CITY OF ATLANTA

DEPARTMENT OF TRANSPORTATION

Utility Manual

Utility Accommodation Policy and Standards Manual

2022

COA Approval

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Preface

The Atlanta Department of Transportation (Atlanta DOT) is charged with safely and efficiently constructing, maintaining, and operating the City's alleys, bridges, parks, paths, sidewalks, and streets for the public. The use of the City's right-of-way by utility companies is a privilege afforded by the City for the public's best interest. The Atlanta DOT Utility Manual defines the standards and procedures under which utility facilities will be permitted to occupy the City's right-of-way.

The Atlanta DOT's emphasis is to minimize the impact of utility facilities pertaining to safety, installation, maintenance, and operations within the City's right of way. It is not the Atlanta DOT's intent to create unnecessary hardship on utility companies requesting space within the City's right-of-way. The public's interest will be served best by the efficient coordination between the Atlanta DOT, CIDs, stakeholders, and utility companies regarding these defined standards and procedures, the guidance under which they are implemented, and plans for new construction of both City projects and utility facility projects.

With the continued growth of the City, utilizing maximum capacity of the City's right-of-way is critical in determining utility facility locations. Utility companies locating and operating facilities in the City's right-of-way must accept responsibility to protect the public's investment in right-of-way, streets, and structures; to maintain adequate traffic flow and public safety during installation, maintenance, and operation of their facilities; and efficient coordination to expedite project delivery to avoid delays during the preconstruction and construction phases.

The City is grateful to the Georgia Department of Transportation for the use and partial duplication of their *Utility Accommodation Policy and Standards Manual* within this Atlanta DOT Utility Manual.

The purpose of this Utility Manual is to establish consistent policies and standards for accommodating utility facilities within the City's right-of-way. If anything in this Utility Manual differs from the City Code of Ordinances or State of Georgia Law, then the Code of Ordinances and/or State of Georgia Law shall be the governing factor.

Table of Contents

Figures

1 Definitions and Terms

Whenever the following abbreviations, terms, and phrases appear in this Manual, the intent and meaning shall be as follows:

1.1 Abbreviations

AAR	American Association of Railroads
AASHTO	American Association of State Highway and Transportation Officials
ADA	Americans with Disabilities Act
ANSI	American National Standards Institute
API	American Petroleum Institute
APWA	American Public Works Association
AREMA	American Railway Engineering and Maintenance-of-Way Association
ASCE	American Society of Civil Engineers
ASTM	American Society of Testing and Materials
ATMS	Advanced Transportation Management System
AWWA	American Water Works Association
CFR	Code of Federal Regulations
CIA	Contract Item Agreement
DNR	Department of Natural Resources
DWM	Department of Watershed Management
EPD	Environmental Protection Division
ESA	Environmentally Sensitive Area
FAPG	Federal-Aid Policy Guide
FCC	Federal Communications Commission
FERC	Federal Energy Regulatory Commission
FFPR	Final Field Plan Review
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
GDOT	Georgia Department of Transportation
GSWCC	Georgia Soil and Water Conservation Commission
GUCC	Georgia Utilities Coordinating Council
GUPS	Georgia Utilities Permitting System (GDOT)
ITS	Intelligent Transportation System
LMIG	Local Maintenance & Improvement Grants
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MUTCD	Manual on Uniform Traffic Control Devices
NEC	National Electrical Code
NESC	National Electrical Safety Code
NFPA	National Fire Protection Association
NJUNS	National Joint Utilities Notification System
O.C.G.A.	Official Code of Georgia, Annotated
OSHA	Occupational Safety & Health Administration
PDP	Plan Development Process
PFA	Project Framework Agreement
PFPR	Preliminary Field Plan Review
POA	Point of Attachment

PMA	Project Management Agreement
PSC	Georgia Public Service Commission
PWOPS	Public Works online Permitting System
STB	Surface Transportation Board
SUA	Standard Utility Agreement
TCP	Traffic Control Plan
TPA	Transportation Purpose Agreement
TRB	Transportation Research Board (National Research Council)
UAS	Utility Adjustment Schedule
USC	United States Code
WTCS	Worksite Traffic Control Supervisor
WUCS	Worksite Utility Coordination Supervisor

1.2 Terms and Phrases

Access Control: The condition whereby the rights of owners or occupants of land abutting the street right-of-way, or other persons, to access, light, air, or view, in connection with a street, is controlled by the Atlanta DOT by special order.

a. **Full Road or Sidewalk Closure:** Means that a portion of the sidewalk and/or roadway is obstructed restricting public vehicular and pedestrian access. Detour route signage is typically provided with this condition.

b. **Partial Road or Sidewalk Closure:** Means that although a portion of the sidewalk and/or roadway is obstructed, limited public vehicular and/or pedestrian access is still maintained.

Abandoned Facilities: A utility facility taken out of service by the Utility but remaining physically in place. A Utility does not relinquish the ownership of an abandoned facility.

Accommodation: The installation of utility facilities along or across right-of-way with the intent that they will occupy and jointly use the right-of-way.

Active Project: A project in the design, right-of-way, or construction phase that is included in the Atlanta DOT Capital Delivery Program and will be considered active until the date of its final acceptance.

Adjustment: The required modification to an existing utility facility to eliminate a conflict with an active project where the utility facility will generally be retained in the same location.

Agreement: A legal document that details the conditions of a Utility's rights and the procedures by which reimbursements, if any, will be made for relocations and adjustments.

Application: The documentation and process by which an Applicant submits a request to the Atlanta DOT to obtain a Permit.

As-Built Plans: Certified Record Drawings by the Utility Owner/Operator which depict the actual location of a utility facility after construction.

Average Daily Traffic (ADT): The average 24-hour traffic volume for a period, usually a year.

Award: The formal acceptance by the Atlanta DOT of a bid for design or construction work.

Backfill: Replacement of soil around and over a pipe, duct line, conduit, cable, or other underground structure or facility.

Backslope: The uphill slope from the flow line of the ditch on the opposite side of the ditch from the roadway.

Bedding: The subgrade soil or specified material and its surface as prepared to support a pipe, duct line, cable, conduit, or any other underground structure or facility.

Best Management Practices (BMP's - Erosion & Sedimentation Control): A collection of structural practices and vegetative measures which, when properly designed, installed, and maintained, will provide effective erosion and sedimentation control for all rainfall events in accordance with Georgia Environmental Protection Division (EPD).

Betterments: Any upgrading of the utility facility being relocated made solely for the benefit of, and at the election of, the Utility and not attributable to the street construction.

Bond: A surety bond posted to ensure proper and complete construction and/or repair of a facility and the affected rights-of-way pursuant to a permit.

Bore: To excavate an underground cylindrical cavity for the insertion of a pipe or electrical conductor by a method other than plowing or trenching.

Buffer (State Waters): An area along the course of any State Waters to be maintained in an undisturbed and natural condition.

Buffer (Vegetation): A defined area or corridor to be maintained in a natural, landscaped, or other condition as specified.

Buried Cable: All cables, wires, conduit, pedestals, and/or other related facilities authorized in a permit for underground installation.

Business Day: A Calendar Day exclusive of Saturday, Sunday, and legal Federal and/or City holidays.

Calendar Day: Any day shown on the calendar, including weekends and holidays, beginning at 12:00 midnight.

Cap: A rigid structural element surmounting a pipe or other facility to provide protection and distribute loads.

Carrier: A pipe directly enclosing a transmitted substance such as liquid, gas, etc.; also, an electric or communication cable, wire, or line.

Casing: A larger protective pipe or concrete enclosing a carrier pipe, conduit, or duct.

CATV: Cable television.

Certified Arborist: A specialist certified by the International Society of Arboriculture in the planting and maintenance of trees.

Certified Flagger: A person providing temporary traffic control whose training and certification was obtained through a training organization that provides certified American Traffic Safety Services Association (ATSSA) or National Safety Council (NSC) programs, or from ATSSA or NSC themselves.

City: City of Atlanta

Coating: Protective material applied to or wrapped around a pipe, duct line, conduit, cable, etc.

Communication Facility: The aggregate of equipment, such as telephones, facsimile equipment, conduits, cables, fiber optic cables, and other electronic equipment, used for various modes of transmission, such as light, digital data, audio signals, image, and video signals.

Conduit: An enclosed tubular casing, often with multiple holes for the protection of wires, cables, or lines, usually jacketed and often extended from manhole to manhole.

Conflict: A conflict occurs when a utility facility requires relocation or adjustment to avoid damage or disruption or to comply with the regulations and accommodation requirements to accommodate construction, maintenance, operations, or other alterations the Atlanta DOT undertakes.

Construction Engineering: Engineering activities required on an active project to coordinate utility relocation work in accordance with the approved work plan and project schedule.

Capital Delivery Program: A listing of projects approved by the Atlanta DOT currently in one or more phases of: Preliminary Engineering, Right-of-Way Acquisition, or Construction.

Contractor: The individual, firm, corporation, or combination thereof, or governmental organization contracting with the Atlanta DOT for performance of prescribed work.

Council District (CD): A management region defined by the City of Atlanta.

Council Member (CM): The elected official who presides over the council district.

Cover (Depth): Vertical distance, from the top of pipe or pipe's protective coating, casing, duct, cable, etc. to some specified surface such as pavement, ditches, or shoulders.

Cradle: A rigid structural element below and supporting a pipe carrier or casing.

Crown Reduction or Cutting Back: The specific cutting back of a branch or leader to a lateral branch at least one-third to one-half diameter of the cut being made. Pruning designed to reduce the crown of a tree or individual branch. Sometimes this is referred to as heading back, drop crotch pruning, natural pruning, lateral pruning, or directional pruning to keep the natural symmetry of the tree on the sides as well as the top.

Damages: The actual cost that covers injury or economic loss due to documented damages resulting solely from failure on the part of the Utility to comply with requirements of the submitted and approved Work Plan under the control of the Utility.

Delay Cost: Costs incurred by the Contractor and approved by the Atlanta DOT, which are caused by, or which grow out of, the failure of the Utility to carry out and complete its work in accordance with the approved Work Plan or in a timely and reasonable manner, if a Work Plan, or revised Work Plan, was not submitted.

Designee: The individual or company to whom the Atlanta DOT delegates certain authority for the administration of the mediation process.

Direct Burial: Installing a utility underground without encasement, typically by plowing or trenching.

Distribution Line: That part of a utility facility connecting its transmission lines with its individual customers or with the service lines of the individual customers.

Drain: Appurtenance to discharge liquid contaminants from casings.

Drainage Structure: Any structure providing drainage for the roadway other than a bridge.

Driving: A small pipe with a pilot shoe can be driven through compressible soils by a steady thrust, hammering or vibrating. Pipe must be smooth and uncoated, and, hence, a casing or corrosion-resistant carrier must be used. Long drives may wander far from the desired line and grade; generally, the length of this installation shall not exceed 30 feet.

Dry Boring: A method of boring where casing or carrier pipe can be jacked through bores carved progressively ahead of the leading edge of the advancing pipe as soil is moved through the pipe, normally with an auger that has been placed inside the pipe. Limited directional change can be achieved with new advances in equipment.

Duct: An enclosed tubular casing for protecting wires, lines, or cables, often flexible or semi- rigid.

Easement: A right, other than the acquisition of title, acquired to use or control property for a designated purpose.

Effectively Destroy: To cause, allow, or permit any act that will cause a tree to die or go into a period of unnatural decline within a period of 1 year from the date of the act. Acts which may effectively destroy a tree include, but are not limited to: damage inflicted unto the root system by heavy machinery; excessive pruning; severing the leader or leaders; stubbing mature wood; changing the natural grade above the root system or around the trunk; damage intentionally inflicted on the tree permitting infection or pest infestation; application of herbicides or other chemical agents; intentional fire damage to the tree permitting infection or pest infestation; the infliction of a trunk wound that is 50% or greater of the circumference of the trunk; or the removal of sufficient canopy to cause the unnatural decline of the tree.

Emergency: A sudden or unforeseen occurrence involving a clear or imminent danger to life, health, property; or interruption of Utility services; or repairs to transportation facilities that require immediate attention.

Encasement: A structural element surrounding a pipe carrier or casing.

Encroachment: Unauthorized use of street right-of-way or easements above or below ground as for signs, fences, building, utilities, parking, storage, etc.

Environmentally Sensitive Areas (ESAs): Environmentally Sensitive Areas include, but are not limited to, wetlands, flood plains, archaeological or historic sites, areas with stability or settlement problems, areas with artesian conditions, animal/or plant communities, and landscapes or geologic formations with exemplary, unique, rare, or threatened/endangered characteristics.

Erosion Control: Practices used to minimize soil loss and the discharge of turbid runoff. Erosion control practices shall be in accordance with Local, State and Federal regulations.

Exception: Utility installations, adjustments, and relocations that are not in accordance with this Manual.

Exotic Pest Plants: Non-native, invasive plants also called noxious weeds, which are a problem in natural communities and ecosystems on public and private land. In general, these plants have the potential to disrupt the natural landscape-invading forests, glades, barrens, wetlands, and other natural areas as well as stifle agriculture production and timber growth. Examples: Kudzu (*Pueraria lobata*), Princess tree (*Paulownia tomentosa*), Privet (*Ligustrum sinense* and *vulgare)*, Mimosa (*Albizia julibrissin*), Japanese honeysuckle (*Lonicera japonica*).

Extraordinary Circumstances: Circumstances, other than normal operating conditions, which exist and make it impractical or impossible for a Utility to comply with the provisions of this section/policy. Such extraordinary circumstances may include, but shall not be limited to, hurricanes, tornadoes, floods, ice and/or snow, and acts of God.

Final Billing: A detailed summary of the actual costs incurred by the Utility, including documentation necessary to verify the amounts expended in connection with the relocation of utility facilities for a transportation project.

Flexible: A plastic, fiberglass, or metallic pipe having large ratio of diameter to wall thickness which can be deformed without undue stress.

Flowable Fill: A low strength, slurry-like fill material primarily used in below grade applications, such as utility trenches, where low strength and ease of placement are required. It is typically placed using conventional ready-mix concrete trucks.

Franchise Agreement: An Agreement used to document and preserve the existing reimbursement rights of the Utility for future projects and for modifying the Utility's right-of-way or easement right to the extent that all future installation, operation, and maintenance of the Utility's facilities within the street right of way shall be in accordance with this Manual, current edition.

Frontage Road: A street or road auxiliary to and located on the side of an expressway or freeway for service to abutting property and for control of access.

Grounded: Connected to the earth, or to some extended, conducting body which serves instead of the earth, whether the connection is intentional or accidental.

Grout: A sand-cement mortar; may be modified with fly ash.

Hand Hole: A pull box, junction box, or an access opening in an underground system which is used for the purpose of splicing or pulling cables.

Highway, Street or Road: A general term denoting a public way for the transportation of people, but primarily for vehicular travel, including the entire area within the right-of-way.

Horizontal Clearance: The lateral distance from edge of traveled way to a roadside object or feature.

Horizontal Directional Drilling: A method of drilling where a remotely controlled cutting head is pushed from an entry pit through the soil under the surface. Changes in line and grade can be made as the operation proceeds. The cutting head is tracked electronically from the surface. Conduits, cables, or casings are pulled back through the opening, sometimes following an enlarging reamer. Drilling fluids are usually used for lubrication and to support the opening until the conduit, casing, or cable is pulled into place. Hydraulic cutting heads that remove the soil by washing or jetting are not allowed.

Inspector: The Atlanta DOT's authorized representative assigned to make detailed inspection of agreement or permit performance.

Intelligent Transportation System (ITS): A system used to collect, store, process, distribute, and use data about the movement of vehicles, people, and goods to enhance safety and security, reduce traffic congestion, save energy, and in other ways improve generally the performance of the City's streets. Two subsystems of ITS are Advanced Traveler Information System (ATIS) and Advanced Transportation Management System (ATMS).

Jacket: Encasement by concrete poured around a pipe.

Jacking: Pushing a pipe horizontally under a roadway by mechanical means with or without boring.

Joint Use: The use of pole-lines, trenches, or other facilities by the Atlanta DOT, two or more Utilities, or a combination thereof.

Land-Disturbing Activity: Any activity which may result in soil erosion from water or wind and the movement of sediments into City waters or onto lands within the City, including, but not limited to, clearing, dredging, grading, excavating, transporting, and filling of land but not including agricultural practices.

Locate request: A communication between an excavator and Georgia 811 in which a request for locating utility facilities is processed.

Locates: An information gathering process, which may or may not involve a formal survey, to identify and define the position of a utility. This information is used to determine the proximity of a utility to other features to prevent conflict during construction.

Long-side Service: A service line that requires crossing of the traveled way.

Maintenance: The work required to keep an existing utility facility in good state of repair without adding to its physical makeup or changing its physical capacity.

Make-Ready/Make-Right Work: All work, as reasonably determined by the pole owner, to prepare an existing pole to receive Licensee's Attachments and to meet the NESC, or other reasonable requirements of the pole owner. This work also includes, but is not limited to, inspections, engineering, permitting and construction, but does not include the owner's routine maintenance or correcting existing violations.

Manhole: An opening to an underground system which workers or others may enter for the purpose of making installations, inspections, repairs, connections, tests, etc.

Manual: The Atlanta DOT's Utility Accommodation Standards and Procedures Manual referenced in this document as the Atlanta DOT Utility Manual.

Manual on Uniform Traffic Control Devices, Current Edition **(MUTCD):** A document produced by the National Committee on Uniform Traffic control Devices for the purposes of unifying standards applicable to different classes of roads and street systems.

Mechanized Excavating Equipment: All equipment which is powered by any motor, engine, hydraulic, or pneumatic device, and which is used for excavating.

Median: The portion of a divided street separating the traveled ways for traffic in opposite directions.

Miscellaneous Facility: The facility authorized in the permit, other than pole-line, buried cable, pipeline, or miscellaneous operations.

Miscellaneous Operations: The performance of miscellaneous operations as described in the permit.

Mitigation/Restoration: Vegetative restoration of the site to make the impact of the vegetation management activities milder or less severe. Vegetation management activities often involve forest canopy and ecosystem losses and fully require mitigation on site possible.

Natural Ground Surface: The ground surface in its original state before any grading, excavating, or filling.

Normal: Crossing at a right angle.

Oblique: Crossing at an acute angle.

Overfill: Backfill above a pipe, duct line, conduits, cables, etc.

