conduit crossing state highway underground will be installed using trenchless technology in accordance with INDOT Standard Specification. Water jetting is not allowed.

Boring,jacking and directional drilling under state highways with access control will be from pits located at least 30 feet from the edge of pavement. Boring, jacking and directional drilling under state highways with no access control will be accomplished from pits located at least the total distance of 10 feet plus the depth of the pit without shoring. Wet boring or water jetting is not allowed. Boring, jacking and directional drilling under interstate highways will be from pits located outside the access control fence. Boring,jacking and directional drilling pits may be located closer than the required distance when they are protected in accordance with the INDOT *Design Manual*.

NOTE: INDOT reserves the right to use monitors for settling a bore over 6.0 inches in diameter.

NOTE: Monitors are not required for Directional Drilling because the bore mud will provide the support after it solidifies.

All trenchless underground installations of casings, pipes or conduits will be in accordance with the current INDOT Standard Specification or the utility industry standard, whichever is more stringent. The diameter of the auger will not exceed the outside diameter of the pulled pipe by more than one inch. Installations with a diameter of six inches or less may be accomplished by either jacking, guided whip auger or auger with the pulled pipe method. Open pits will be clearly marked, protected by barriers and secured from intrusion by pedestrians. Pits used for trenchless underground installations will be located in an area and constructed in

such a manner that will not affect highway structural footings or the highway. Shoring may be used to protect the highway.

To modify a permit, the utility must request and submit an addendum, along with a revised drawing to the District Permit Manager. The request will be presented to the designated utility coordinator for approval.

Utility tunnels will be designed so that most repairs or replacement of sections of pipe line can be made without pulling the entire pipe line. The utility tunnel design will include one or more entrance shafts of a size suitable for removal of one pipe section from the gallery. Utility tunnels will extend across the full width of the right-of-way.

Provided the design does not violate industry standards, INDOT encourages the installation of multiple utility facilities in the same duct or same trench to minimize the impact on the highway right-of-way and reduce installation costs. One utility may be selected as the lead for the project to complete the design and construction.

CHAPTER 10 STRUCTURES

10.1 Utility Structures Construction Guidance

INDOT reserves the right to allow the construction of a bridge or tunnel to facilitate the placement of one or more utility facilities. The utility is responsible for and will pay the cost for design, construction, maintenance and any other costs associated with these structures. INDOT will participate in these costs to the extent that the utility is reimbursable for such work as the result of a highway project or to the extent that the structure is also used for highway purposes.

10.2 Highway Structures Guidance

Highway structures include bridges, small structures, culverts or other drainage pipes. INDOT does not allow facilities that supply hazardous, explosive, high voltage, high pressure or heated commodities to occupy or attach to highway structures. A Utility that desires to attach a facility to a highway structure will be considered an UAP Exception and will follow those procedures for approval and a proper permit.

Facilities that are allowed to attach to highway structures will comply with the following.

- Lines will not be attached to highway structures where they interfere with traffic, routine maintenance operations, the flow of water or degrade the appearance of the structure.

- Facilities will be carried in conduits or casings of sufficient strength to protect the line.

- INDOT may include conduits in the design of a bridge provided that:

    - The utility provides a written request providing the details of their requirements prior to the completion of the design of the highway improvement project.

    - The utility agrees to pay all additional costs associated with the design and construction to accommodate their requirements.

- The use of INDOT owned conduit is discouraged. If that the Utility may use INDOT owned conduit, there shall be written approval accompanied by an agreement. The Utility will be responsible for the cost and maintenance. The Utility will receive written approval to utilize INDOT owned conduit.

10.3 Structural Analysis

All requests to attach pipelines to an existing bridge must be accompanied by sufficient information including design details and calculations certified by a professional engineer to determine the effect of the added load on the structure. If the bridge does not have sufficient strength to carry the loads with an adequate margin of safety, the request will be denied. Where the request is to attach lines within or to a new structure, the utility will be responsible for any increase in the cost of the structure to support the extra loads of the pipeline, including any increase in the size or thickness of members necessary to contain lines or conduits installed within the structure.