Overhead/Subsurface Utility Engineering (SUE): According to the *ASCE Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data*, current edition, SUE is "a branch of engineering practice that involves managing certain risks associated with utility mapping at appropriate quality levels, utility coordination, utility relocation design and coordination, utility condition assessment, communication of utility data to concerned parties, utility relocation cost estimate, implementation of utility accommodation policies, and utility design."

Owner: The individual, company, government agency, etc. having ownership and responsibility for a utility facility.

Parties: The Atlanta DOT, the Utility; and the Contractor may be a party (or parties) where applicable.

Pavement Structure: The combination of subbase, base course, and surface course placed on a subgrade to support the traffic load and distribute it to the roadbed.

Permit: The legal document by which the Atlanta DOT regulates the use and/or occupancy of the right-of-way for a Utility. The term permit also may include all details, plans, special provisions, etc.

Piercing Tool: A pneumatically powered cylinder attached to an external air supply which is inserted in a pilot hole at proper depth and grade. The pneumatic hammering action of the head of the tool propels the cylinder through the soil. A wire, cable, casing, or carrier pipe is pulled back through the opening by the attached air supply line. Current equipment limits openings to about 50 mm or 2 inches in compressible soils.

Pipe: A tubular product made as a production item for sale as such. Cylinders formed from plate during the fabrication of auxiliary equipment are not pipe as defined here.

Pipeline: All pipelines, hydrants, valve boxes, manholes, conduits, casings, and/or related fixtures authorized in the permit.

Plan Development Process (PDP): The Atlanta DOT's policy document outlining the process of project development from project identification through construction award to the Contractor.

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.

Pole-line: All poles, wires, guys, anchors, and/or related fixtures authorized in the permit.

Pole transfers: Removing and re-attaching an overhead utility facility from an existing pole location to a newly installed pole location.

Preliminary Engineering (Preconstruction): Engineering activities required during the Plan Development Process of an active project that provides for all the necessary plans, documents, and any other supporting information necessary to determine utility impacts and the appropriate coordination.

Pressure: Relative internal pressure.

Prior Rights: A prior vested right whereby a utility is eligible for compensation for the relocation of utility facilities whose occupancy predates existing or proposed right-of-way.

Private Lines: Facilities that are not owned by government entities, inclusive of any substantially owned or controlled subsidiary, and are generally considered facilities which are devoted exclusively to private use and not directly or indirectly serving the public.

Project Manager (PM): The Atlanta DOT's representative, typically in a design office, in charge of a project. The Project Manager makes the day-to-day engineering decisions and is responsible for steering, coordinating, and managing a project through the Atlanta DOT's Plan Development Process. The Project Manager may or may not be the individual doing the actual design.

Pruning: The removal of plant parts, dead or alive, in a careful and systematic manner to not damage other parts and the health of the plant.

Public Utilities: Generally considered those utility facilities which directly or indirectly serve the public by conveying a product, power, or communication from the Utility to a customer and includes utility-type facilities that are owned by or dedicated to a governmental agency for its own use.

Public Works Online Permitting System (PWOPS): The City's electronic, web-based system which allows Utility Companies the ability to apply for a City permit via the internet.

Regulator Stations (sites): An appurtenance typically associated with gas pipelines for the control of pressure to a lesser pressure distribution main.

Relocation: The adjustment of utility facilities required for the construction, repair, improvement, maintenance, safe and effective operation, alteration or relocation of all or any portion of the street. It includes removing and reinstalling the facility, including necessary temporary facilities, acquiring necessary right-of-way on the new location, moving, rearranging, or changing the type of existing facilities, and taking any necessary safety and protective measures. It shall also mean constructing a replacement facility that is both functionally equivalent to the existing facility and necessary for continuous operation of the utility service, the project economy, or sequence of street construction.

Repair: The work required by failure of a utility facility, and which essentially consists of replacement in kind and replacement in place of components of the facility.

Restoration: The reconstruction of the street disrupted by the construction of, maintenance, or repair of a utility facility with the resultant effects by which the street is returned to a condition as good as or better than its original condition.

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

Right-of-Way (ROW) Permit: The document(s) by which the Atlanta DOT approves the use and occupancy of street right-of-way by utility facilities or private entity.

Rigid: A general term denoting pipes distressed by diametric deflection exceeding 1.0%. (Such as welded or bolted metallic pipe and reinforced, prestressed, or pretensioned concrete pressure pipe.)

Roadbed Structure: The portion of street that includes the pavement structure, shoulders, and front slopes.

Roadside: A general term denoting the area adjoining the outer edge of the roadway. Extensive areas between the roadways of a divided street may also be considered roadside.

Roadway: The portion of a street, including shoulders, for vehicular use. A divided street has two or more roadways.

Semi-rigid: A general term denoting tolerating diametric deflection up to 3.0%. (Such as large diameter concrete and metallic pipe).

Service Lines: Generally considered a special class of private lines. Whether the public utility facility is on or off the street right-of-way, the sole reason for a service line to be on the street right-of-way is to facilitate its connection with a public utility.

Short-side Service: A service line that does not require the crossing of the traveled way.

Shoulder: The portion of the roadway continuous with the traveled way for accommodation of stopped vehicles, for emergency use, and for lateral support of base and surface courses.

Shrub: A woody plant smaller than a tree usually having multiple permanent stems branching from or near the ground.

Side fill: Backfill alongside a pipe, duct line, conduits, cables, etc.

Site: Includes any vegetation activity (i.e., mowing, chemical control, pruning, and tree removal), on or adjacent to the right-of-way, being performed under an approved vegetation permit. This term can also be referred to as a designated location (i.e., construction project site).

Slab, floating: A slab between, but not contacting, the pipe and the pavement.

Sleeve: A short casing through a wall, pier, abutment, or similar street structure.

Special Provisions: Additions or revisions to the Atlanta DOT Utility Manual or current Atlanta DOT specifications, applicable to an individual permit, agreement, or active project.

Standard Specifications: The GDOT *Standard Specifications, Construction of Transportation Systems*, current edition, including approved amendments thereto.

Surety: The corporate body or bodies bound with and for the Utility for the full and complete performance of the provisions in the permit.

Team: Consists of, including but not limited to, Atlanta DOT Preconstruction and Construction staff, Finance Officer, Engineers, Designers, Project Manager, Design Consultants, Contractors, Utility Companies, GDOT, CIDs and stakeholders.

Telecommunication Facility: Any communication facility as defined herein.

Test Hole: The excavation made to determine, measure, and record the presence of a utility facility. The term may also be associated with the repair of certain underground facilities.

Timber Pole: A wooden pole that conforms to GDOT 925 Specifications.

Toe of Slope: The bottom of a slope of a fill or cut area, usually the lowest point of the slope.

Topping: To cut the top or sides of a tree flat or the severe reduction of branches without consideration for specifications for cutting back to keep the natural symmetry (sides as well as top) of the tree; to sever the leader or leaders or to prune a tree by the stubbing of mature wood.

Traffic Control Plan: Documentation of how a safe flow of traffic will be conducted through an area in which utility work is being performed.

Transmission Lines: The part of a utility facility connecting its main energy or material source(s) with its distribution system, to which individual customers usually are not connected.

Traveled Way: The portion of the roadway used for the movement of vehicles, exclusive of shoulders and auxiliary lanes.

Tree: Any living, self-supporting, dicotyledonous, or monocotyledonous woody perennial plant which normally grows to an overall height of no less than 10 feet in Georgia.

Tree Canopy: The upper portion of the tree consisting of limbs, branches, and leaves.

Trenched: Installed in a narrow open excavation.

Trenchless Technology: The use of directional boring, horizontal drilling, tunneling, and other techniques used in the construction or installation of underground portions of facilities to minimize disruption and damage to right-of-way.

Underpass: A passage running underneath a street or railroad.

Utility: Any privately, publicly, or cooperatively owned line, facility, or system for producing, transmitting, or distributing communications, cable television, power, electricity, light, heat, gas, oil products, water, steam, clay, waste, storm water not connected with street drainage, and other similar services and commodities, including river gages, fire and police signals, and street lighting systems, which directly or indirectly serve the public.

Utility Adjustment Schedule (UAS): The form used by a Utility to estimate the work and time required to complete relocations or adjustments as part of a street project.

Utility Driveways: Driveways for access to utility sites such as water tanks, water meters, sewer lift stations, telephone service cabinets, power substations, or gas regulator sites.

Utility Facility: The term "utility facility" shall include, but is not limited to, all poles, wires, guys, anchors, buried cable, conduit, pedestals, pipelines, hydrants, valve boxes, manholes, casings, river gages, and related fixtures authorized in the permit or agreement.

Utility Tunnel: An underpass for one or more utility lines.

Vegetation: All woody and herbaceous plants either naturally occurring or planted.

Vegetation Management: All planned work activities relating to landscape and roadside development on the right-of-way. These activities may include the removal and/or pruning of trees or other vegetation, landscape planting, construction, and any maintenance management of their related features (i.e., mowing, chemical control and pruning and tree removal).

Vent: An appurtenance to discharge gaseous contaminants from casings.

Walled: Partially encased by concrete poured alongside a carrier or casing.

Wash Factor: The product being transported or carried in a pipeline facility is of a liquid form and has the capacity to remove roadway material from around the pipeline if a leak occurred. Not to include service lines one (1) inch or less.

Work Plan: A set of documents, to be returned at the 2nd utility submission request, consisting of the utility relocation plans, cost estimate, construction details, specifications and utility adjustment schedule for each utility having impacted facilities needing relocation or adjustment to resolve conflicts with a project's construction.

2 Utility Accommodation

2.1 Authority to Regulate

2.1.1 Public Road Encroachment Prohibited

Per City Code Section 138-2: Any work conducted in, on, or along the City's right-of-way must be permitted.

2.1.2 Basis for Policies and Standards

This Manual has been established after careful review of standards and practices of other government agencies, recommendations of national associations of street, public works, and utility officials concerned with utility accommodation policies, and national standards and codes governing utilities. The provisions are further based on the prior experience of the City in its utility permit operations and the judgment of the City's staff as to adequate and proper design, construction, and operation practices. These policies and standards are in conformance with other standards under which the City operates and are considered to constitute reasonable requirements for the protection of the public interest in accommodating utilities on the right-of-way.

2.2 Authority to Reimburse

2.2.1 Utility Facilities Holding a Property Interest

For those installations where the utility is determined to hold a property interest, the measure of damages for the adjustment or relocation of the facilities is construed to be the net cost (including the cost of replacement right-of-way and proper credits for salvage) to restore the function of the utility, and payment, therefore, is made in lieu of the market value approach of determining the value of property taken. Prior approval for reimbursement is required as stated in Section 4.3 of this Manual.

2.3 Purpose of Manual

2.3.1 Policies and Standards

The purpose of this Manual is to establish and prescribe uniform policies and standards for accommodation of utilities within the City's right-of-way, to provide a basis for the planning of utility installations, and to establish procedures and controls for the issuance of permits. A permit system for the accommodation of utilities makes known the intent of the utility to carry out work within the right-of-way, stipulates the nature and extent of such right-of-way work, provides an administrative means to coordinate the use of right-of-way space and to hold the utility responsible for such authorized work, and provides a means to grant approval for the authorized work and establish records of all utility installations, certain maintenance activities, and operations within the right-of-way.

2.4 Limitations on Right-of-Way Occupancy

2.4.1 Protection of Roadway

It is the policy of the City that no utility may occupy the right-of-way unless sufficient space is available so that the mobility and safety of the public is not unduly impaired and the utility installation does not prevent the City from reasonably maintaining the streets, structures, traffic control devices and other appurtenant facilities, and if maintenance and operations of the utility do not jeopardize the street structure or the maintenance thereof.

2.4.2 Written Authorization Required

Before installing, relocating, or maintaining any utility facility which will occupy or encroach within the City's right-of-way, the utility owner will be required to obtain written authorization from the City. For all utility work, a permit will be issued. Also, for relocation or adjustment of facilities for which a written permit has not previously been issued, a permit will be required. Details and requirements for issuing permits are contained in Chapter 3 of this Manual. For relocation or adjustment of utilities on City projects where the utility is to be reimbursed by the City, a permit and an agreement will be executed and will contain the necessary authorization for the installation. Procedures for pre-construction and construction activities are described in Chapter 4 of this Manual.

2.4.3 Compliance with Federal Laws and Regulations

Where Federal and/or State funding is present in a City project, requirements for the relocation and adjustment of utility facilities and for accommodating utility facilities on right-of-way are prescribed in the United States Code (USC) and Code of Federal Regulations (CFR), Title 23, Chapter I, Subchapter G, Part 645, Subparts A and B, (cited hereafter as 23 CFR 645). It is the policy of the City to require full compliance with 23 CFR 645 and this Manual for all installations on right-of-way. Where laws, regulations, policies, procedures, provisions, or standards conflict between the USC and 23 CFR 645 and this Manual, the more restrictive shall apply.

2.4.4 Utility Driveways

Utility driveways are generally needed for access to sites containing utility facilities such as power substations, water tanks, telephone service sites, and others. The utility should apply for a driveway permit for new utility facilities prior to purchase of an easement or property.

2.4.5 Private Lines

Typically, private lines serve only the owner (e.g., farmer's waterline or an industrial plant's waste line, etc.) and not the public. Private lines may cross the right-of-way by conforming to all other applicable requirements contained in this Manual. Longitudinal installations of private lines are not permitted.

2.4.6 Service Lines

Because it is in the interest of both the customer and utility to have these connections, service lines are permitted on the right-of-way as close to perpendicular as possible with the transmission facility. Any longitudinal installations of service lines shall be reviewed by the Atlanta DOT permitting team on a case-by-case basis. See Section 5.2.2.2 for control of cover.

2.4.7 Abandoned Facilities

The utility shall notify the Atlanta DOT Utility Coordinator, in writing, of the intention to abandon its facilities in place. Such abandoned installations within the right-of-way shall remain the responsibility of the utility. The City may give reasonable notice to require the removal of abandoned utility facilities and restoration of the right-of-way, or the filling of any such facility by an approved method, when necessary, to avoid interference with the operation, maintenance, or reconstruction of a City project. Any utility facility that the utility requests to abandon shall conform to the following:

1. All underground non-metallic utility facilities to be abandoned shall be locatable using a generally accepted electro-magnetic locating method to enable pipe and cable locates.
2. Any underground utility facility approved or elected to be abandoned in place, larger than two (2) inches up to six (6) inches, inside diameter, shall be plugged at all open ends of the abandoned facilities. All facilities with an inside diameter larger than six (6) inches shall be grout filled to 100%.

2.4.7.1 Hazardous Facilities to be Abandoned

Whenever an existing utility facility contains a hazardous material and exists in the City's right-of-way and the utility determines the facility will no longer be utilized, the utility shall request for its abandonment, in writing, to the Atlanta DOT Utility Coordinator. Upon this request, the utility shall have the discretion to one of the following options:

1. Remove and dispose of the asbestos pipe in accordance with federal laws and regulations.
2. Leave the asbestos pipe in place and fill it with grout or other similar substance designed to harden within the pipe.
3. Allow the asbestos pipe to remain undisturbed in the ground and take no further action.

At the request of the City or utility, any hazardous material left in the right-of-way shall be marked and be locatable by using a generally accepted electro-magnetic locating methods. The utility shall not relinquish the ownership of said facility as stated in OCGA Section 25-9 and Section 32-6-174 and it shall be deemed abandoned and out of service.

If the utility selects either item (2) or (3) above and the abandoned facility is later determined to conflict with a City project, operation, or activity in the City's right-of-way, then the abandoned facility shall be removed by the utility in accordance with all Federal, State, and local laws and regulations. All costs, claims, or other liability associated with the owner's decision pursuant to this section shall be borne by said utility.

2.5 Policy on Relocation

2.5.1 Authority to Order Removal and Relocation

Under the provisions of City Code Section 138-23, the City reserves the right to require a utility to remove, repair, adjust or relocate any utility facilities within the right-of-way which are deemed to conflict with a City project. All Utilities utilizing the right-of-way shall follow the City's relocation procedures, as outlined in Chapter 4 of this Manual, so as not to adversely affect the project's schedule.

2.5.1.1 Compensation for Relocation

The removal, relocation, or adjustment of utilities shall be accomplished at the sole expense of the utility except as it may qualify for reimbursement under the provisions of Chapter 4 of this Manual.

2.5.2 Notifications, Failure to Begin or Complete Work

Under the provisions of City Code Section Sec. 138-23, the City shall give the utility at least sixty (60) days written notice to begin the physical removal, relocation, or adjustment of such utility facility. The procedures and time frames allowed for each phase of a project are defined in Chapter 4 of this Manual.

2.5.2.1 Work Found Necessary after Project Letting Date

In the event it becomes necessary to require the utility to remove, relocate or adjust its facilities after the project has been awarded, the utility shall provide a revised work plan within thirty (30) calendar days after becoming aware of the additional work or upon receipt of the City's written notification advising of the additional work. The utility's work plan, whether new or revised shall be reviewed by the Atlanta DOT Utility Coordinator to ensure compliance with the additional work.

2.5.3 Failure to Comply

Should the utility fail to comply to written notifications, the City may petition for an injunction to enforce the performance of the utility's duty to not unduly delay a project or as may be such under O.C.G.A. §32-6-175 and City Code Section 138-23. Furthermore, the utility may be held liable to the City or its contractors for documented damages resulting solely from utility's failure to comply with the requirements of the utility's approved work plan.

Upon notification in writing by the City that the utility is liable for damages or delay costs, the utility shall have forty-five (45) days from receipt of such letter to pay the amount of the damages or delay costs to the City.

2.5.3.1 Mediation

If the City, utility and/or contractor fail to reach an agreeable solution, the mediation process identified by GDOT can be an option for resolving the issue.

2.5.3.2 Removal by City

If the utility abandons the work on the project or is no longer able to perform its removal, relocation, or adjustment work, the City may perform said work with its forces or by employing or contracting for the necessary engineering, labor, equipment, tools, materials, supervision, or other services to accomplish the removal, relocation, and adjustment work in accordance with the utility's approved work plan.

2.5.3.3 Reimbursement by Utility

The City shall submit a bill for the full amount of the cost of removal, relocation, and adjustment work to the utility, and the amount shall become due immediately, or within such time as may be agreed upon between the utility and the City.

2.6 Policy on Traffic Protection

2.6.1 Traffic Control

The primary function of all temporary traffic control is to provide for the safe and efficient movement of vehicles, bicyclists, and pedestrians through or around temporary traffic control zones while reasonably protecting workers and equipment. A concurrent objective of the temporary traffic control is the efficient construction and maintenance of the street and utilities.