Any time that an attachment must be relocated to accommodate highway work or safety, the utility must apply for a new attachment. Prior existence is not be a basis for reattachment.

CHAPTER 11 UNDERGROUND LINES

All underground lines must meet applicable codes, industry standards, and the criteria below. INDOT reserves the right to revoke any and all permits to do any work within the state right-of-way if the following guidelines are not met. INDOT also reserves the right to request AS-BUILTS to verify the facilities are within permitted location.

11.1 Clearances

Vertical and horizontal clearances between a pipeline and a highway structure, other highway appurtenances or utility facilities should be sufficient to allow maintenance of the pipeline and the other items.

11.2 Depths

For the minimum depths of cover for underground lines as described herein, refer to Appendix A.

Existing lines may be allowed to remain in place with a reduction of 0.5 feet in the depths of cover specified above. Also, existing lines may remain in place with a lesser depth of cover if the pipeline is protected by a reinforced concrete slab which complies with the requirements listed below.

Width. The width will be three times the pipe diameter or encasement diameter whichever is greater but not less than 4.0 feet.

Thickness. The thickness will be a minimum of 6.0 inches.

Reinforcing. The minimum reinforcement will be No. 4 epoxy coated bars on 12.0 inch center, or the equivalent.

Cover. The cover will be at least six inches between the bottom of slab and top of pipe.

11.3 Location

Subject to INDOT permit guidelines, in urban areas, not including interstates, existing longitudinal lines may remain in place provided they comply with the following:

The lines can be maintained without violating access control.

The lines will not interfere with the proposed highway improvement project.

The lines are of sufficient strength and durability to withstand the changed conditions and have adequate remaining service life to prevent maintenance, repair or replacement.

Service access points are adjusted to be flush with the surface to accommodate any changes in grade.

Service access points are positioned to be out of the normal wheel path to accommodate any changes in traffic patterns and away from intersections.

The lines comply with all other requirements of this policy, as well as federal and state law.

11.4 Strength

All underground lines will provide sufficient strength to withstand internal design pressures. All underground lines will provide sufficient strength to withstand external design pressures including superimposed loads of soil, roadway, traffic, construction equipment, and other typical roadway pressures. All underground lines will be of satisfactory durability to withstand the conditions to which they may be subjected.

11.5 Crossings

Liquid petroleum and gas line crossings may be encased or non-encased. However, only welded steel lines with adequate corrosion protection may be used for non-encased highway crossings. Non-encased gas line crossings must be fusion joined plastic lines or plastic lines with no joints under or within 5.0 feet of the roadway. All water line crossings under the roadway and within 5.0 feet of the roadway must be encased, except service lines of 2.0 inches diameter or less. All sanitary line crossings under the roadway and within 5 feet of the roadway must be encased, except non-pressurized lines.

Communication lines crossing underneath highways do not require conduit. The use of a conduit or other suitable protection will be considered for communication lines located near footings of bridges, highway structures or other locations where the integrity of the line may be at risk.

Underground power lines shall be in a conduit. The use of a conduit or other suitable protection will be considered for power lines located near footings of bridges, highway structures or other locations that may be exposed to workers or the public.

11.6 Encasement and Conduit

Pipelines with encasements will consist of a pipe or other separate structure around and outside of the carrier line. Encasements may be metallic or nonmetallic. The encasement will be of sufficient strength to withstand external design pressures including superimposed loads of soil, roadway, traffic, construction equipment, and other typical roadway pressures. When used, encasement and conduits will extend under the median, from top of back slope to top of back slope for cut sections, 5.0 feet beyond the toe of slope under fill sections, 5.0 feet beyond the back of the curb, and 5.0 feet beyond any structure which the lines passes under or through. Encasement and conduits may be omitted under medians that are substantially wider than normal standards for such roadway, such as when the roadways are on independent alignments. All casings will be sealed at both ends.

11.7 Manholes, Vaults, Pits, and Hand Holes

Generally, manholes, vaults and pits are discouraged from being placed in the pavement, shoulders or curbs of any roadway. However, if they are permitted in the roadway, they should be installed outside the normal wheel path and away from intersections. In general these types of access points are limited to those necessary to install and service the lines. They will be placed directly in line with the facilities and of the minimum width to accomplish their intended function. They will be installed so the top of the facility is flush with the roadway or ground surface. They will have a solid no-grated line. They will provide sufficient strength to withstand external design pressures including superimposed loads of soil, roadway, traffic, construction equipment, and other typical roadway pressures. Manholes or structures beneath the roadway should be sealed in a way to prevent the inadvertent removal of subbase material.

CHAPTER 12 ABOVE GROUND POWER, LIGHTING, AND COMMUNICATION LINES

12.1 Type of Construction

Longitudinal lines will be limited to single pole construction. Transverse lines will be limited to single pole construction or that type of construction used on the portion of the line adjacent to the highway right-of-way.

12.2 Vertical Clearances

The vertical clearance for overhead power and communication lines above the highway will be a minimum of 18 feet. If the overhead power and communication lines are at a signalized intersection where the signal is at 18 feet, then the overhead utility needs to be at a level to maintain a safe line of sight. The vertical clearance of overhead power lines and communication lines relative to a highway bridge or other highway structure will provide reasonable space for construction and maintenance activities.

12.3 Location

INDOT discourages the placement of towers on highway right-of-way. Light poles will be located in accordance with the Roadside Safety chapter of the INDOT *Design Manual*. Light poles will not be permitted in the ditch line of any state highway. Light poles in the clear zone will be breakaway design except at locations nearby sidewalks, shared-use paths, and other pedestrian facilities.

The number of guy wires placed within the right-of-way will be held to a minimum. Where possible, guy wires and guy poles placed inside the right-of-way will run

parallel to overhead power lines. Where possible, guy wires and guy poles that are not in line with the pole line will be placed outside of the right-of-way. Guy wires and guy poles may be placed in other locations but in no case will they be located within the specified clear zone.

Poles for longitudinal installations will not be allowed in the roadway median. Poles for transverse crossings may be allowed in the roadway medium where the cost of spanning an extreme width is excessive and where poles can be located in accordance with the other provisions of this policy.

Ground mounted appurtenances will be installed with a vegetation free area extending one foot beyond the appurtenance in all directions. The vegetation free area may be provided by an extension of the mounting pad, heavy duty plastic or similar material. The housing for ground mounted appurtenances will be an inconspicuous color.

CHAPTER 13 FACILITY CONSTRUCTION

13.1 Preservation, Restoration, Cleanup, Drainage, and Envioronmental Permits

Preservation. The utility shall make every effort to minimize the areas disturbed by their work. The utility shall make reasonable efforts to minimize damage to crops and agricultural land. The utility is responsible for any cost of damage to crops or agricultural land.

Restoration. The utility shall restore in a timely manner areas disturbed by their own forces or their contractor to a condition equal to or better than the condition prior to work. Restoration of disturbed areas shall be in accordance with the requirements of the work plan, INDOT Standard Specifications and all provisions of the permit including; General Provisions, Special Provisions and any Additional Special Provisions.

Cleanup. Spraying, Cutting and Trimming of Trees, Shrubs and/or Vegetation. A permit will be required for the trimming, cutting, spraying or removal of trees, shrubs or other vegetation located within the highway right-of-way. INDOT will authorize any work completed in writing and will be in accordance with INDOT Standard Specification Earthwork.

Drainage. The utility will maintain existing drainage patterns during the installation, maintenance or removal of their facilities. Trenches and bore pits for underground facility installations will be backfilled in accordance with INDOT Standard Specifications. Outlets or under drains will be installed as needed to avoid entrapped water. Test holes will be back filled in accordance with INDOT specifications.