2.6.1.1 General

As a minimum, the utility shall comply with the *Manual on Uniform Traffic Control Devices* (MUTCD), current edition, for all utility work - whether written authorization is required. Copies of the current MUTCD may be obtained from the FHWA's website.

The safe passage of vehicular traffic, bicyclists, and pedestrians through and around a temporary traffic control work zone, while minimizing confusion and disruption to traffic flow, shall have priority over all other utility activities. During the construction of the facilities authorized by a permit, or during any repair, removal, or relocation thereof, or during any miscellaneous operations and maintenance activities, the utility shall always, install, maintain, and remove all certified flaggers, signs, warning lights, channelization devices, and other safety devices as described in the MUTCD and the temporary traffic control plan. All temporary traffic control devices shall be removed from the City's right-of-way as soon as practical when they are no longer needed. When work is suspended for short periods of time, temporary traffic control devices that are no longer applicable shall be removed or covered.

The City reserves the right to require additional certified flaggers, signs, warning lights, channelization devices, and other safety devices as may be necessary to properly protect, warn, and safeguard the traveling public. Continued failure of the utility to comply with the requirements of this or any other related section will result in the City issuing a written stop work order. Upon issuance of a stop work order, all utility work on the right-of-way will be suspended, except erosion control and traffic control, until corrective actions are made, and the City issues a written resume work order.

2.6.1.2 Flagger

All flaggers must have received training and a certificate upon completion of the training. This includes all work, whether by contract or by permit, such as City project construction, utility accommodations, etc. All costs for providing certified flaggers will be borne by the contractor, utility company, or any other entity granted permission to encroach upon right-of-way. Flaggers shall always have their certification with them when flagging and may be subject to inspection.

Failure to provide certified flaggers as required above shall be reason for suspending work regarding the flagger(s) until a certified flagger can be provided. Flagger training and certification can be obtained through training organizations that provide certified American Traffic Safety Services Association (ATSSA) or National Safety Council (NSC) programs, or from ATSSA or NSC themselves.

2.6.2 Restriction Against Interference with Traffic

For details concerning the City's current construction work time limitations, please refer to City Code Section 150-293.

Utility operations shall be performed at a minimal disruption to traffic and planned around peak traffic flow. This applies to installation, maintenance, and operation of utility facilities. The City reserves the right to prohibit any work which may interfere with traffic movement during times of peak traffic flow or scheduled events. All work shall be planned so that road or lane closures, or other access points, are held to a minimum. It shall be the responsibility of the utility to notify property owners when private driveways are to be affected and to provide temporary measures to maintain access during construction.

The City reserves the right to place time restrictions or moratoriums on all utility work covered under a permit when, in the opinion of the City, the continuance of the work would seriously hinder traffic flow, be needlessly disruptive, or would unnecessarily inconvenience the traveling public. The utility shall suspend and/or reschedule any work when the City deems that conditions are unfavorable for continuing the work.

Advance notification requirements to the utility to suspend work will be according to the events and the time restrictions outlined below:

Incident management / emergencies	No advance notice required
Threatening/Inclement weather	twenty-four (24) hours
Holidays, sporting events, unfavorable conditions	three (3) calendar days

The City will not consider any request for compensation for loss of productivity, rescheduling of crews, rental of equipment, or delays to the utility's schedule.

Except in emergencies, there shall be no interruption of traffic until a temporary traffic control plan has been addressed in accordance with the approved permit. For emergencies occurring during normal business hours, the utility shall notify the City's inspector, as soon as practical, but no later than two (2) hours after the onset of the emergency. For emergencies occurring during non-business hours, including weekends, the utility shall contact 9-1-1, the City's emergency operations at www.atl311.com and send an email to atldotpermits@atlantaga.gov.

2.7 Control of Soil, Erosion and Sedimentation

The utility is responsible for following and implementing the requirements of the laws regarding control of soil, erosion, and sedimentation. The utility shall apply for and obtain all permits required to perform their work.

2.8 Environmentally Sensitive Areas

No work shall occur on known or apparent right-of-way sites designated as an Environmentally Sensitive Area (ESA) until the necessary Federal, State, and Local permit(s) are acquired by the utility. The City PM is responsible for providing the most current version of the City's environmental "Green Sheet". The earliest available version that will be provided to the utilities shall be the Final Field Plan Review version. The City's PM is responsible for providing the utility the most current version prior to the start of construction as well as any updated versions as the active project progresses.

In cases where the utility encounters an ESA that was not previously known prior to the issuance of a permit, the Utility shall immediately cease operations and contact the Atlanta DOT Utility Coordinator. The Atlanta DOT Utility Coordinator will contact the City's PM to determine the disposition thereof. When directed by the Atlanta DOT Utility Coordinator, the utility shall resume operations in such a manner as to comply with the proper authorities' requirements.

3 Permitting

3.1 Qualifications

All Utilities shall meet and maintain the following qualifications to operate facilities on the City's streets and sidewalks. The information below must be current and on file with the Atlanta DOT TIM office. At a minimum, any changes must be updated on an annual basis. The utility must:

1. Satisfy the requirements of the Georgia Secretary of State and Public Service Commission (PSC) unless exempt and provide evidence of compliance.
2. Maintain a permanent office, or have resources under contract, within the State of Georgia with sufficient staff available twenty-four (24) hours a day / (7) days a week. Staff shall be authorized to repair, adjust, or relocate company facilities involved with any emergency and to perform relocation work (maintenance or construction) necessitated by a City project's construction. The utility shall provide contact information (contact name, address, and phone number) of companies performing said work.
3. Be a member of Georgia 811 and participate in the One Call System.
4. Provide proof of insurance or self-insurance. The City shall require a bond for permit work. All utilities must maintain a bond issued in the name of the City of Atlanta. See Section 3.6 of this Manual.
5. Inform the City, in detail, with the provision of documents, construction drawings, site plans and other pertinent information, showing what types of services are being provided and the type of construction activity that may be undertaking within the right-of-way.
6. Provide any other information deemed necessary by the City.

3.2 Requirements for Permits

All utilities shall be required to apply for and obtain written permission from the City prior to using or occupying any part of the City's right-of-way. A permit will be required for the following, unless excluded under Section 3.9.2 of this Manual:

1. Any new utility facility or any changes to existing facilities.
2. "Special Case Utilities" such as irrigation, drainage facilities not connected with roadway drainage and clay pipeline facilities.
3. Installing facilities adjacent to the right-of-way to require trimming on the right-of-way.
4. Installing or maintaining facilities adjacent to the right-of-way which requires operating or construction clearance within the right-of-way.
5. Excavating and boring within the roadbed structure and in the softscape area of the right-of-way.
6. Cutting of any paved surface. Recently paved roads are to be restored under extra requirements. The requirements for road restoration for pavements that are less than seven (7) years old may be found in the right-of-way manual.
7. A separate permit shall be required for each street where the installation is proposed.

3.2.1 Types of Permits

3.2.1.1 Blasting Permit

The City does not issue blasting permits while working on City's right-of-way, but, when the use of explosives is necessary, the contractor/utility shall exercise the utmost care not to endanger life or property, and shall obey all Federal, State, and other Governmental regulations applying to transportation, storage, use, and control of explosives. The contractor/utility shall be completely responsible for all damage resulting from the transportation, storage, use, and control of explosives in the work by the contractor/utility, the contractor's/utility's agents, or employees; and shall hold the City harmless from all claims of damages resulting in any manner thereof.

The contractor/utility shall notify each public utility owner having structures or other installations, above or below ground, near the site of his intention to use explosives. Such notice shall be given sufficiently in advance to enable the utility owners to take such steps as they may deem necessary to protect their property from injury. Such notice shall not relieve the contractor/utility of responsibility for all damages resulting from his blasting operations.

The contractor/utility shall notify the City's Inspector a minimum of five (5) working days prior to use of explosives.

The contractor/utility shall coordinate with the appropriate railroad company/entity if the use of explosives is required in a railroad right-of-way.

3.2.1.2 Poles – Utility, Small Cell, Lighting & Traffic Signal

For pole installations located within the City's right-of-way, the permit application will include a Special Provision requiring removal of such infrastructure within thirty (30) days following notice from the City if the permit is rescinded. Permit applications for pole installations within the right-of-way shall be accompanied with the utility's certification that neither the utility nor others will reimburse, in any manner, an adjacent property owner for concurrence with the pole location. The utility shall also certify that no person(s), organization, etc., will be granted consideration of any type for the privilege of using the pole within the right-of-way, nor shall any person(s) organizations, etc. outside the utility's organization be granted a percentage of revenue, fixed fee, or any compensation of any nature from the use of the pole permitted within the right-of-way. The issuing of small cell permits must conform to SB66, and other requirements mentioned in the City's Right-of-Way Manual.

3.2.2 Terms and Conditions of Permit

The utility, in accepting the permit, agrees to abide by its terms and conditions. The utility's proposed installation must comply with this Manual, and any other requirements that the City may stipulate. Special requirements are typically discussed with the utility during the City's review of the application. However, the utility shall review the permit for any added requirements and, if not in agreement, may withdraw the permit application by written request prior to installing the facilities covered by the permit. The utility, in accepting the permit, agrees to abide by the terms and conditions thereof. Failure to comply with terms of the permit during the installation, operation and maintenance of the utility facility may result in revocation of the permit and removal of the facility.

3.3 Permit Application and Approval Procedure

3.3.1 Where to Apply

Links to the various types of permits needed for work within the City's right-of-way can be found under the services tab on the Atlanta DOT webpage.

3.3.2 Authority to Approve

The authority to issue permits is given to the Atlanta DOT's Commissioner by City Code Section 138-65 which defines the authority to approve applications involving utility encroachments including all applicable permit forms and provisions, except that no approval shall be given until all reviews and concurrences by other offices within the City or by other agencies has been obtained.

3.3.2.1 Structures

Permit applications for any installation which will involve excavation within ten (10) feet of structures, walls or attachments to bridges shall be submitted to the Atlanta DOT Bridge Engineer for review. Upon approval of the Atlanta DOT Bridge Engineer, the permit will be forwarded to Atlanta DOT permitting team for final approval. When attachments are to be made to bridges over a railroad, the utility shall obtain written concurrence from the appropriate railroad before the City will release an approved permit.

3.3.2.2 Blasting

Applications for utility encroachment permits shall require a yes or no answer only to indicate whether blasting is required for the requested installation; otherwise, reference Section 3.2.1.1 concerning blasting requirements.

3.3.2.3 Active Projects

Permits will not be approved until adequately coordinated with the appropriate City PM.

3.3.2.4 Interstates

Any request for encroachment on Interstate highways shall be made following GDOT permitting criteria with copies of all correspondence forwarded to the Atlanta DOT TIM office.

3.3.2.5 Utility Driveways

A City utility encroachment permit does not grant driveway access approval. Any request for driveway access to a utility's facility, whether located on or off the right-of-way, will require a driveway permit from the Atlanta DOT's TIM office. It is recommended that the utility coordinate with the City before they purchase a site or obtain an easement for such facilities as power substations, water tanks, sewer lift stations, telephone service cabinets, gas regulator sites, or telecommunication service.

3.3.3 Approval of Other Agencies

Applications for utility encroachments or construction on State-owned property under control of the City should be made to the Atlanta DOT-TIM division in the same manner as for encroachments on right-of-way. After review, the application will be forwarded to the GDOT or other state agencies for coordination.

3.4 Allocation of Costs

3.4.1 Permit Fee

There shall be no charge for the issuance of the permit for franchise companies.

3.4.2 Installation Costs

The entire cost of installing, maintaining, repairing, operating, or using the pole-line, buried cable, pipeline, miscellaneous utility facility, performing miscellaneous operations and any other expense whatsoever to the facilities or operations authorized by the permit, shall be paid by the utility unless provided for within a reimbursable utility agreement as indicated in Chapter 4 of this Manual.

3.4.3 Reimbursement of City Expense

If the City is required to incur additional or unusual expense to ensure compliance with the terms of the permit due to extraordinary inspection requirements or the utility's inadequate control procedures, the utility shall reimburse the City for such additional cost of inspection and any repairs the City must make within the right-of-way. This reimbursement shall be due whether the additional or unusual expense is incurred through services by City staff or by the City's contractor.

The necessity of inspection and testing of permitted facilities will be determined by the City acting within its sole discretion. The City shall supervise all inspection and testing as deemed necessary by the City. The City may require the utility to hire an engineering firm licensed in Georgia and listed on the City's Prequalified List to perform this work at the utility's expense. All costs incurred by the City necessary for these functions will be reimbursed by the utility. At all times, operations shall be subject to City inspection.

The utility shall reimburse the City for direct costs associated with repairs to restore the right-of-way when the right-of-way has been damaged because of the utility, after due notice, to properly install, operate, or maintain its facility. The costs will be based on the actual cost incurred as supported by the City's records. The utility shall make the reimbursement within sixty (60) days after receiving notification from the City.

3.4.4 Materials within the Right-of-Way

The utility, upon notification in writing by the City, shall replace or pay for any materials removed from the right-of-way or destroyed because of the utility's operations authorized by the permit. The utility shall make the reimbursement within sixty (60) days after receiving a statement from the City.

3.5 Liability and Control

3.5.1 Damages Resulting from Installation

The utility shall indemnify and hold harmless the City, the members thereof, and all officers, employees, or agents of the City, or any political subdivision thereof, against any and all damages, claims, demands, actions, causes of action, costs, and expenses of whatsoever nature which may result from any injury to, or the death of, any persons or from the loss of, or damages to, property of any kind or nature, including the highway and highway facilities or structures, property, or equipment used or owned by the City, and facilities, which now or may hereafter, occupy the City's right-of-way, when such injury, death, loss, or damages arise out of the construction, installation, maintenance, repair, removal, relocation, operation, or use of a pole-line, buried cable, pipeline, or miscellaneous utility facility covered by the permit, or out of miscellaneous operations authorized by the permit. Any supervision or control exercised by the City shall

in no way relieve the utility of any duty or responsibility to the public, nor shall such supervision or control relieve the utility from the requirement of this Section of this Manual.

This indemnification extends to the successors and assigns of the utility. This indemnification obligation survives the termination or revocation of the permit and the dissolution or, to the extent allowed by law, the bankruptcy of the utility. The City's Office of Risk Management shall use the provided bond to make required restorations within the right-of-way. A claim will be initiated by Atlanta DOT for any needed restorations in the right-of-way.

This indemnification applies where the Indemnitees are partially responsible for the situation giving rise to the claim, provided; however, that this indemnification does not apply to the extent of the sole negligence of the Indemnitees.

This indemnification does not extend beyond the scope of the permit and the uses or work undertaken there under.

3.5.2 Injury or Damage to Utilities

The City, the members thereof, and all officers, employees, or agents of the City, shall not be held responsible or liable for injury or damage that may occur to facilities covered by the permit, or to any connection or connections thereto, by reason of highway maintenance and construction activities, because of the work performed by the City's employees.

3.5.3 Right-of-Way Restoration and Liability

The area disturbed by utility construction or maintenance, shall be kept to a minimum. The utility shall restore all right-of-way to a condition equal to or better than the existing condition. Restoration methods shall conform to the City's current Policies, Standards, and Specifications. Restoration work must be approved by the City. If necessary, unsatisfactory restoration work will be corrected by the utility or the City, and, if performed by the City, the cost billed to the utility Company.

3.5.4 Protection of Public

The utility shall have sole responsibility for the adequacy and safety of the design and engineering of its facilities, in performing the operations authorized by the permit; in addition to any methods which the City may require to properly protect the public from injury and damage on the right-of-way.

3.5.5 Inspection of Facilities

The City reserves the right to inspect the facilities during such periods as the inspector deems necessary to check compliance with the permit. The utility shall facilitate access to the facility for the inspection in accordance with the City's schedule. At such time, the utility shall make known to the City any reasonable security measures. The City's agents, employees, and independent contractors may at any time, upon twenty-four (24) hours advanced notice, and during regular business hours, conduct such inspections and physical engineering studies as the City deems appropriate upon the facilities of the utility located in, on, along, over, or under City right-of-way including, but not limited to, facilities located within manholes, vaults, valves, etc. The City, City's agents, employees, and independent contractors shall have the right to come onto the right-of-way for the purposes of surveying the right-of-way and conducting such inspections and studies as the City desires, provided that any such inspections and studies do not change in any material manner the current physical condition of the right-of-way. Should the physical condition of the right-of-way be affected by said inspections and studies, the City will return the right-of-way to its original condition at its own expense.

3.5.6 Work by utility contractors / Subcontractors

When the utility needs to hire a contractor for permitted work on the City's right-of-way, prior to beginning work, the utility contractor shall agree in writing that such work will be performed in accordance with the City's current policies, standards, and specifications, and be subject to inspection to ensure compliance. The written contract/agreement shall provide that the City be held harmless for any expenses or damages to the utility's contractor because of any City action required to correct deviations from the said policies, standards, and specifications. This agreement may be made part of continuing contracts or contract bid documents. If not included in the contract, prior to beginning work, a Special Assurances form shall be completed and submitted to Atlanta DOT permitting team or the designated inspector. When any utility's contractor develops a history of poor performance, the City reserves the right to require the utility's contractor to furnish additional performance bond, letter of credit, or letter of escrow in an amount specified by the Office of Risk Management in accordance with Section 3.6.6 of this Manual. Upon continued refusal of the utility's contractor to comply with City policies, standards, and specifications, the City may ban said utility's contractor from working within the City's right-of-way.

3.5.7 Final Permit Authority

The decision of the City shall be final and conclusive with respect to any of the conditions, terms, stipulations, and provisions of the permit.

3.5.8 Utility Stop Work Order

Situations may occur during permit performance that cause the City to order a suspension of work or work stoppage. The City is authorized to issue a utility Stop Work Order whenever a violation of the permit is occurring, or imminent danger exists. A Stop Work Order shall be in writing and shall be given to the utility involved, the utility's agent, or to the utility's contractor engaged in the activity suspected of the violation.

The utility receiving a Stop Work Order will be required to cease all utility/construction activities on the City's right-of-way. The utility shall remove all equipment and materials from the site and only perform work which shall prevent damage or deterioration of the site or for the safety of the public. This Stop Work Order will be in effect until the City, Atlanta DOT or inspector confirms that corrective measures or permit compliance has been satisfactorily addressed. Promptly after issuing the Stop Work Order, the inspector should forward a copy and discuss the Stop Work Order with the Atlanta DOT management. Failure by the utility to address the violation in a timely manner can result in permit revocation and jeopardize any future permit applications.