Environmental Permits. The utility will obtain all required environmental permits to support the installation or relocation of their facilities. The utility will implement erosion control, sediment control, and storm water management measures in accordance with 40 CFR Parts 9, 122, 123, & 124, 327, IAC 15-5 and the Indiana Storm Water Quality Manual. The utility will implement such measures to protect all areas disturbed by work performed by their own forces or work performed by their contractor. The utility will implement such measures during work operations and after work operations until replacement vegetation is established or until the area is disturbed by another party.

13.2 Safety and Convenience

Control of Traffic. Traffic control for utility construction and maintenance operations will conform to the Indiana Manual on Uniform Traffic Control Devices (IMUTCD) or the INDOT Work Zone Safety Handbook. All construction and maintenance operations will be planned with due consideration to the safety of the public and maintaining traffic mobility. Any such work must be planned to minimize closure of intersecting streets, road approaches, traffic lanes, or other access points. On high volume highways, construction operations interfering with traffic should not be allowed during periods of peak traffic flow. In accordance with the Traffic Control-Plan Design chapter of the INDOT *Design Manual,* a traffic control plan must be prepared and submitted with the permit application. INDOT reserves the right to inspect traffic control operations for compliance with established standards.

Work Site Safety. The utility will comply with the requirements of the IMUTCD. INDOT reserves the right to require utility construction or maintenance operations on state highway right-of-way to be discontinued during periods of inclement weather or when soil conditions are such that the utility work would result in extensive damage to the highway right-of-way or create an unsafe traveling condition.

Maintenance and Repairs. The utility will maintain all facilities in good repair both structurally and aesthetically. Maintenance of facilities crossing limited access highways will be from city streets, county roads, service roads, and approved openings provided in limited access right-of-way fences unless such alternatives are not practical. Maintenance and repair does not include the installation or relocation of facilities.

13.3 Trenches, Bedding, and Backfill

The essential features for trench construction are restoration of the structural integrity of roadbed after trenching; security of the pipe against deformation likely to cause leakage; and assurance against the trench becoming a drainage channel. The integrity of the pavement structure, shoulders and embankment are of primary concern.

Trenches, bedding and backfill will be in accordance with the INDOT Standard Specification and as follows:

- The width of a trench will be the minimum necessary to accomplish the installation. Shoring will be used when necessary, in accordance with OSHA requirements.

- Bedding will be provided to a depth of 6.0 inches or half the nominal diameter of the pipe, duct, or duct bank, whichever is less. Bedding consists of pit run sand and gravel mixture or other suitable materials approved by the permit inspector in accordance with INDOT Standard Specification. Bedding will not be required for pipes, ducts or duct banks encased in concrete or flowable fill. The bottom of the trench will be prepared to provide the pipe, duct or duct bank with uniform bedding support throughout the length of the installation.

13.4 Underground Facilities Protection

Indiana 811 is the agency that coordinates the protection of underground utility facilities in accordance with IC 8-1-26. Contact will be made with Indiana 811 two days prior to any excavation or survey so that underground facilities may be located and marked.

The location of each underground utility will be marked by the utility with paint, flags or other temporary surface markings color coded for each utility type. The uniform color code system is as follows:

a. Red: Electric power lines or conduits.
b. Yellow: Gas, petroleum, steam or other hazardous materials.
c. Orange: All types of communication lines.
d. Blue: Water systems and slurry pipelines.
e. Green: Storm and sanitary sewers.
f. Purple. Reclaimed water.
g. Pink. Temporary survey markings
h. White. Proposed construction.

An underground utility line, which lacks a continuous and integral metallic component capable of detection by locating instruments, will be accompanied in its location by a continuous detectable material such as a metallic tracer wire or metallic tape. This includes service lines.
A utility will place a warning device directly above high risk facilities such as gas and petroleum lines. A utility may install a warning device above other facilities. Warning devices will be buried at least 12 inches below the ground surface and indicate they are in close proximity to a buried facility as industry standards require.

The utility will place a readily identifiable and suitable marker(s) or sign immediately above any facility and where it crosses the right-of-way line, except where there is a vent. The markers or signs will be placed within close proximity to

the facility. The markers indicate the facility type and facility contact information. Markers and signs will be:

INDOT approved
Break-away and crashworthy
Placed at the right-of-way in transverse crossings

13.5 Pavement Cuts

Open cutting of pavement on interstate highways is not allowed. Open cutting of pavement on all other highways is highly discouraged because it adversely affects the integrity of the pavement and may disrupt the flow of traffic. A utility that desires to install a facility by open cut will obtain a "right-of-way occupancy permit" from the appropriate INDOT District prior to starting the work. The permit request will explain the reasons why the utility desires to install their facilities by open cut. At the conclusion of the work, all cuts in the pavement will be repaired with like materials, to a similar or greater depth and to a condition equal to or better than the condition of the pavement prior to the work in accordance with INDOT Standard Specification. INDOT will inspect all pavement cuts in the roadway to determine the extent of pavement repairs. The utility shall contact INDOT no later than 30 days following the pavement cut to allow for a timely inspection. The utility will submit their pavement design for the repair of the pavement when the permit is requested. The design for pavement repairs will be approved prior to a permit being issued.

13.6 Road Closures

A utility that requires a road closure to install, service or relocate their facility will obtain a permit prior to starting their work. The utility will coordinate with the District Permit Engineer to determine an acceptable plan to address impacts to school busses and emergency vehicles including but not limited to ambulances, fire and law enforcement. The utility will provide notice of the location and schedule for the proposed road closure to all impacted state and local agencies including but not limited to schools, hospitals, fire departments and law enforcement offices at least three months prior to the date of the planned road closure.

13.7 Emergency Repairs

Emergency repairs may be performed within the right-of-way when physical conditions or time constraints prevent applying for and obtaining a permit. The utility will notify the District Permit Manager or INDOT Traffic Management Center as soon as possible about its plan of action for the emergency repairs prior to beginning any work within the right-of-way. The utility will make arrangements for the control and protection of traffic or pedestrians affected by the proposed operations. The utility will submit a permit application within five working days of the work to cover the emergency repairs.

13.8 Inactive Facilities

Inactive facilities fall into two categories.

Out of Service Facilities. Facilities that are no longer in use and will be restored to service.

Retired/Abandoned in Place Facilities. Facilities that are no longer in use and will not be restored to service.

Inactive facilities remain the responsibility of the utility until such are removed from the State highway right-of-way. INDOT does not allow a utility to absolve themselves of accountability and responsibility for their facilities. An inactive facility remains the responsibility and property of the utility owner, regardless if the facility is retired or abandoned or if the utility has subordinated its property interest. The utility will maintain accurate, complete and understandable records of all inactive facilities.

The utility will remove all above ground inactive facilities within sixty calendar days of the facility becoming inactive.

INDOT prefers that underground facilities that are out of service be removed from the right-of-way when reasonable. The utility will remove underground out of service facilities that may impair the safety or integrity of the highway or adversely impact the environment. The utility may remove underground out of service facilities provided that such removal does not impair the safety or integrity of the highway or adversely impact the environment.

A utility may leave retired in place pipes of any material that are 12.0 inch or less in diameter provided the ends are sealed. A utility may leave retired in place pipes of greater than 12.0 inches in diameter provided they are filled with flowable fill or grout with the ends are sealed. The flowable fill or grout material will be in accordance with INDOT Standard Specification.

A utility is responsible to remove inactive facilities that are found to be in conflict with a highway improvement project. The utility is responsible for the cost to remove these facilities unless the work is reimbursable. The utility may consider alternate methods of removal such as having the work included in the state highway construction contract.

13.9 Inspections

INDOT reserves the right to inspect all utility installations within highway right-of-way. If any violations or deficiencies are observed, INDOT will provide notice of such violations or deficiencies to the utility. The utility will establish with INDOT a reasonable timeframe for corrective action if such is necessary. The cost of subsequent inspections may be charged to the utility.