3.5.8.1 When to Use a Stop Work Order

One (1) of the following conditions must be present before a Stop Work Order is issued:

- Inadequate erosion control
- Inadequate traffic control
- Utility damages to other facilities
- Utility damages to the City's right-of-way
- The City views it as an imminent danger situation
- The utility is not following the approved plans
- The utility is not complying with permit conditions as regards the number of lanes or sidewalk

- Utility is not installing their facilities in accordance with the approved permit
- The City has no other immediate option to correct the situation

There shall be no retributive actions for invoking a legitimate stop work order, even if it is determined later that the actual hazard severity or potential was insufficient to justify the action. It is important that the stop work process is respected by all, and that it is not used in a deliberately disruptive way.

3.5.8.2 Return to Work

The Atlanta DOT permitting staff, shall determine when the utility may resume activities after a stop work action. This decision shall be based on the inspector's investigation and any other pertinent information. A utility return to work order must be issued in written including any preconditions or procedural modifications. By accepting the return-to-work order, the utility will once again agree to comply with and be bound by the City's policies, standards, and specifications. The utility shall comply with all general provisions and special provisions shown on the original permit or revised permit, and any special conditions listed on the return-to-work order during the installation, operation, and maintenance of said utility facilities.

3.6 Insurance and Bond

3.6.1 Requirement for Insurance

The utility or utility's contractor shall obtain and carry, for the period of time required to complete the work authorized by the permit, including the repair and restoration of the City right-of-way, and also during such future periods of time when operations are performed involving the repair, relocation, or removal of said facilities authorized by the permit, a liability and property damage insurance policy, or policies, holding the City harmless from any damages arising out of operations performed or authorized by the permit. The utility shall procure the insurance coverages identified below at the utility's own expense and shall furnish the City with an insurance certificate or a certificate from the utility's self-insurance program. The insurance certificate must provide the following:

1. Name and address of authorized agent
2. Name and address of insured
3. Name of insurance company(ies)
4. Description of policies
5. Policy number(s)
6. Policy period(s)
7. Limits of liability
8. Project Number, project name, and permit number
9. Signature of authorized agent
10. Telephone number of authorized agents
11. Mandatory thirty (30) day notice of cancellation/non-renewal.

3.6.2 Policy Provisions

Each of the insurance coverages required below shall be issued by a company licensed by the Insurance Commissioner to transact the business of insurance in the State of Georgia for the applicable line of insurance, and an insurer (or, for qualified self-insureds or group self- insureds, a specific excess insurer providing statutory limits) with a Best Policyholders Rating of "A-" or better and with a financial size rating of Class V or larger. Each such policy shall contain the following provisions:

1. The insurance company agrees that the policy shall not be canceled, changed, allowed to lapse, or allowed to expire until thirty (30) days after the City has received written notice thereof as evidenced by return receipt of registered letter or until such time as other insurance coverage providing protection equal to protection called for in this contract shall have been received, accepted, and acknowledged by the City.
2. The policy shall not be subject to invalidation as to any insured by reason of any act or omission of another insured or any of its officers, employees, agents, or other representatives (“Separation of Insureds”).
3. The utility shall notify each Insurer that the statutory requirement that the Attorney General of Georgia shall represent and defend the Indemnitees remains in full force and effect and is not waived by any policy of insurance. The Attorney General of Georgia shall represent and defend the Indemnitees. In the event of litigation, any settlement on behalf of the Indemnitees must be expressly approved by the Attorney General. The utility and its insurance carrier may retain, but are not obligated to retain, counsel to assist with the defense of the Indemnitees, in which case there will be cooperation between the Attorney General and such counsel.
4. Self-insured retention, except for qualified self-insurers or group self-insurers, in any policy shall not exceed $100,000.00.

3.6.3 Insurance Coverages

The utility shall purchase and have the City of Atlanta on the insurance certificate that the following types of insurance coverages, not inconsistent with the policies and requirements of O.C.G.A. §50-21-37, have been purchased by the utility. The minimum required coverages and liability limits are as follows:

3.6.3.1 Workers' Compensation

The utility agrees to provide Workers’ Compensation coverage in accordance with the statutory limits as established by the General Assembly of the State of Georgia. A group-insurer must submit a certificate of authority from the Insurance Commissioner approving the group insurance plan. A self-insurer must submit a certificate from the Georgia State Board of Workers’ Compensation stating the utility qualifies to pay its own workers’ compensation claims. The utility shall require all contractors using the property or performing work under this agreement to obtain an insurance certificate showing proof of Workers' Compensation and shall submit a certificate on the letterhead of the utility in the following language prior to taking possession of the property: “This is to certify that all contractors performing work on this property are covered by their own worker’s compensation insurance or are covered by the utility’s worker’s compensation insurance.”

3.6.3.2 Employers’ Liability Insurance

The utility shall also maintain Employers Liability Insurance Coverage with limits of at least (a) Bodily Injury by Accident - $1,000,000 each accident; and (b) Bodily Injury by Disease - $1,000,000 each employee. The utility shall require all contractors performing work under this

agreement to obtain an insurance certificate showing proof of Employers Liability Insurance Coverage and shall submit a certificate on the letterhead of the utility in the following language prior to taking possession of the property: “This is to certify that all contractors performing work on this property are covered by their own employer’s liability insurance or are covered by the general utility’s employer’s liability insurance.”

3.6.3.3 Commercial General Liability Insurance

The utility shall provide Commercial General Liability Insurance (1993 ISO Occurrence form or equivalent) which shall include, but need not be limited to, coverage for personal injury and advertising liability, and contractual liability. The Commercial General Liability Insurance shall provide at minimum the following limits:

Coverage Limit

1. Personal Injury and Advertising $1,000,000 per Occurrence
2. Contractual $1,000,000 per Occurrence
3. General Aggregate $2,000,000

The policy or policies must be on an "occurrence" basis and must include separate aggregate limits for each permit.

3.6.3.4 Commercial Umbrella Liability Insurance

The utility shall provide a Commercial Umbrella Liability Insurance Policy to provide excess coverage above the Commercial General Liability, the Workers’ Compensation and Employers’ Liability to satisfy the minimum limits set forth herein. The minimum amount of Umbrella limits required above shall be $2,000,000.00 per Occurrence and $4,000,000.00 Aggregate. The policy must be on an "occurrence" basis.

3.6.4 Termination of Obligation to Insure

Unless otherwise expressly provided to the contrary, the obligation to insure, as provided herein, shall not terminate so long as the permit is in effect, or until the utility shall have vacated the property, whichever is the later.

3.6.5 Failure of Insurers

The utility is responsible for any delay resulting from the failure of his insurance carriers to furnish proof of proper coverage in the prescribed form, or for the insolvency or financial failure of such insurance carriers.

3.6.6 Requirement for Performance Bond, Letter of Credit, or Letter of Escrow

The requirement of bonding is an assignment of risk issue. It can create a lot of unnecessary and costly administrative work. Therefore, the position taken by the City is no bond will be required unless there are unique circumstances, or when the installation of a utility is being performed by or for an entity that is not registered with the Secretary of State as a business or contractor. A performance bond, letter of credit, or letter of escrow payable to the City shall be required as a condition of the permit. When requested in writing by the City or during the permitting process, the utility or utility’s contractor shall furnish, for the period required for the complete installation of the facilities authorized by the permit, including the repair and restoration of the City right-of-way, and during such future periods of time when operations are performed involving the repair, relocation, or removal of said facilities authorized by the permit. The amount of the performance bond, letter of credit, or letter of escrow shall be limited to an engineering estimate of potential infrastructure damages, restoration, or replacement, and any appurtenances,

materials, or services necessary to conduct the work as specified in the Special Provisions of the permit. The performance bond, letter of credit, or letter of escrow shall be written by a surety company or bank duly qualified and licensed to do business in the State of Georgia. No work shall be commenced under the permit until the said performance bond, letter of credit, or letter of escrow has been submitted to and approved by the City.

3.7 Installation Details

3.7.1 Plans to Accompany Permit

The utility shall submit via the online platform, plan sheets which will be legible at either ledger size (11-inch x 17-inch) or letter size (8½ inch by 11 inch) with the permit application. The plans shall show in detail the location of the proposed facility or operations as described in the said permit application. The plans shall also show the size, material, pressure (design, normal, maximum), capacity, etc. of facilities to be installed; their relationship to right-of- way lines, pavement type, pavement edge, structures, roadway drainage, etc., horizontal, and vertical clearance to critical elements of the roadway, other existing utilities, proposed test hole locations, and any other information necessary to evaluate the impact to the right-of-way and the safety of the public.

Permits showing relocations for City projects or new utility installations on active projects will show all the above items on the project plans sheets, utility adjustment schedule, cost estimate (if relocated plan) and other items necessary. Special plan requirements may be requested by Atlanta DOT permitting team on any active project that is under construction. This requirement is additional to the above and may include, but is not limited to, voluntary conversion by the utility to the metric system of measurement (if City plans are in metric) and shall be shown on copies of project construction plans.

Permits requested within the limits of an inactive project currently listed in the Atlanta DOT's program will require all items previously mentioned and a no-cost letter stating that the utility facility will be relocated at no-cost to the City if found to be in conflict once the project becomes active.

When attachment to structures, such as: bridges, culverts, walls, etc. is involved, the utility shall include in the plans or drawings a complete description as to location, type, size, and details of the attachment method. In the case of attachments to bridges, the unit weights of the materials to be attached shall be provided. The application should also include detailed drawings of the bridge and the proposed attachment. As a minimum, these drawings should include a plan and elevation view along with sufficient sections to enable the Atlanta DOT bridge engineer to determine the relative position of the proposed attachments to all members of the bridge superstructure. For attaching utilities to existing bridges where no City plans exist, the utility will provide a readable set of county plans, Corps of Engineers plans, or other design drawings. If no plans exist, the utility will submit drawings showing sufficient details to adequately evaluate the permit application. Drawings shall contain a north arrow, clearly state on which side of the bridge the utility is being proposed, supply recent photographs showing the area of proposed utility attachment to the bridge, give descriptions of photographs with attention given to compass direction and drawing on photographs for clarification is advisable.

Plans shall also show whether cathodic protection is to be provided and the proposed method for insulating bridge members from electrical currents.

When required by the Atlanta DOT bridge engineer, soil borings or other soil investigations shall be made to determine the nature of the underlying material for underground installations. If borings have been taken prior to application for the permit, a copy of the boring logs shall be submitted with the permit

application. Any soil borings, or additional borings, that may be required shall be performed at the sole expense of the utility.

3.7.2 Construction and Work Requirements

3.7.2.1 Compliance with Plans

The utility's completed facility shall be in substantial conformance with the plans required by Section 3.7.1 above. When changes to an approved permit are required on construction, the utility shall request and receive approval of said changes by the Atlanta DOT permitting team before construction. The utility shall then prepare revised "as built" plans, furnish two (2) copies to the Atlanta DOT permitting team and upload the revised plans on the City's permitting portal for permit record files.

3.7.2.2 Work Standards

All work in connection with the facility authorized by the permit shall be done in a neat and workmanlike manner to the satisfaction of the City. All utility installations shall also conform with the applicable sections of this Manual and current editions of the City's policies, standards and specifications; rules and regulations of the Public Service Commission (PSC); the National Electrical Safety Code (NESC), the American Water Works Association (AWWA) standards, the recognized ANSI standard code for the type of facility to be installed, the "Americans with Disabilities Act" (Title 42 USC Chapter 126), all other applicable governmental codes and regulations, and any special provisions which may be made a part of the permit by the City.

3.7.2.3 Notice of Work Beginning

The utility shall contact the designated inspector at least twenty-four (24) hours before starting any work to discuss the work schedule, temporary traffic control plan, review for any changes from the initial permit application and for understanding by all parties prior to occupying the work site. At such time, the inspector will notify the utility of any work hour restrictions, moratoriums on traffic interruptions, or other issues that may affect the proposed work.

3.7.2.4 Notice of Work Completion

The utility shall notify the inspector when the permitted work has been completed so that an inspection can be made to ensure that provisions of the permit have been met and that all areas within the right-of-way have been adequately restored.

3.8 Traffic Protection

3.8.1 General

The utility shall be responsible for the overall selection and installation of the appropriate traffic control devices. The utility will plan and determine the scope of a temporary Traffic Control Plan (TCP). A TCP describes temporary traffic control measures to be used for facilitating road users through a work zone. The degree of detail in the TCP will depend on the complexity of the work and traffic interference. The TCP shall include, but is not limited to, defining all materials, traffic control devices, traffic diagrams, pacing of traffic, and other activities required to accomplish the work. The conditions in each work zone will vary and all factors should be considered in determining the appropriate traffic control requirements. The TCP should start in the planning phase and continue through design, construction, and restoration phases of the work.

The utility shall indicate on each permit application whether the TCP is based on the typical application drawings contained in Part 6 of the MUTCD or a detailed TCP designed solely for a particular work site or a combination of both. If the utility determines that a detailed TCP designed solely for a particular work site is needed, a copy of the detailed TCP shall be submitted with the permit application. The City reserves the right to request a detailed TCP upon review of the permit applications. The detailed TCP will be reviewed by Atlanta DOT Permitting team. This is a general review by the City and is not an approval or guarantee that the methods proposed by the utility will be suitable for the field conditions that may be encountered.

3.8.2 Interstate and Limited Access Highways

When the construction activity will have an impact with the City's right-of-way and adjacent GDOT right-of-way, the utility will provide the Atlanta DOT permitting team with copies of all GDOT permit related documentation which coincides with the utility's City permit application.

3.8.3 Worksite Traffic Control Supervisor

For any work performed in, on, along, over, or under the right-of-way, the utility shall designate a qualified and adequately trained person as the Worksite Traffic Control Supervisor (WTCS). The WTCS will have the primary responsibility and sufficient authority for assuring that the TCP and other safety aspects of the work are effectively administered. The WTCS shall be available on a twenty-four (24) hour basis to perform his duties. The WTCS's traffic control responsibilities shall have priority over all other assigned duties. If the work requires traffic control activities to be performed during both daylight and nighttime hours, it may be necessary for the utility to designate an alternate WTCS. An alternate WTCS must meet the same requirements and qualifications as the primary WTCS. The WTCS shall be responsible for administering the selection, installation, inspection, and maintenance of all traffic control devices in accordance with the TCP, project plans, specifications, special provisions and the MUTCD. The WTCS shall be available on a full-time basis to maintain traffic control devices with access to all personnel, material, and equipment necessary to respond effectively to an emergency within forty-five (45) minutes of notification of the emergency. The WTCS shall regularly perform inspections to ensure that traffic control is maintained.

3.9 Maintenance

3.9.1 General Restrictions

The utility shall keep facilities authorized by the permit in a good state of repair from the standpoint of both structure and appearance. The City may revoke the permit and order removal of any facilities that become a hazard to the public or detrimental to the right-of-way due to improper maintenance practices.

3.9.2 Maintenance Activities

The activities listed below shall be considered as incidental to operation and maintenance of the facilities installed within the City right-of-way and will not require separate written authorization; however, in such cases that require the blocking of one or more traffic lanes for a period more than one (1) hour, the City will require prior written notification. The utility must inform Atlanta DOT permitting team prior to engaging in maintenance activities. The utility shall give advance notification in accordance with Section 3.7.2.3 of this Manual.

Note (as referenced in Section 3.2 of this Manual): Activities including installation or replacement of a pole, excavation in the roadbed structure, cutting of pavement, boring beneath the pavement or introduction of new obstructions onto the right-of-way are not considered maintenance activities and will require a permit.

If any of the previously mentioned activities are considered as an emergency, reference Section 3.10 of this Manual.

3.9.2.1 Replacement of any Component Parts

The replacement of any component parts, not including poles or cables, which become necessary due to damage, deterioration, or obsolescence. Any replacement shall not affect vertical or horizontal clearances from the traveled way or shall not change the rated capacity or transmittant of the facility for which a permit was issued.

3.9.2.2 Installation of Lateral Service

The installation of lateral service connections to serve occupants of an adjacent property if they do not cross or begin in the roadbed structure and are at a right angle to the pavement (i.e., “short-side” service).

3.9.2.3 Installation of Additional Appurtenance

The installation of additional appurtenance or attachments to facilities which do not affect vertical or horizontal clearances from the traveled way or do not change the rated capacity or transmittant of the facility for which a permit was issued.

3.9.2.4 Routine Inspection

Periodic, routine inspection, testing, and preventive and routine maintenance to ensure that facilities are always retained in a serviceable condition and good state of repair.

3.10 Emergencies

3.10.1 General

During an emergency, the utility should protect the public safety by making necessary repairs to the existing facilities complying, as much as is practical, with the requirements of this Manual. The utility will assist the City in restoring damaged or closed transportation facilities by expediting the engineering, scheduling, and other activities required to meet the accelerated construction deadlines and for the protection of existing facilities which may include relocations and/or adjustments, whether temporary or permanent. No advanced permit approval is required. However, notification is required, and an emergency utility permit shall be submitted within five (5) business days after the onset of the emergency for any excavation or boring within the roadbed structure, or cutting of any paved surface, or the replacement of any poles. Upon notification of an emergency, the utility shall submit the required work plan as the accelerated schedule demands.

3.10.2 Notification

If an emergency occurs, the utility shall notify the Atlanta DOT permitting team and the franchise permit manager, to obtain an emergency permit authorization number. This verbal approval shall be gained as soon as practical, but no later than twenty-four (24) hours after the onset of the emergency. The authorization number will be provided to the utility with the completion and approval of the emergency utility permit checklist by the designated inspector. If the emergency occurs during non-business hours, including weekends, the utility shall contact Atlanta DOT franchise permit manager by email, phone, and text.

3.11 Additional Approval and Notice of Other Agencies

3.11.1 Additional Permit or License

Nothing in the permit shall be construed to grant rights or imply approval in areas not falling within the authority and jurisdiction of the City. It shall be the responsibility of the utility to determine the need for, and to obtain, such license, permit, or other form of approval that may be required by other Federal, State, local agencies, or railroads.

3.11.2 New Utility Installations on Projects Under Construction

When a project is under construction, it shall be the responsibility of the utility to furnish a utility adjustment schedule for making a new utility installation that is compatible with project's construction schedule. Written approval of such schedule by the contractor shall be furnished to the City's inspector prior to the utility beginning work. Upon request the City will assist in resolving any disputes over utility adjustment schedules or in arranging for emergency access to utility facilities within a project under construction.