13.10 Records

INDOT reserves the right to request information from the utility to help minimize relocation efforts. The utility will adequately protect and maintain records and documents of its facilities located in public right-of-way. Records will cover active facilities and inactive facilities. Records will include the facility type, function, size, configuration, material, location, elevation and any special features such as encasement, manholes and valves. Records will include all service lines which enter or cross the highway right-of-way. The utility will provide complete, concise, and accurate copies of these records at no cost within 30 days of a request.

CHAPTER 14 IRRIGATION AND DRAINAGE PIPES, DITCHES AND CANALS

Irrigation and drainage pipes crossing state right-of-way may be permitted. Irrigation and drainage pipes installed across any highway right-of-way must be designed, constructed and maintained in accordance with INDOT standards for culverts and bridges.

Ditches and canals may be permitted on state right-of-way if they comply with the clear zone requirements of the INDOT *Design Manual*

CHAPTER 15 BROADBAND FACILITIES

Note: Broadband facilities are not included in the Utility Accommodation Policy. Broadband facilities are to be coordinated in reference to the Broadband facilities are to be coordinated in reference to the Broadband Access Permit Guidance document that can be found at the following link: http://www.in.gov/indot/2727.htm

INDOT reserves the right to revoke any and all permits to do any work within the state right-of-way if the following Broadband Permit Guidelines are not met. INDOT also reserves the right to request AS-BUILTS to verify the fiber is within permitted location.

CHAPTER 16 MAINTENANCE AND REVIEW

The Utilities and Railroad Division, in cooperation with INDOT districts and other applicable divisions, will oversee all maintenance of the UAP. The Utilities and Railroad Division will review the UAP every 12-24 months and provide updates as needed.

GLOSSARY

The following definitions apply to INDOT's utility accommodation:

ANSI. American National Standards Institute. https://www.ansi.org/

Access Control. The regulation of public access to and from properties abutting the highway facilities. The three basic types are non-limited access, partial limited access and full limited access.

Applicant. An applicant is a person or entity applying for a permit under this policy.

Appurtenances: a physical component of a utility or road system instrumental to the operation of the system.

Backfill. Replacement of excavation with suitable material compacted as specified.

Bedding. Soil or other suitable material used to support an underground facility.

Bonding. A method to help ensure that the job a contractor or utility has been hired to do is performed satisfactorily and that the state is protected against losses from theft or damage done by the utility or contractor.

CFR. Code of Federal Regulations. https://www.ecfr.gov/cgi-bin/ECFR?page=browse

Boring. Boring is the process of making a hole below the ground by drilling.

Carrier. A carrier is a pipe directly enclosing a transmitted fluid; liquid, gas or slurry.

Casing. A casing is a pipe enclosing a carrier.

Clear Zone. The clear zone is the portion of the road side within the highway right-of-way that is free of non-traversable hazards and fixed objects. The INDOT *Design Manual* is the guide for establishing the clear zone for various types of highways and operating conditions.

Conduit. A conduit is a pipe that encloses a communication or electrical line.

Depth of Cover. Depth of cover is the distance between the top of an underground facility including casing to the surface of the ground or pavement. (The INDOT design manual references depth of cover from top of pipe to bottom of pavement. The utilities should be told the depth of pavement at each conflict in order for them to understand clearances and true depth of cover.)

District. A district is one of the six administrative subdivisions of INDOT.

Distribution Point. A distribution point is a location on a main line where a connection is made to serve one or more customers.

Divided Highway. A divided highway is a highway with separated roadways for traffic in opposite directions.

Electronic Permitting System (EPS). The electronic online system used to record activity related to an INDOT permit including plan submittals, correspondence and payment activity.

FHWA. Federal Highway Administration https://www.fhwa.dot.gov/reports/utilguid/

Facility. Any privately, municipally, publicly or cooperatively owned systems for supplying: communication, power, light, heat, electricity, gas, water, pipeline, sewer, sewage disposal, drain or like services directly or indirectly to the public. Facilities do not include plant type components such as solar arrays, wind turbines and oil wells that produce commodities.

Facility relocation Any activity involving a facility that is needed for a roadway improvement project including, but not limited to, abandoning, altering, deactivating, installing, maintaining, modifying, moving, removing, or supporting.

Highway. Highway, street, or road means a public way for purposes of vehicular traffic, including the entire area within the right-of-way.

Frontage Road. A frontage road is a local street or road auxiliary to and located along side of a highway used for access control, and to provide service to adjacent areas.

Gas Line, High Pressure. A pipeline that supplies natural gas with an internal pressure greater than 60 psi.

Gas Line, Low Pressure. A pipeline that supplies natural gas with internal pressure less than or equal to 60 psi.

Gas Line, Medium Pressure. A pipeline that supplies natural gas with internal pressure less than or equal to 60 psi.

IMUTCD. Indiana Manual on Uniform Traffic Control Devices.
https://www.in.gov/dot/div/contracts/design/mutcd/2011rev3MUTCD.htm

INDOT. Indiana Department of Transportation. www.in.gov/indot

Limited Access Highway. A highway or street designed for through traffic, over, from, or to which owners or occupiers of abutting land or other persons have either no right or easement, or a limited right or easement of direct access, light, air or view because their property abuts upon the limited access facility or for any other reason. The highways or streets may be parkways from which trucks, buses, or other commercial vehicles are excluded, or freeways open to use by all customary forms of highway or street traffic.

Manhole. A manhole is an opening in an underground system where a worker(s) may enter for the purpose of working on the facilities.

Median. A median is the portion of a divided highway separating the traveled way for traffic in opposite directions.

Manual on Uniform Traffic Control Devices (Federal) https://mutcd.fhwa.dot.gov/
NESC. National Electric Safety Code. http://standards.ieee.org/about/nesc/

Notice to Proceed (NTP). Formal notification by INDOT to a utility to proceed with installation or relocation of their facilities on public right-of-way.

OSHA. Occupational Safety and Health Administration. https://www.osha.gov/
Occupancy. The presence of utility facilities within highway right-of-way.

Pavement Structure. The combination of the sub-base, base course and surface course placed on a sub-grade to support the traffic load and distribute it to the road bed.

Permit. Written formal acceptance by INDOT of the utility's plan to construct, maintain repair or remove their facilities on public right-of-way.

Pipeline. A continuous carrier used primarily for the transportation of fluids (liquid, gas or slurry) from one point to another using either gravity or pressure flow.

Plowing. Direct burial of utility lines by means of a plow type mechanism which breaks the ground, places the utility line, and closes the break in the ground in a single operation.

Private Line. Privately owned facility devoted exclusively to serve the owner of those facilities.

Right-of-Way. A general term denoting land, property, or interest therein usually in a strip, acquired for or devoted to transportation purposes.

Road. A public way for purposes of vehicular traffic, including the entire area within the right-of-way.

Roadway. The paved portion of the highway used by vehicular traffic and includes the shoulders.

Roadside. The area abutting the roadway within the right-of-way. Roadside includes areas between roadways of a divided highway.

Service Line. A facility that supplies a service to an individual customer from a main line.

Shoulder. The portion of the roadway adjacent to the traveled way for the accommodation of stopped vehicles, emergency use, and lateral support of the pavement structure.

State Highway System. Encompasses all highways under state jurisdiction including interstates, US routes, and state routes. This system includes local roads or state park roads when an improvement project is under state administration.

Structure. A functional unit including the foundation thereof for which the component parts and the method of assembly or construction were determined by the laws of structure mechanics to support predetermined loads.

Sub-grade. The prepared earth surface upon which the pavement structure and shoulders are constructed.

Traffic Control Plan. Describes the traffic control devices and other measures that will be used to promote the safe and controlled movement of vehicular traffic around the worksite and the safety of the utility work force.

Transverse Installation. Extending across or in a cross direction (not parallel).

Traveled way. That portion of the roadway for the movement of vehicles excluding shoulders and auxiliary lanes.

Trenchless Technology. A group of construction methods for underground facility installation, replacement, renovation, inspection, location, and leak detection, with minimum excavation from the ground surface.

UCDM. Utility Coordination and Design Manual (UCDM)

Utility. The owner of a facility.