3.11.3 Notice to Others

The utility shall give due notice to other utilities through the Georgia811 of any other known overhead, underground or other utility facilities at the described location which may be impacted by the installation. The information required for this notice shall be in accordance with the procedures developed by the Georgia811. Refer to O.C.G.A. §25-9-1 and §46-3-30 for more information.

The City encourages the use of NJUNS for utilities to obtain information on a variety of shared concerns, including pole transfers, new attachments to poles, and joint trenching. As per Section 3.7.1 of this Manual, it will be the responsibility of the utility to notify all other pole occupants of the permit approvals and installation completion so that the next utility can transfer their facilities.

However, on Atlanta DOT projects, NJUNS tickets will not be created for these transfers. As the project's construction progresses, the Atlanta DOT Utility Coordinator will facilitate the transfer of overhead utility facilities to the new pole location(s).

The City encourages participation in its utilities coordination meetings and local GUCC meetings in the interest of receiving advance information on Atlanta DOT projects and any other significant City project(s) which may affect other stakeholder's assets and schedules.

3.12 Effective Period of Permit

3.12.1 Term of Permit

If work begins within twelve (12) months after issuance, and unless otherwise provided in the special provisions, the permit shall be in effect for an indefinite period from and after the date approved, unless sooner revoked by mutual consent or by the City for failure of the utility to abide by the terms and conditions of the permit or by operation of law. A permit is automatically revoked when the utility for which the permit is issued ceases or abandons the operations.

3.12.2 Cancellation for Cause

Failure of the utility, within a reasonable time after written notice from the City, to comply with any of the terms and conditions of the permit shall be sufficient cause for cancellation of the permit.

3.12.3 Assignment or Transfer

The permit, and the privileges granted, and the obligations of the utility created thereby, shall be binding upon the successors and assigns of the utility. The utility shall give the City's inspector written notice of any such assignment or transfer within a reasonable time thereafter. The notice shall include the following:

- Original utility name
- New utility name
- Effective date
- Means of change (shareholder approval, sale of utility, buyout, court order) Verification of pending or completed publication of "Notice of Change of Corporate Name" pursuant to O.C.G.A. §14-2-1006.1(b)

3.12.4 Time Limit on Beginning Work

The utility shall commence installation of the utility facility covered by the permit within twelve (12) months from the date the permit is approved, otherwise the permit shall expire, and a new permit will be required.

3.12.5 Changes Subsequent to Permit Approval

The utility shall obtain City approval prior to any change of transmittant, increase in working capacity or maximum pressure and a new permit may be required.

3.12.6 Large Projects

The majority of, if not all, City projects are considered Large Projects as defined in O.C.G.A §25-9 and as stated in the PSC Rule 515-9-4. Because City projects typically last more than ninety (90) days or are more than one (1) linear mile, all utilities involved with active projects will treat them as a Large Project. It is the responsibility of the City's contractor to follow the procedures for notifying Georgia811 of a Large Project Notification. If the City's contractor decides to treat the active project as a Large Project, the utilities and any utility excavator performing utility relocation or adjustment work on behalf of the utility, as directed by the City in accordance with O.C.G.A. §32-6-171, will participate and make the necessary arrangements to locate their facilities for the contractor on an as needed basis. Any contractual relationship that may be required will be handled separately between the contractor and utility. The utilities shall not invoice the contractor or any excavator working under the contractor on City projects for their costs of any re-marking requests.

3.13 Identifications

3.13.1 Worksite Identification

To identify the work during installation, the utility shall place a card sign, or signs, on the roadway near the work before beginning the installation. The sign shall be visible from the traveled way and shall be placed not less than six (6) feet above the ground and at least one (1) per mile. The sign or signs will be furnished to the applicant by the City along with the approved permit.

3.13.2 Vehicle and Equipment Identification

The exterior sides of any vehicle and equipment used in conjunction with any activity within the right- of-way must be clearly marked or labeled, identifying the utility for which the work is being performed, as well as the contractor(s) performing the work for the utility.

3.14 Coordination of Requirements

In the case of any discrepancy between the requirements of this Manual, plans or special provisions attached to the permit, the following order of control shall govern:

1. Special Provisions (including any City approved exceptions to the Manual)
2. Manual
3. Plans accompanying permit

4 Pre-Construction and Construction

4.1 General Provisions

This chapter defines the standards and procedures for utility coordination within the Atlanta DOT's right-of-way and is organized by the usual sequence of events pertaining to utilities from a project's concept through construction close out. Although it is impractical to include all policy interpretations and instructional material, this chapter contains most information required to do the job. Separate Atlanta DOT policies, standards and specifications may supplement this chapter and provide valuable information on subjects that occur less frequently.

4.1.1 Roles and Responsibilities

To ensure that each step provided in this chapter is properly completed, the responsible party will be identified. The following summary briefly describes those responsibilities.

4.1.1.1 Atlanta DOT

The Atlanta DOT is the overall governing entity and typically:

1. Directs the standards and procedures of the Atlanta DOT Utility Manual for the efficient utility coordination on Atlanta DOT projects.
2. Has final approval authority of all utility permits and utility relocations.
3. Schedules and facilitates the quarterly Utilities Coordination Meeting.
4. Acts as the primary point of contact with utilities for identifying utility impacts on Atlanta DOT projects. Also acts as liaison between the Atlanta DOT and utility companies and serves as central resource for utility issues.
5. Establishes a project utility file to document the actions taken or recommended during the life of a project. Discussions or meetings should be summarized and recorded in a memorandum. The project file is critical for maintaining current project status or for documenting past actions.
6. Establishes timelines, deadlines for utility plan submissions.
7. Maintains a project tracking database to ensure that utility related information is kept current.
8. Prepares preliminary utility cost estimates based on possible relocations. These estimates are used to support budgeting needs for current and future fiscal years.
9. Reviews and processes all Utility Agreements.
10. Coordinate existing and proposed utility facility locations within the project limits.
11. Issues the Utility Notice to Proceed for preconstruction and construction activities.
12. On complex projects, conducts utility impact meetings to discuss the project's design and affected utility facilities. The Atlanta DOT Utility Coordinator, PM and designer should be included in these meetings as well.
13. Participates in Concept Meetings and Field Plan Review Meetings to ensure utility issues are addressed and documented.
14. Collects and reviews utility plans, specifications, cost estimates, and utility adjustment schedules from all utilities located within a project's limits.

15. Reviews supporting documentation for a utility company's prior rights claim.
16. Invites impacted utility companies to the Preconstruction Conference. At the Preconstruction Conference, provides an overview of utility or railroad items relating to the contract documents, utility or railroad agreements, work plan, and discuss any special situations.

4.1.1.2 Utility

1. Each utility is responsible for obtaining written approval prior to working on the Atlanta DOT's right-of-way. The Atlanta DOT shall provide written approval by the following methods:
    a. Approval by Permit – For any utility work on the Atlanta DOT's right-of-way, a permit must be completed and on file with the Atlanta DOT.
    b. Approval by Agreement – For utility relocations deemed to be reimbursable, the utility company and the Atlanta DOT shall agree
2. in writing on their separate responsibilities for funding and accomplishing the work. The agreement shall specify the terms and estimated costs of the utility company's reimbursable relocation work. Any agreement for reimbursement must be executed prior to a project's bidding. In addition, for projects with GDOT oversight, agreements must be executed prior to project certification deadlines; otherwise, the Atlanta DOT may be denied federal participation.
3. Each utility is responsible for preparing project specific reviews and work plans which include 1st and 2nd utility submission plans, cost estimate, construction details, specifications and UAS forms.
4. Each utility is responsible for participating in the Atlanta DOT's Quarterly Utilities Coordination Meetings.
5. During a project's construction phase, each utility is responsible for coordinating their facility relocations with the Atlanta DOT's contractor.

4.1.2 Overhead/Subsurface Utility Engineering (SUE) Investigations

4.1.2.1 General Description

The Atlanta DOT, at its discretion, administers a SUE Investigation to manage the risks associated with existing utility facilities found on Atlanta DOT projects. A SUE Investigation employs established engineering technologies that can provide precise horizontal and vertical locations of existing overhead/underground utilities to produce an accurate picture of the existing overhead/underground utility infrastructure. The techniques of SUE may be appropriate for certain Atlanta DOT projects where enhanced Quality Levels of Service for existing utility information are determined to be essential for the design analysis.

Accurate and comprehensive horizontal and vertical location data for all existing utilities found within a project's limits makes it possible to:

- Design around many utilities, thus avoiding costly and time-consuming relocations

AND/OR

- Accurately depict existing utilities on construction plans so the utility, Atlanta DOT and its contractors will have more accurate locations of existing utilities and will be able to consider any mitigation needs before any excavation takes place

The following Quality Levels of Service for existing utility information can be found on Atlanta DOT project utility plans where SUE has been employed:

- QL-D - Information derived through existing records or oral recollections. This also includes an on-site inspection to verify credibility of such records. QL-D is typically applied when it is necessary for the designer to make broad decisions about route selection, purchasing right-of-way, or producing a higher level of data.
- QL-C - Information obtained to indicate the presence and approximate horizontal location of underground utilities by surveying visible above-ground utility features, such as manholes, valve boxes, posts, etc., and by using professional judgment, correlating this information with existing utility records (QL-D). QL-C is typically recommended when preliminary design begins, and project mapping and survey control have been established.
- QL-B - Information obtained to indicate the presence and approximate horizontal location of underground utilities using geophysical prospecting techniques, including electromagnetic, magnetic, sonic, or other energy fields. The data obtained from these methods should be reproducible by surface geophysics at any point of their depiction. This level of information is used by the designer to make educated decisions on where to place storm drainage systems, footings, and foundations to avoid conflicts with existing utility facilities. QL-B is typically recommended when preliminary design begins, and project mapping and survey control have been established.
- QL-A - Information to obtain the precise horizontal and vertical position of the utility line by excavating a test hole. The test holes shall be done using vacuum excavation or comparable nondestructive equipment in a manner as to cause no damage to the utility line. This level of information provides three-dimensional (x, y, z) mapping of specific conflict areas needed for final design and utility placement decisions where drastic cost savings will be incurred for the project. QL-A is recommended after the Preliminary Field Plan Review.

4.1.2.2 Implementation of SUE

The Atlanta DOT recommends the use of SUE on most projects and its use on any project where inaccurate underground utility information would negatively impact the project in a significant way.

The proper implementation of SUE in relation to the project's development is critical to maximizing its usefulness in utility conflict avoidance. Below is a general guide as to when each Quality Level of SUE investigation should begin for each major phase of project development.

Project Development	% Design Complete	SUE Investigation Quality Level
Conceptual Design Phase	0-10%	QL-D
Preliminary Design Phase	10-30%	QL-C or QL-B
	30-60%	(1st submission)
Final Design Phase	60-70%	QL-A
	70-90%	(2nd submission, if applicable)

4.2 Pre-Construction: Utility Phase

From the concept phase through construction close out, the Atlanta DOT will coordinate with utility companies according to the standards and procedures set forth in this Manual and the Atlanta DOT's Plan

Development Process (PDP) policy, current edition. This coordination is necessary to determine the scope of utility involvement and allow reasonable notice for the utilities to plan for unavoidable relocations. The utility, Atlanta DOT Utility Coordinator and PM review the location of utilities within and near the project limits at multiple times during the development of a project to determine their proposed disposition. In cases where suitable arrangements cannot be made, a pre-design conference may be called with the utility, Atlanta DOT Utility Coordinator and PM to make special provisions for accommodating or relocating the utility's facilities.

4.2.1 Concept Phase

It is imperative that current information on the Atlanta DOT's proposed projects be provided to the utility companies so that they may plan their necessary work as far in advance as practical. Such early planning is critical to avoid unnecessary utility impacts that may delay Atlanta DOT's projects.

4.2.1.1 Quarterly Utilities Coordination Meetings

To provide information on the Atlanta DOT's proposed projects and to discuss proposed projects with utility companies on a regular basis, it is the Atlanta DOT's desire to conduct quarterly meetings. All known utilities will be invited and encouraged to attend these meetings. The Atlanta DOT Utility Coordinator will conduct these meetings. Information on the Atlanta DOT's proposed projects will be provided to the utilities to the extent possible without compromising any confidential or otherwise sensitive information. The Atlanta DOT's proposed projects will be reviewed for at least a twelve (12) month look ahead period. Information beyond that time can be provided or reviewed individually with the utilities as desired. Items that need to be addressed, as a minimum, are as follows:

- Utilities will be asked to advise the Atlanta DOT of any unusual problems anticipated for projects scheduled within the next twelve (12) months.
- Utilities will be asked to advise the Atlanta DOT and other utilities about plans for construction of new utility facilities affecting the existing or proposed right-of-way.
- Utilities are encouraged to discuss their plans for significant construction during these meetings. This can serve as an early discussion of the proposed routes to avoid possible conflicts.

The Atlanta DOT will schedule each year's quarterly meetings well in advance and notify the Utilities through electronic mail. The meetings are anticipated to held virtually through Microsoft TEAMS.

4.2.1.2 Project Concept Phase

The overall objective of the concept phase is to identify the project's required footprint to accommodate the desired improvements. This decision can typically be made after preliminary traffic and operational studies, accident analysis, determination of project deficiencies, planning requirements, environmental impacts, study of alternatives, permit requirements, social and economic considerations, utility considerations, right-of-way impacts, and other analyses have been made.

The Atlanta DOT Utility Coordinator will perform the following tasks to ensure adequate utility coordination is performed during Concept Phase.

Prior to Concept Team Meeting:

- Perform an initial utility impact survey of the project to identify visible utilities, type of facilities, and general utility location (i.e., left/right side of roadway). Identify any major utility facilities such as electric transmission lines, substations, remote terminal (RT) sites, pipelines, gas risers, etc.

- Obtain a Georgia811 design ticket to aid in the identification of utility companies/entities within the project limits
- Invite utilities to attend the project's Concept Team Meeting.

During Concept Team Meeting:

- Present all potential utility impacts known to date. Record any new impacts or project changes that may affect utilities.

After Concept Team Meeting:

- Provide a list of all utilities found to be within the project's limits including the utility company name and point of contact information.
- Provide a preliminary utility cost estimate including potentially reimbursable and non-reimbursable utility facilities.

4.2.2 Project Design Phase

The purpose of this phase is to develop the project's plan set including the utility relocations plans and, if necessary, agreements needed to resolve utility impacts on the project. Utility issues can affect budgeting, scheduling, right-of-way acquisition, environmental clearances, and project constructability. To this end, utility facility conflict identification and resolution are critical for this phase of the project's development. The utility coordination tasks required to successfully complete the project design phase typically consist of multiple plan submissions and/or utility coordination meetings between the Atlanta DOT and impacted utilities. The Atlanta DOT Utility Coordinator and the utilities are jointly responsible for ensuring that these tasks are completed properly.

The following sections detail the tasks performed during the project's Design Phase.

4.2.2.1 Utility Plan Development

Utility Plans are used as the primary tool to identify and resolve utility related conflicts. Utility information shown on the utility plans is either obtained from an Overhead/Subsurface Utility Engineering (SUE) investigation and/or the utility.

The first task required in the development of the utility plans is to identify the existing utility facilities in relation to the project's construction limits. Determining the location of these existing utilities is a cooperative effort between the Atlanta DOT and the utility.

1. 1st Utility Submission Request - The Atlanta DOT Utility Coordinator will submit preliminary project plans (30%) to the utilities for providing markups showing the locations of their existing facilities. This task is commonly referred to as the 1st Submission. The information obtained from the 1st Submission typically comes from utility records and is classified as SUE QL-D. It is the utilities responsibility to return the requested information by the due date shown in the 1st Submission request letter.

   The Atlanta DOT may perform an Overhead/Subsurface Utility Engineering (SUE) investigation to identify the existing utility facilities. The Atlanta DOT Utility Coordinator will review and submit this information to each utility found within the project's limits and request verification of the SUE identified locations.

   In some cases, the 1st Submission and 2nd Submission may be requested concurrently.

2. 2nd Utility Submission Request - The Atlanta DOT Utility Coordinator will submit final project plans (60%) and the Utility Adjustment Schedule (UAS) form to the utilities for providing work plans showing the facility relocations needed to clear any conflicts with the project's construction. This task is commonly referred to as the 2nd Submission. Typically, the 2nd Submission will include a request letter, project plans, staging plans, cross sections, drainage profiles, and preliminary bridge/wall plans. The utility will also be responsible for adding any utility facility information not shown and for preparing staging plans or showing temporary work reflecting the 2nd Submission relocations. It is the utilities responsibility to return the requested information by the due date shown in the 2nd Submission request letter.

   A work plan consisting of the marked relocation plans, cost estimate of the work required to clear the construction conflicts, utility facility specific construction details and specifications, determination of method of performance and UAS should be returned by the due date shown in the 2nd Submission request letter. The work plan should be sufficiently detailed to provide the Atlanta DOT a clear understanding of how the relocation work will be performed during the project's construction. The Atlanta DOT Utility Coordinator will review and coordinate each utility's work plan with other impacted utilities so that no foreseeable conflicts are created.

   To assist in keeping the project on schedule, the Atlanta DOT Utility Coordinator will send out a submission request reminder prior to the date shown in the request letter.

   If the project's design is revised after the 2nd Submission request, it may be necessary for the Atlanta DOT Utility Coordinator to submit a Revised 2nd Utility Submission Request to the utilities. Utilities should thoroughly review these revised plans and make any necessary changes to their 2nd Submission plans. It is the utilities responsibility to return the requested information by the due date shown in the Revised 2nd Utility Submission request letter.

   If a utility company has verified the accuracy of their facilities in the plans and has determined that no conflict is anticipated, a No Conflict letter stating such shall be returned to the Atlanta DOT Utility Coordinator by the due date shown in the request letter.

   The Atlanta DOT Utility Coordinator will review each utility company's work plan to verify construction conflicts have been adequately addressed. After this review, the Atlanta DOT's PM will be responsible for incorporating all information into the project's utility plans and special provisions.

   If a utility company does not return the requested information from the 1st and 2nd submission requests, a Failure to Respond letter will be sent and that utility company's lack of response will be accepted as the equivalent to a No Conflict letter.

3. Utility Submission Request Due Dates - It is the Atlanta DOT Utility Coordinator's responsibility to review each project and provide the utilities with a due date for each deliverable. The following timeframes will be used for determining the Utility Submission Requests due dates described above:

   - 30 to 60 business days (i.e., resurfacing, maintenance, intersections, mobility, etc.)
   - 90 to 120 business days (i.e., reconstruction, rehabilitation, bridges, etc.)

   These timeframes are subject to change based upon the project's schedule. It is the Atlanta DOT Utility Coordinator responsibility to track a project's schedule and notify the utilities if the due dates have changed.

4. Contents of Utility Plans - the Atlanta DOT's utility plans will show the approximate size, type and location of existing utility facilities and proposed facility relocations needed to clear any conflicts with the project's staging and/or construction.

As a minimum, the Utility Plans shall show the following information:

- Design Details - The location, length, size and/or capacity, type, class and pertinent operating conditions, and design features of existing, proposed, and temporary facilities, including proposed changes and disposition by appropriate annotation, symbols, legend, notes, color coding, etc.
- Erosion & Sedimentation Control Best Management Practices
- Relation to Project Features - The project number, plan scale and date, horizontal and vertical location of utility facilities in relation to the alignment, geometric features, stationing, grades, structures, proposed and existing right-of- way lines, and, where applicable, the access control lines
- Proposed Plan Notes or Special Provisions - When a utility's work causes or requires coordination with other utilities, construction staging, or restrictive work periods or conditions

4.2.2.2 Determination of Method of Performance

As part of the work plan, the utility and the Atlanta DOT will determine the responsible party for performing the necessary relocation work. This work may be done by one or a combination of the following methods:

- The utility with its own forces
- By a contractor who regularly performs similar work for the utility
- By the lowest qualified bidder after suitable advertisement by the utility
- By inclusion into the Atlanta DOT project's construction contract

4.3 Reimbursement for Utility Work

4.3.1 Conditions Governing Reimbursement

4.3.1.1 Participation in Utility Costs

Each utility or entity will be required to adjust or relocate its facilities at its own expense unless their facilities hold a property interest. The Atlanta DOT may be responsible for funding the costs of removing, adjusting, and relocating those facilities which are physically in place and in conflict with proposed construction deemed eligible for reimbursement under the reimbursement classifications identified in Section 4.3.1.2 of this Manual. The determination of reimbursable facilities will be made by the Atlanta DOT Utility Coordinator and appropriate City staff after reviewing applicable documentation provided by the utility company.

4.3.1.2 Reimbursement Classifications

Where the utility is to be reimbursed for the cost of relocating or adjusting their facilities, such relocations or adjustments will be classified within the scope of Cases I thru IX as follows:

Case I - This case applies when the utility has right of occupancy in its existing location by reason of holding a fee, an easement or other property interest. The compensable interest in the lands they occupy can be defined and supported by a deed, written easement, or by other written evidence satisfactory to the Atlanta DOT in consultation with the State Law, to establish that a compensable property interest exists.

Case II - This case applies when any utility facilities owned by a municipality, county, or authority, without regard to whether such facilities were originally installed upon the Atlanta DOT right-of-way,

where such relocation or adjustment is necessary to clear proposed work on the Atlanta DOT's project.

Case III - This case applies when any utility facilities owned by a municipality, county or authority which are installed within the right-of-way of a street or road under the jurisdiction of the same municipality or county prior to the time such street or road becomes a part of the State Highway System and which are subsequently required to be relocated or adjusted for construction on the State Highway System or will become part of the permanent State Highway System upon completion of the construction project. In submitting claims for reimbursement under Case III, it will be necessary to furnish the date when the utility was installed and the date that the road or street became a part of the permanent State Highway System.

Case IV - This case applies when it is determined to be in the public interest to install, adjust or occupy utility facilities so that the utility directly serves a transportation purpose and there will be costs to the utility(ies) that will be incurred solely for this purpose. The cost of such installation or adjustment may be reimbursed under an agreement between the Atlanta DOT and the Utility. The agreement will cover the arrangements for new or replacement utility services to highway facilities such as welcome centers, rest areas, weigh stations, Atlanta DOT offices, or to support aerial or underground, traffic control devices, traffic signals, and/or sign installations (See Section 4.6 of this Manual). When this Case is applied to Joint-Use Poles as described under Section 4.6 of this Manual, reimbursement shall be limited to the pole owner only. This Case does not cover clearances required for project conflicts.

Case V - This case applies when a Utility relocates its facility to improve the safety of the roadside under a cost sharing agreement implemented specifically to address crash statistics. Projects shall be identified and programmed based on crash data and other traffic data to indicate there will be a high probability of measurable results benefiting the traveling public. Projects will normally require at least 50% participation from the utilities toward the in-kind replacement cost. Costs including right-of-way, engineering and administration of the in-kind relocation cost may be counted toward the utility's share whether included in the agreement or a separate estimate to support the Utility's contribution to the project. The utility may upgrade its facility in conjunction with the work but any costs attributable to the upgrade shall not be counted toward the minimum share to be borne by the utility.

Case VI - This case applies when the advance installation of new utility facilities, crossing or otherwise occupying the proposed right- of-way of a future planned highway project, is either underway, or scheduled to be underway; prior to the time such right-of-way is purchased by or under control of the City, arrangements shall be made for such facilities to be installed in such a manner that will meet the requirements of the future planned highway project. Additional costs incurred by the Utility that are attributable to and in accommodation of the planned Atlanta DOT project and the proposed facilities, or portion thereof, will be outside the existing City right-of-way, shall be eligible for reimbursement. For example, such additional costs may include the cost of providing higher poles or longer spans, encasement of cable or pipes, additional length of facilities and the like which otherwise would not be required by the Utility for its own operation. However, if the Atlanta DOT has already acquired the right-of-way where the new installation is proposed, reimbursement will not apply, and the installation will require a utility permit.

Case VII - This case applies when it is determined to be in the public interest for the Atlanta DOT to pay the cost of removing, relocating, or making the adjustments to any utility facility owned by a public utility without regard to whether such facilities were originally installed upon the City right-of-way. The following prerequisites must be satisfied before this case can be employed:

1. It is determined by the Atlanta DOT that such reimbursement is necessary to expedite the staging of the project.

AND

2. The costs of the removal, relocation, or adjustment of such utility facilities can be included as part of the contract between the Atlanta DOT and the contractor for the associated project.

Case VIII - This case applies when a utility relocates their facilities based upon final plans provided by the Atlanta DOT and is required to relocate or adjust their facilities a subsequent time due to a design change that is determined to be no fault of the utility (Note: Final plans are the plans issued by the Atlanta DOT for the Utility Notice to Proceed). The eligibility of such claims for reimbursement will be considered by the Atlanta DOT on a case-by-case basis. Therefore, the additional expenses and circumstances must be documented and verifiable. Routine plan revisions are to be expected and will not normally justify reimbursement. This case applies to any utility facility, without regard to whether such facilities were originally considered reimbursable by any of the cases provided above.

Case IX - This case applies when the Atlanta DOT determines that it is in the public interest to relocate existing overhead/aerial facilities to underground. This case may be justified from the standpoint of highway safety, aesthetics, economic development, community health, reduced network outages, scenic, environmental, historical.

4.3.1.3 Non-Reimbursement Cases for Facilities in Conflict

No utility will be reimbursed for the cost of relocation or adjustment of utility facilities in conflict with project construction, maintenance, and operations where the utility facilities were initially installed within the public right-of-way, except as provided under the Cases defined above.

4.3.2 Determination of Reimbursable Eligibility

4.3.2.1 Eligibility and Supporting Data

Whenever a claim for reimbursement is made, the utility will identify the specific facilities and provide adequate supporting documentation. Upon review and verification of the documentation provided, the Atlanta DOT Utility Coordinator will notify the utility in writing of the review's findings.

4.3.2.2 Partial Eligibility

Where a portion of a utility's facility is located within City's right-of-way and a portion is located on private property, the cost of accomplishing such adjustment will be reimbursed on a percentage basis. An exception may be made when the reimbursable and non-reimbursable work can be separated for recordkeeping purposes, or the reimbursable portion is reimbursed on a lump sum basis.

4.3.2.3 Crossings

Generally, the share paid by each party will be prorated by the location of the conflict. The facilities in conflict on private property will be paid by the Atlanta DOT and the facilities in conflict on the City's right-of-way will be paid by the utility.

If additional vertical underground, overhead clearance, or other protection not serving a project purpose is required within the limits of the existing right-of-way, those such adjustment costs will not be eligible for reimbursement and will be prorated against the total estimated cost of the work needed to clear construction conflicts. For example, no costs will be eligible for reimbursement if existing poles, not in conflict with the project's construction, must be replaced with taller poles to achieve NESC clearance requirements.

4.3.2.4 Longitudinal

Where a portion of a utility's facility is located within City's right-of-way, but some portions are on private easement, the cost of adjustment may be prorated on the following basis. For underground facilities, such as pipelines or buried cable, the length of facility off the right-of-way as a proportion of the total to be adjusted, measured in linear feet, may be used. For pole line facilities, the number of poles off the existing right-of-way as a proportion of the total to be relocated may be used.

4.3.2.5 Other Methods

In all cases, the utility may propose a method of prorating costs when the reimbursable cost estimate is prepared. Such proposal will be subject to review and approval. The Atlanta DOT Utility Coordinator and appropriate City staff shall make a final determination of the appropriate ratio of costs to be borne by the utility and the Atlanta DOT. The percentage to be borne by each party shall be included in the agreement required for the utility work and executed by the City and the utility.

4.3.3 Eligible Reimbursable Costs

When the relocation or adjustment of utility facilities are determined to be reimbursable, eligible costs may include the following:

1. Preliminary engineering expenses necessary to review and prepare markups, cost estimates, agreements, and work plans prior to the construction contract awarded.
2. Construction engineering for surveying and staking of the job site, inspection, and supervision of the work. Construction engineering shall not be eligible for reimbursement when utility relocation work is included in the project's construction contract. The Atlanta DOT Utility Coordinator shall inform the utility of any construction changes that affect the utility's relocation design.
3. Costs of direct labor, materials, supplies, and equipment required to complete the relocations, minus salvage credit and betterments, required by the project.
4. Construction related overhead costs which can be shown by the records of the utility to be reasonably associated with the project and in accord with Generally Accepted Accounting Principles (GAAP), its standard accounting procedures and practice for assigning overhead expenses to other similar work which the utility undertakes. Overhead rates must be supported by internal or external audits acceptable to the Atlanta DOT. Only those overhead costs which are necessary for doing the relocation work are eligible for reimbursement.
5. Right-of-way costs for replacement right-of-way or private easements necessitated by the Atlanta DOT project.

4.3.4 Preparation of Reimbursable Cost Estimates

4.3.4.1 Cost Estimate Requirements

4.3.4.1.1 Itemized Detail, Actual Cost, or Lump Sum

Cost estimates for relocation or adjustment of utilities deemed to be eligible for reimbursement shall be prepared by the utility. The estimate shall show the work items to be performed, including preliminary engineering, construction engineering, right-of-way, and an itemization of credits for salvage and betterments in sufficient for review the Atlanta DOT Utility Coordinator.

4.3.4.1.2 Additional Requirements for Lump Sum Estimates

The utility shall provide history of costs for similar work performed on an actual cost or low bid basis as well as current quotes from contractors and suppliers. This is in addition to the itemized detail required for estimates so the Atlanta DOT may determine if the proposed lump sum payment is reasonable. The estimate shall be adjusted for differences between the example projects and the project so that the final estimate to be used for the agreement will be near the midrange of expected costs; therefore, the risk associated with the lump sum method of estimating accuracy shall be equally divided between the Atlanta DOT and utility.

4.3.4.1.3 Work by Contract

Any construction work to be included in the construction contract must be separately identified in the cost estimate.

4.3.4.2 Review by Atlanta DOT

The plans, specifications, and cost estimate package will be reviewed by the Atlanta DOT Utility Coordinator to ensure it meets the requirements referenced above and is reasonable for the scope of work proposed by the utility. After this review, the Atlanta DOT Utility Coordinator will then request for the utility to prepare the agreement.

4.3.5 Reimbursable Agreements

4.3.5.1 Agreement requirements

The utility will be responsible for agreement's preparation. The agreement will be prepared using the utility's reimbursable cost estimate package with the understanding that the basis of payment will be actual costs when the relocations are complete. The exception to this basis will be when the relocation work can be defined clearly, concisely, and accurately estimated by a lump sum. In either case, adequate supporting documentation will be included in the agreement package. The agreement must be executed by the utility prior to being forwarded to the Atlanta DOT Utility Coordinator.

4.3.5.2 Reviews and Approval

All agreements will be authorized by City Council legislation and executed by the Mayor. It will be the responsibility of the Atlanta DOT Utility Coordinator to coordinate these tasks.

4.3.5.3 GDOT / FHWA Approval

For projects with GDOT oversight, the Atlanta DOT Utility Coordinator will assist with the certification requirements to ensure the agreements are in accordance with State and Federal policy, laws, or requirements. In the event GDOT or FHWA questions any portion of the utility plans, cost estimate or agreement, the Atlanta DOT Utility Coordinator will coordinate with the appropriate GDOT, City, and Atlanta DOT staff to address those concerns.

4.3.5.4 Agreement Change Requests

If it becomes apparent that a change in plans or quantities will be required or that the actual cost of the relocation work will exceed the amount of the executed agreement, the utility is responsible for notifying the Atlanta DOT in writing prior to proceeding with that work. This will result in the need for a revised agreement and will follow the same process as referenced above.

4.4 Construction: Utility Phase

4.4.1 Construction Notifications

4.4.1.1 Preconstruction Conference

It is the practice of the Atlanta DOT to conduct a preconstruction conference on most projects with the construction contractor prior to the beginning of construction. The utility will be notified via electronic mail of this conference by the Atlanta DOT Utility Coordinator. The utility is expected to have a representative in attendance. The utility shall cooperate fully with the Atlanta DOT and the construction contractor to minimize conflict(s) with the project's construction.

The Atlanta DOT Utility Coordinator will submit the Utility Notice to Proceed after the contract is awarded and prior to the Preconstruction Conference.

4.4.1.2 Notice to Atlanta DOT by Utility

The utility shall notify the Atlanta DOT Utility Coordinator prior to beginning any construction activities, when work will be suspended, and, if construction activities are not continuous, prior to resuming work. The Atlanta DOT Utility Coordinator will document the utility's beginning and ending dates of work. Also, failure to properly relocate facilities in reference to the project's alignment and grade may result in having to move facilities a second time at the utility's expense.

4.4.1.3 Pole transfers

On Atlanta DOT projects, NJUNS tickets will not be created for these transfers. As the project's construction progresses, the Atlanta DOT Utility Coordinator will facilitate the transfer of overhead utility facilities to the new pole location(s).

4.4.2 Revised Work Plan Approval

After the project is awarded, if previously unforeseen utility relocation or adjustment work is believed to be necessary by the utility, Atlanta DOT, or the construction contractor, the utility shall provide a revised work plan within thirty (30) calendar days of the utility's discovery or the receipt of written notification from Atlanta DOT. The incorporation of this revised work plan into the overall project schedule is not intended to correct errors and omissions with the original submitted work plan. If such errors or omissions occur, it will be the utility's responsibility to adhere to the originally submitted work plan. It is the responsibility of the Atlanta DOT Utility Coordinator to review all revised work plans submitted by the utility. The Atlanta DOT Utility Coordinator will typically consult with the Atlanta DOT PM and construction contractor to determine the reasonability of such revised work plans. If, upon review, the Atlanta DOT Utility Coordinator determines a revised work plan to be unreasonable based upon the required scope of utility adjustment and/or work required to accommodate the utility, the utility will be responsible for adhering to the originally submitted work plan or submit a revised work plan acceptable to all parties.

4.5 Billing & Payment

4.5.1 Basis of Reimbursement

4.5.1.1 Reimbursement to Represent Actual Costs

It is the intent of the Atlanta DOT that utilities be reimbursed for actual costs incurred for the items, specified in executed agreement. Such costs shall be supported by adequate accounting records supplied by the utility and shall be subject to audit, and by the City, State and/or FHWA when federal funds are involved for a period of three (3) years from the date the final payment has been received by the utility.

4.5.1.2 Basis of Payment

On projects where the estimated total cost of the relocation work can be defined clearly, concisely and can be accurately estimated, a lump sum payment may be agreed to. The amount of any lump sum payment shall be based on a detailed estimate.

On all other projects, final payment shall not be made until the utility has presented an invoice covering in detail the actual costs covered under the agreement and has been verified by the Atlanta DOT. The final payment will be made conditional subject to audit findings. Once the conditional payment has been made, no further payment or refund will be made to either party except required by audit findings.

4.5.2 Final Bills

The final billing by the utility shall include a detailed summary of all expenses incurred during the relocation work. The final bill must follow the cost estimate supporting the agreement. Lump sum billings, unless provided for in the agreement, will not be acceptable as a final statement of cost. Furthermore, reimbursement cannot be made for any items not contained in the executed agreement.

4.5.3 Certification of Final Costs

Final bills, for other than lump sum agreements, shall contain a certification, by an appropriate officer of the utility (i.e., Controller, Chief Financial Officer, Engineering Manager, etc.), that all items billed reflect actual expenditures by the utility for the relocation or adjustment of its facilities. An acceptable form of certification follows:

> "This is to certify that the costs for labor, equipment, materials, supplies, contractor payments and other items included in this final bill reflect actual expenses incurred by the Company for the relocation and adjustment of its facilities under the contract agreement for which the bill is submitted and that records to support all charges are on file in the Company's offices at *(insert company address)*."

4.5.4 Audit by Atlanta DOT

Invoices, time sheets, and other source documents supporting the utility's work performed under an agreement or contract with the utility will be subject to an audit by the Atlanta DOT to determine or validate the actual eligible cost of the relocation as provided for herein.

4.5.5 Documentation of Costs

4.5.5.1 Detailed Records Required

The utility shall maintain an accounting system adequate to support and document all expenses claimed for reimbursement under the agreement.

4.5.5.2 Retention of Records

All records and accounts shall be subject to audit by the Atlanta DOT and, if applicable by State and FHWA, for a period of three (3) years from the date final payment has been received by the utility.

4.6 Joint Use of Utility Facilities

The purpose of this policy is to ensure timely project delivery by encouraging coordination as it relates to multiple facilities occupying or attaching to a utility pole(s) and to encourage the use of joint-use facilities to minimize obstructions in the City right-of-way. All other projects shall follow the prescribed procedures in the Atlanta DOT PDP.