Vent. A pipe to allow the dissipation of gases or vapors into the atmosphere from an underground casing.

Appendix A: Minimum Depth of Cover for Utility Lines

Minimum Depth of Cover for Utility Lines (Feet)	Under or within 5 feet of pavement or structure(1)	Not under or within 5 feet of pavement or structure	Under ditches
Liquid Petroleum Lines Encased	4.0	3.0	4.0
Liquid Petroleum Lines Not Encased	4.0	3.0	4.0
High Pressure Gas Lines Encased	4.0	3.0	4.0
High Pressure Gas Lines Not Encased	4.0	3.0	4.0
Medium & Low Pressure Gas Lines Encased	4.0	3.0	4.0
Medium & Low Pressure Gas Lines Not Encased	4.0	3.0	4.0
Water Lines(2)	4.0	3.0	4.0
Sanitary Lines	4.0	3.0	4.0
Underground Power Lines Encased	4.0	3.0	4.0
Underground Power Lines Not Encased	4.0	3.0	4.0
Underground Communication Lines Encased	4.0	3.0	4.0
Underground Communication Lines Not Encased	4.0	3.0	4.0
Notes			
(1) Minimum 2.0 ft below structure or improvement			
(2) Dependent on Ten State Standards and IDEM			

Appendix B: Requirements for Drawings of Sufficient Detail

1. Overlay the utility relocations on each INDOT plan and profile sheet and on each cross section utilizing INDOT stationing, offsets and elevations. This applies to poles, aerial and underground lateral crossings and underground facilities that are parallel to the INDOT right-of-way.
2. Label the type of utility facility such as high pressure gas, fiber optics etc.
3. Include a legend for utility facility symbols.
4. Provide a cross section detail of each duct bank and vault.
5. Overlay the utility relocations on temporary right-of-way drawings or runaround drawings such as those used for the construction of bridges, drainage structures, or for the removal of structures.
6. Show the clearances over pavement for proposed overhead crossing lines on the cross sections.
7. Label the station and offset of each utility pole.
8. Dimension each pole foundation giving depth, width, length or diameter.
9. Label each guy offset for the attached pole and depth of the anchor.
10. Label the stationing of each underground crossing.
11. Label the maximum and /or minimum elevation of each underground facility where it crosses under existing or proposed pavement or ditch. Note that the maximum elevation is to be measured from the top of the pipe and the minimum elevation is to be measured from the bottom of the pipe. If it adds clarity, you may add arrows that show the limits of the set elevations. It may be useful to add a note to the drawing stating, " from Station XXX+XX to Station YYY+YY, the top of the line will not be higher than AAA.AA," or you may state "at Station XXX+XX from 50.0 feet left to 20.0 feet right the top of the line will not be higher than AAA.AA."
12. Label the maximum or minimum elevation of each underground facility where it crosses a drainage structure or another utility.
13. Label the underground utilities as proposed, existing to remain or existing to be removed.
14. Label above and underground appurtenances such as control boxes, climate control units, vaults and hand holes and give the size of each.
15. Label poles and other above ground appurtenances as proposed, existing to remain or existing to be removed.
16. "X" out facilities to be removed from service.
17. Label the offset from the centerline or the distance from proposed right-of-way of each underground utility that is roughly parallel to the centerline especially at change points.
18. Note whether a utility facility is a transmission or distribution utility facility.
19. Note the method of installation of underground utility facilities such as bore or direct bury.
20. Note the material of underground utility facilities.
21. Note which manhole covers will need to be adjusted to grade per the work plan narrative. Note utility contact info for the adjustment of manhole covers.
22. Note which out of service pipes are to be filled with cellular grout.
23. Note that utility facilities being installed in contaminated soil will be bored and will use suitable pipe material when no provisions have made to remove the contaminated soil.
24. Provide any bore pit location and size.
25. Note where nonmetallic lines have metal tracing wires.
26. Identify pipes made with asbestos or made with an asbestos casing.
27. Identify the location of the utility facility's easements.

END OF DOCUMENT

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