4.6.1 Attachment to Joint-Use Poles

All parties that wish to make an attachment to these poles shall coordinate with the pole owner.

4.6.2 Pole Transfers

On Atlanta DOT projects, NJUNS tickets will not be created for these transfers. As the project's construction progresses, the Atlanta DOT Utility Coordinator will facilitate the transfer of overhead utility facilities to the new pole location(s).

All poles that require Make-Ready/Make-right Work shall meet current specifications and standards. Existing attachments in violation of the NEC, NESC, Pole Owners, as installed by the utility owners or others, shall be corrected at no cost to the City.

4.6.3 Overhead/Subsurface Utility Engineering (SUE) Projects

Existing Poles - It is desirable to use Overhead/Subsurface Utility Engineering (SUE) to determine existing utility owners/locations; POA and traffic signal interconnect information on projects with five (5) or more intersections. The request for SUE should be made by the Atlanta DOT.

The following tasks will be performed to ensure proper utility coordination is performed during the project's development.

- After the development of the project's concept, the Atlanta DOT PM will initiate a Kickoff Meeting to assess the initial utility impacts and components needed for the design of the project.
- After the completion of SUE services, the Atlanta DOT Utility Coordinator will coordinate and conduct a Utility Field Meeting. At this meeting, the participants should walk the project and visually inspect utilization of existing poles and Points of Attachments (POA's), pole type/class, utility owners, guying requirements, if the use of a self-supporting pole or a timber pole is more practical, etc. The determination of joint use should consider constructability, project construction time, utility construction time, right-of-way considerations, and the cost of Make-Ready Work.
- Corrected project plans and Utility Field Meeting minutes will be provided to the utility owners prior to the Preliminary Field Plan Review (PFPR). From this information, utility owners can identify

any discrepancies and begin to develop the relocation design(s) and/or Make-Ready worksheets, if applicable. Traffic signals that are added after the Utility Field Meeting shall be properly coordinated to reduce project delays.

- After the completion of the PFPR and prior to the Final Field Plan Review (FFPR), corrected plans with elements of the signal design, including an estimated range of proposed POA's and loading, should be provided to the utility owners to finalize the relocation design(s) and/or Make-Ready worksheets, if applicable.
- The FFPR plans will incorporate the relocation design(s) and/or Make-Ready worksheets, if applicable, from the utility companies. If any changes that affect joint-use poles are identified at FFPR, the Atlanta DOT PM and/or pole owner will be required to review the changes for acceptance.
- Non-SUE Projects/New Installations – For projects that do not utilize the services of SUE and/or have less than five (5) traffic signals, the responsible party for preliminary engineering will perform a survey to include but not limited to the Edge of Pavement (EP) and curb/gutter, and property and R/W data. Once the survey is complete, the Atlanta DOT Utility Coordinator will submit a 1st Submission request to the utilities. The existing pole POA's will be determined during the Utility Field Meeting.
- After receipt of the marked utility plans, the Atlanta DOT Utility Coordinator will coordinate and conduct a Utility Field Meeting which will follow the same process as mentioned above.

4.6.4 Construction Requirements

When joint-use poles are utilized, the Atlanta DOT Utility Coordinator, construction contractor and the utilities shall review the project for placement of mast arms, strain poles and joint-use poles for placement verification. If there is a redesign in the plans and/or changes made by the construction contractor, the utilities will have thirty (30) business days for re-engineering purposes. Make-Ready worksheets may be used in conjunction with the UAS if warranted by the scope of the

project. Field decisions shall be documented and distributed to all parties by the Atlanta DOT Utility Coordinator for verification. The utilities shall have the right to inspect the work at any time and advise the Atlanta DOT Utility Coordinator of any observed discrepancies or potential problems.

4.6.5 Maintenance

The joint-use attachee will be responsible for arranging access and coordination of maintenance work with the pole owner.

5 Controls and Standards

5.1 General Considerations

5.1.1 Location of Facilities Within the Right-of-Way

5.1.1.1 Longitudinal Installations

Longitudinal installations are to be located on uniform alignment, as near as practical, to the right-of- way line to provide a safe environment for traffic operation, minimize interference with drainage, structural integrity of the traveled way, shoulders, embankment, and preserve space for future improvements or other utility installations. Longitudinal installations are not to be located within the pavement or between the edge of pavement and the ditch or toe of front slope. Exceptions may be granted where no other practical alternative exists. For permit approval requirements, please see Chapter 3 of this Manual.

5.1.1.2 Crossings

5.1.1.2.1 Aerial Facility Right–of-Way Crossings

Normal (90 degrees) to the travel way except where impractical due to topography, existing easements, or other features. Repetitive crossings associated with generally parallel construction shall not be allowed, primarily, for the purpose of minimizing easement strips or tree clearing requirements. Exceptions with justification may be approved by the ATLDOT permitting team.

5.1.1.2.2 Aerial Facility Roadway Crossings

Should be designed to minimize the number of fixed objects, number of crossings, and/or total crossing length.

5.1.1.2.3 Underground Facilities Right-of-Way Crossings

Normal (90 degrees) to the travel way except where impractical due to topography, existing easements or other features.

5.1.1.2.4 Underground Facilities Roadway Crossings

Normal (90 degrees) to the travel way to the extent feasible and practical.

5.1.1.3 Use of Drainage Culverts

Installation of underground utility facilities within right-of-way drainage culverts shall be prohibited.

5.1.1.4 Clearances

The horizontal and vertical clearances of utility facilities within the right-of-way shall conform to the current National Electric Safety Code (NESC) and the current AASHTO Roadside Design Guide applicable for the system, except where greater clearances are required in this Manual, depending on the type of right-of-way and specific conditions for the right-of-way section involved. Above ground utility facilities are a form of roadside obstacles, and their location must be consistent with the clearances applicable to all roadside obstacles for the type of right-of-way involved.

5.1.1.5 Preservation of Safety, Visual Quality, and Maintenance Efficiency

Consideration shall be given to the measures, reflecting sound engineering principles and economic factors, necessary to preserve and protect the integrity and visual quality of the right-of-way, its maintenance efficiency, and the safety of right-of-way traffic.

5.1.2 Utility Facilities Installed Inside and Parallel to the Right–of–Way

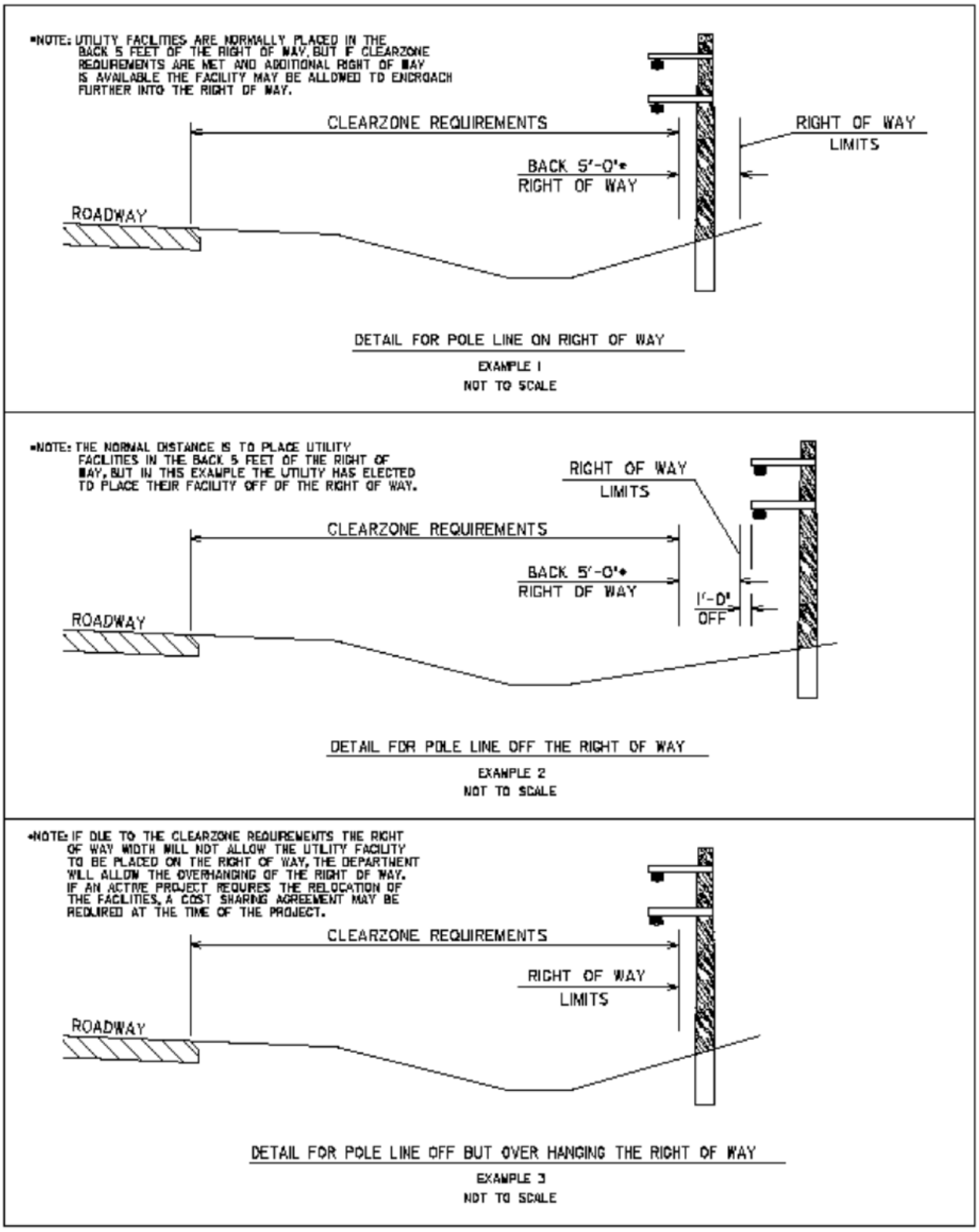
The policy of the City is to permit and encourage utilities to locate their facilities within the right-of-way in cases where they can be safely accommodated. The preferred location for the installation of utility facilities is in the back five (5) feet of the right-of-way. However, if the right-of-way width is sufficient to meet the clear zone/safety requirements and still have additional right-of-way area, the City may allow the utility facility to encroach further into the right-of-way (see Example 1 in Figure 1); thus, eliminating the need for private easements off the right- of-way.

5.1.3 Utility Facilities Installed Outside and Parallel to the Right-of–Way

The policy of the City is to permit and encourage utilities to locate their facilities within the right-of-way in cases where they can be safely accommodated. In some cases, however, such as narrow right-of-way, streets with closely abutting features, and other prevailing conditions, utility facilities may not be safely accommodated, and the utility may have to install their facilities outside of the right-of-way. In other cases, the utility may choose to install their facilities outside of the right-of-way without regards to determining whether the right-of-way is available for their use. In any case, if the utility locates their facilities outside of right-of-way, but still needs access from the right-of-way to construct (which may include clearing and trimming of trees), maintain, and operate the said facilities, they shall obtain a permit from the City. See Chapter 6 of this Manual for information regarding clearing and trimming of trees for new installations. For these installations, the following rules shall apply:

1. The City will review its identified project list and determine if the proposed installation conflicts with an identified project. The utility shall clearly show on the plans the width of right-of-way to be cleared. A permit shall be issued if it is determined that there is no conflict.
2. If it is determined that there is a conflict with an identified project, the utility should agree to install their facilities beyond the limits of that project's proposed (additional) right-of-way. Typically, no permit will be issued unless the utility demonstrates that they can install their facilities in such a manner that will avoid conflicts with the identified project.
3. If the utility chooses to install their facilities outside of the right-of-way, the entire physical structure (poles, wire, insulators, etc.) shall be located off the right-of- way (see Example 2 in Figure 1). Any facility located outside of the right-of-way may clear and trim inside the right-of-way by obtaining a permit. The utility shall clearly show on the permit plans the width of the right-of-way to be cleared. If the City needs to place a structure for transportation purposes (i.e., signal pole, overhead strain pole, bridge, wall, etc.) which may encroach upon the said utility facilities' clearance requirements, the utility shall relocate at no cost to the City.
4. If it is determined there is no conflict with an identified project and the City has insufficient right-of-way to safely accommodate the utility facility, the City will allow the overhanging of the right-of-way by the utility facility (see Example 3 in Figure 1). If the facilities conflict with an identified project, and it requires the relocation of the facilities, a percentage agreement for reimbursement to the utility may be coordinated during the preliminary engineering phase by the ATLDOT Utility Coordinator.

Figure 1. Details for Pole Lines



5.1.4 Design of Utility Facilities

5.1.4.1 Responsibility for Design

The utility company shall be responsible for the facility's design to be installed within the right-of-way or attached to a right-of-way structure. The City shall be responsible for review and approval of the utility's proposed facilities.

5.1.4.2 Governing Codes

Except where a higher degree of protection is required by the permit special provisions, by industry or governmental codes, or by laws or codes of the public authority having jurisdiction over the utility, all utility installations in, on, along, over, or under the right-of-way and utility attachments to right-of-way structures shall, as a minimum, meet the following requirements:

1. Electric power and communication facilities shall conform to the National Electrical Safety Code (NESC), current edition.
2. Water lines shall conform to current specifications of the American Water Works Association (AWWA) and the City's Standard Specifications, current edition.
3. Pressure pipelines shall conform to the current applicable sections of ASME Standards of Pressure Piping of the American Society of Mechanical Engineers (ASME), 49 CFR, Part 190, et. seq., and applicable industry codes.
4. Liquid petroleum pipelines shall conform to the current applicable sections of API RP 1102 Steel Pipelines Crossing Railroads and Highways of the American Petroleum Institute (API) for pipeline crossings under the right-of-way.
5. Any pipeline carrying hazardous materials shall conform to the rules and regulations of the U.S. Department of Transportation (USDOT) governing the transportation of such material.
6. No pipeline company shall exercise the right of eminent domain for the construction of a pipeline without first obtaining approval from the ATLDOT Commissioner that such action is authorized pursuant to the provisions of Title 22-3-83 of the O.C.G.A.
7. Utilities will be responsible for meeting the applicable OSHA regulations and all safety requirements. All work within the right-of-way must be done in a safe and lawful manner. Any excavation or trenched construction must be appropriately shored, and workers must be adequately protected.

5.1.4.3 Design Criteria for Pipelines

1. Pipelines located in casings or utility tunnels are to be designed to withstand expected internal pressure and to resist internal and external corrosion; and uncased buried pipelines are to be designed to withstand external pressure.
2. The City will review plans and specifications to reasonably determine that the roadway will not be damaged. The utility will be responsible for design to satisfy code requirements and soil pressures including those imposed by boring or jacking.
3. All utility facilities shall be installed in a manner that will make them locatable using a generally accepted electronic locating methods. Non-metallic facilities shall be installed with electrically continuous tracer material to enable pipe and cable locates.

5.1.4.4 Appearance Requirements

Utility facilities located above ground are to be of a design compatible with the scenic quality of the specific right-of-way being traversed.

5.1.4.5 Materials Requirements

All utility installations in, on, along, over, or under the right-of-way and attachments to right-of-way structures are to be of durable materials designed for long life expectancy and relatively free from routine servicing and maintenance. Asbestos cement pipe will not be permitted.

5.1.4.6 Provisions for Expansion

On new installations or adjustments of existing utility facilities, particularly those located underground or attached to bridges, provisions shall be made for known or planned expansion. They are to be planned to avoid interference with right-of-way traffic when additional overhead or underground lines are installed at a future date.

5.1.5 Preservation, Restoration, and Cleanup

5.1.5.1 Disturbed Areas

The size of the disturbed area shall be kept to a minimum. Construction methods are to be in accordance with the City's Specifications and Special Provisions as referenced in Section 3.5.3 of this Manual.

5.1.5.2 Drainage

Care must be taken in utility installations to avoid disturbing existing drainage facilities.

5.1.6 Safety and Convenience of Traffic

5.1.6.1 Traffic Control

Traffic control for utility construction and maintenance operations shall conform to Sections 2.6 and 3.8 of this Manual.

5.1.6.2 Closing of Trenches or Pits

Whenever open trenching is required for the installation or maintenance of facilities within the right-of-way, the work shall be scheduled so that not more than five hundred (500) feet of trench shall be open at any one time. More restrictive controls may be imposed where conditions warrant. Whenever possible, work shall be scheduled so that open excavations will not be left overnight. Where trenches or pits are to be left open, they shall be covered by metal plates of sufficient thickness and size to safely support traffic.

5.1.6.3 Storage of Materials

Storage of materials shall be for a temporary, sufficient duration to facilitate their incorporation into the construction which shall be expeditiously pursued.

5.1.6.4 Residential and Commercial Driveways

It shall be the responsibility of the utility to notify property owners at least seventy-two (72) hours in advance of when driveways are to be cut or blocked and to provide temporary measures to maintain access during the work. No resident or business shall be denied vehicular access to their property for any length

of time other than as determined by the City. Where two or more existing driveways are present for a business, only one existing driveway shall be closed at any time. The utility shall maintain sufficient personnel and equipment on the work site to ensure that ingress and egress are provided when and where needed. Stone or cold mix may be used temporarily. Plating may also be required on commercial driveways. The utility shall restore such driveway to a condition similar or equal to that existing before such driveway cut was done, by repairing, rebuilding, or otherwise restoring as may be directed.

5.2 Underground Utility Facilities

5.2.1 Location and Alignment

5.2.1.1 Considerations

There are several reasons for advocating crossings generally normal (at 90 degrees) to the right-of-way alignment. Oblique right-of-way crossings have several objections such as:

- increase interference with right-of-way traffic during construction
- are more likely to conflict with other right-of-way facilities
- upset distribution of live loads to the subgrade and across joints in the pavement
- leave more conspicuous patches in the pavement to be repaired if the backfill subsides

From the utility viewpoint, normal crossings may introduce bends outside the right-of-way which reduce efficiency in transmission of the utility. However, oblique alignment of new crossing adds considerably to the cost, acting as an economic control.

5.2.1.2 Controls for Locating Underground utility Facilities

The following controls are applicable to the location and alignment:

1. The angle of crossing shall be at (ninety) 90 degrees or nearly so, for facilities six (6) inches or less in diameter and for trenched installations cutting any part of the roadway. For all other crossings, the angle of crossing should be based on economic considerations of practical alternates.
2. Conditions which are generally unsuitable or undesirable for crossings are to be avoided. These include locations are:
    - in deep cuts
    - across cuts and fills on steep slopes
    - near footings of bridges and retaining walls
    - across intersections at grade or ramp terminals
    - at cross drains where flow of water, drift, or streambed load, may be obstructed
    - within basins of an underpass drained by a pump if pipeline carries a liquid or liquefied gas
    - in wet or rocky terrain where it will be difficult to provide minimum cover
3. All new or relocated longitudinal installations shall be located on uniform alignment, parallel to the roadway and as near as practical to the right-of-way.

4. All locations shall be reviewed by the City to ensure that the proposed utility installation will not severely interfere with existing or planned right-of-way facilities or with right-of-way maintenance and operation.

5.2.2 Cover (Depth)

5.2.2.1 Considerations

The critical control for cover on a crossing is the low point in the right-of-way cross section. Usually, this is the bottom of the longitudinal ditch. In establishing the depth below an unpaved ditch, allowances must be made for potential increases in ditch depth resulting from erosion, ditch maintenance operations, or the need to increase the capacity of the ditch. On longitudinal installations, the critical controls are usually the depths of lateral drainage facilities, landscaping, buried cable, bridge structures, and right-of-way maintenance operations.

5.2.2.2 Controls for Cover

1. The cover shall be established as follows:

   Utility Facilities Crossing:

   - Under pavement surface: four (4) feet
   - Under other surfaces, including unlined ditch: three (3) feet
   - Under sidewalk, paved ditch, or ditch gutter: two (2) feet

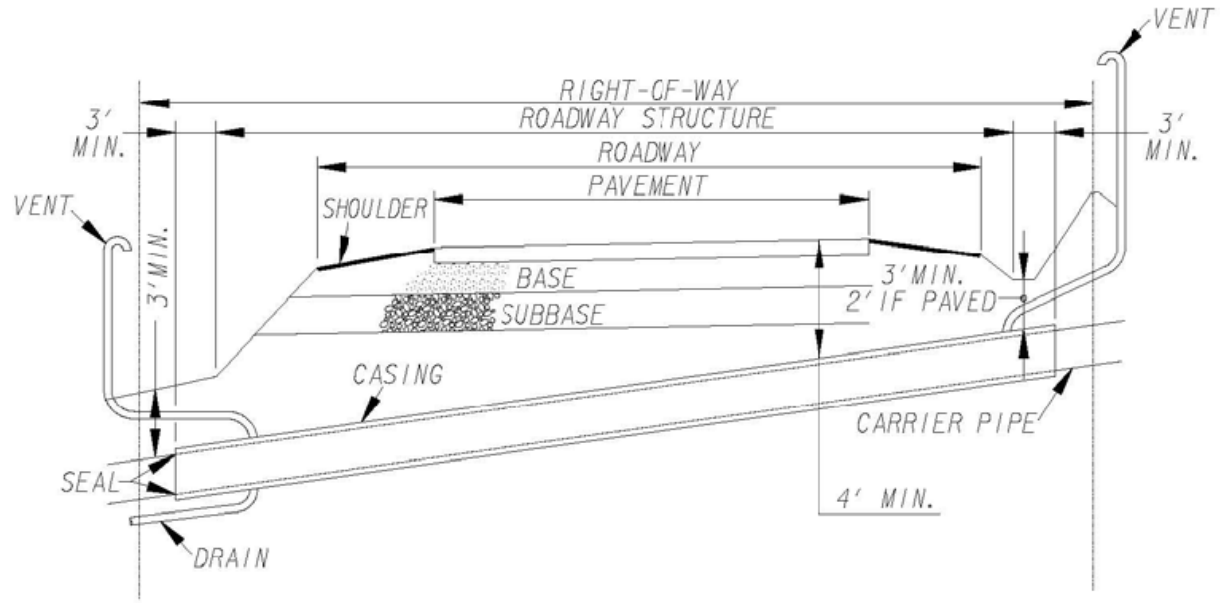
     (See Figure 2)

   Utility Facilities Longitudinal:

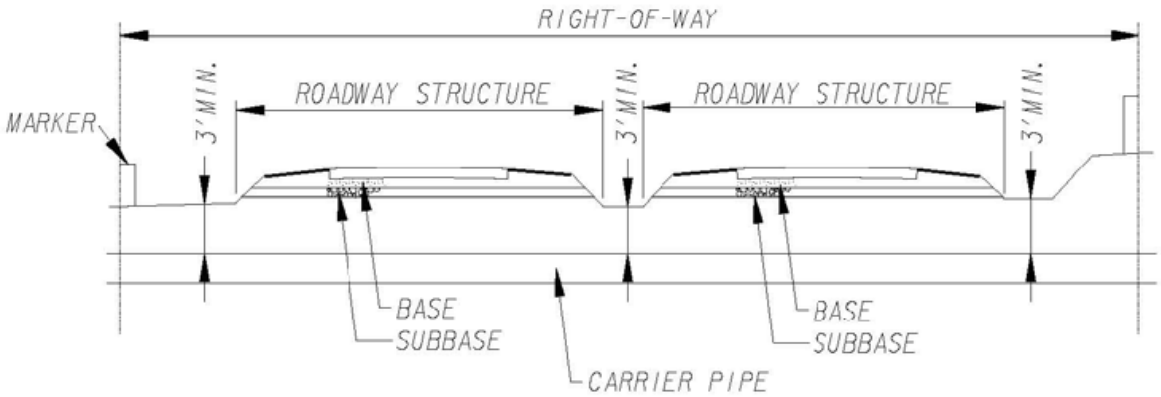
   - Under pavement surface/sidewalks: four (4) feet
   - Under unpaved surfaces: three (3) feet
   - Under paved ditch: two (2) feet
   - For trunk line communication and cable facilities direct buried in the back five (5) feet of the right-of-way: two (2) feet to top of cable, all others three (3) feet.
   - For communication and cable service line facilities only: minimum buried depths shall be based on the method of installation set by the utility facility owner. When the facility is to be installed under pavement, the installation depths shall be as listed above.

2. For flexible pipe installations under pavement, the minimum cover shall be four (4) feet or the outside diameter of pipe, whichever is greater.
3. Where less-than-minimum cover is essential to avoid conflicts, the top of pipe or other facility must not project into the pavement subbase, and shall be protected with a casing, capping or other method acceptable to the City.

Figure 2. Depth of Bury



(a) ENCASED CROSSING



(b) UNCASED CROSSING

5.2.3 Encasement

5.2.3.1 Considerations

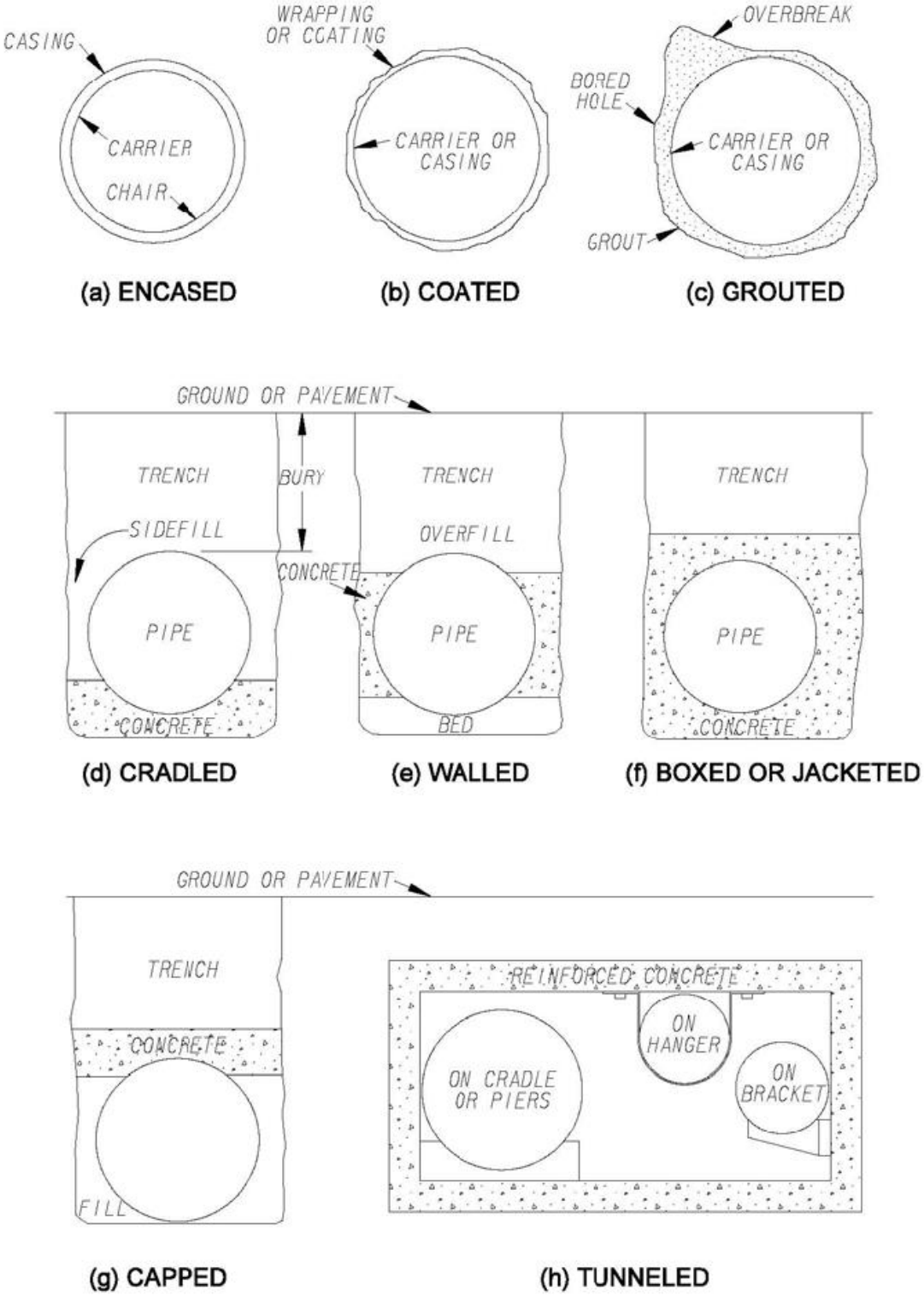
Encasement may include complete or partial enclosures designed to protect the carrier, lighten its burden, facilitate its insertion and withdrawal, or guarantee integrity of the earth structure. (See Figure 3).

5.2.3.2 Controls for Encasement

The following controls are applicable for providing encasement of utility crossings of the right-of-way:

1. When an encasement is used and designed as a pressure vessel, the encasement pipe will have strength equal to or exceeding the carrier pipe. Where the casing is not a pressure vessel, the casing pipe shall be capable of supporting a minimum external load of 2200 PSF at forty-eight (48) inches, minimum depth, and per other requirements found in this Manual or those of a Railroad operating a rail corridor if more stringent.
2. All facilities greater than four (4) inches in outside diameter and crossing under the right-of-way carrying hazardous (flammable, corrosive, expansive, energized, and/or unstable) materials under pressure or having a wash factor shall be cased. Casing shall extend a minimum of ten (10) feet beyond the edge of pavement or beyond toe of slope or ditch line, whichever is greater. In an area with curb, the casing must extend a minimum of three (3) feet beyond the back of the curb. The extension of encasements may be required by the City in some cases to allow for future identified projects.
3. Encasement may be required for any facility located with less than minimum clearances or near bridge footings or other right-of-way structures or other elements, such as high voltage power lines, flood channels, and subsiding ground.
4. Casing shall be sealed at the ends to prevent debris and moisture from entering the annular space between the casing and carrier pipe.
5. Sag pipes (inverted siphons) should be avoided whenever there is the possibility of sedimentation collecting in the sag. Where use of sag pipe is unavoidable, provisions for draining the sag shall be required.

Figure 3. Types of Encasements



5.2.3.3 Controls for Uncased Carriers

For conditions not outlined in Section 5.2.3.2 of this Manual, crossings of the right-of-way may be installed without encasement. An uncased carrier crossing a right-of-way becomes an integral part of the earth structure supporting the pavement. Just as for a culvert, the City must be assured of the adequacy of the structural design. This design must consider the complication of internal pressure and the nature of the transmittant. Controls for uncased carriers are to be designed to withstand all the following load combinations:

1. Earth and live load
2. Internal pressure
3. Earth, live load, and internal pressure

AND

4. Earth and live load plus alternations of full and zero internal pressure. For near grade summits of liquid carriers, the "zero internal pressure" used in design shall be taken as absolute, that is, under vacuum.

Such installations shall include a higher factor of safety in the design, construction and testing than would normally be required for cased construction.

Uncased crossings of pipelines transmitting natural gas may be permitted, provided such pipelines conform to 49 CFR, Part 192, or Part 195, as applicable.

5.2.4 Controls for Hazardous Transmittants

Hazardous transmittants are those which are flammable, corrosive, expansive, energized, and/or unstable. Controls for hazardous transmittants follow:

5.2.4.1 Cathodic Protection

Cathodic protection shall be provided on all new installations of metallic pipelines carrying hazardous transmittants. Controls for cathodic protection are as follows:

1. Any cathodic protection anode bed or deep anode well shall not be placed within twenty (20) feet of any structure or culvert.
2. Shallow anode bed types exceeding forty-eight (48) inches in width shall not be permitted in the right of way. All others must have a depth of coverage of at least thirty-six (36) inches. Deep well anode beds of up to sixty (60) inches in diameter are acceptable. Rectifier and meter loop poles shall be placed at or near the right of way line.
3. Any cathodic protection anode beds, deep anode wells, rectifiers, and/or meter loop poles located in the right of way line shall be marked as per Sections 5.2.4.3 and 5.2.5.3 as applicable.
4. See Section 5.7.2 for additional information concerning cathodic protection around bridge structures.

5.2.4.2 Encasement

For encasement requirements, see Section 5.2.3 of this Manual.

5.2.4.3 Markers

Markers shall be required for pipelines carrying hazardous transmittants in accordance with 49 CFR, Part 190, et. seq.

5.2.5 Controls for Appurtenances

5.2.5.1 Vents

Vents are appurtenances by which fluids between carrier and casing may be inspected, sampled, exhausted, or evacuated. These fluids may be leakage from the carrier within the casing or the soil without, or atmospheric vapor and condensate, or decomposition products of pipes and coatings. Liquid or heavy gases can be vented by gravity drains; light gases are exhausted through risers or standpipes projecting above the ground surface. Vent standpipes shall be located and constructed so as not to interfere with maintenance or operation of the right-of-way nor be concealed by vegetation; preferably they should stand on a fence or right-of-way line.

5.2.5.2 Drains

Where drains are necessary for casings, vaults, or other facilities, they shall be shown on the permit drawings. Drains may outfall into roadside ditches or natural water courses at locations approved by the City. Such outfalls shall not be used as a waste way for purging the carrier unless specifically authorized by permit.

5.2.5.3 Markers

If markers are used, the location and emergency information shall be marked conspicuously for all underground facilities. Markers may be signs on vents or on special posts at the fence or the right-of-way line. They should be provided at one end of a normal crossing, at both ends of an oblique crossing, and should not be in close vicinity to visible and obvious above ground utility facilities of the same type. Information on markers shall include pipeline identification, owner of pipeline and location of local office and emergency telephone number, including area code to contact.

5.2.5.4 Manholes, Vaults, and Hand Holes

Manholes, vaults, and hand holes are to be designed and located in such a manner that will cause the least interference to traffic, other utilities, and future identified projects. These structures shall be limited to those necessary for installation and maintenance of underground lines.

Within the right-of-way (rural typical section), it is desirable for them to be placed outside the ditch limits and as near as practical to the right-of-way line. However, in cases where they must be installed in the ditch, they shall be flush and have a watertight cover. In addition, the ditch shall be paved with concrete (in accordance with City standards) for a minimum of ten (10) feet on both sides of the structure.

Also, within the right-of-way (urban typical section), it is desirable for them to be placed outside the sidewalk limits and as near as practical to the right-of-way line. However, in cases where they must be installed in the sidewalk due to limited right-of-way, the installation shall meet ADA requirements.

Exceptions to the above requirements shall be reviewed and approved during the permitting process.

These exceptions shall be made only at those locations where manholes, vaults, and hand holes are essential parts of existing lines that will remain under existing or proposed roadways. When adjustment to grade is approved for manholes, vaults, and hand holes that will be retained in the pavement, the

adjustment shall be treated as an open cut and repaired in accordance with Section 5.2.6.2 of this Manual, the City's Right-of Way Manual and/or repaired using an "Approved Manhole Method". (See Section 5.4 of this Manual.) Manholes shall be flush with finish grade within roadbed limits and shall protrude no more than four (4) inches above grade in other areas of relatively flat grade.

5.2.5.5 Fire Hydrants

Hydrants shall be located as near as practical to the right-of-way line. Where necessary, to permit access by fire trucks, hydrants may be located inward from the right-of-way subject to the following controls:

1. In rural typical section (ditch) areas where speed limits are 50 mph or greater, hydrants shall be located as near to the right-of-way as practical. On heavily traveled streets, hydrants should be located at side roads, driveways, ramps, etc., in so far as practical, to allow a set- back from the pavement and still provide a means of access.
2. In urban typical section (curb and gutter) areas, hydrant placement guidelines are as follows:
   - speed limits are 45 mph or greater - twelve (12) feet from the face of curb
   - speeds greater than 35 mph but less than 45 mph - eight (8) feet from the face of curb
   - speeds 35 mph or less - six (6) feet from face of curb

   All hydrants shall be of breakaway design, and, in all cases referenced above, at a minimum, the facility shall be placed behind the sidewalk to maintain current ADA sidewalk clearance guidelines.
3. Blue reflective raised pavement markers may be used as a method of identifying fire hydrants for firefighting purposes.

5.2.5.6 Shut-off Valves

Shut-off valves or switches shall be installed as near to the right-of-way line as practical, at both sides of all crossings of right-of-way and crossings carried on structures. However, valves may be omitted on carrier pipelines within steel casings that extend the full width of the right-of-way.

5.2.5.7 Gas Regulator Stations

These shall consist of either a 1 inch or 2-inch regulator station depending on the piping size of the regulator components in the station. Regulation, relief, and valve components shall be housed below ground in steel or concrete pits, vaults or located off the right-of-way. On both the 1 inch and 2-inch stations, the pits are to be closed with steel covers flush with the ground. However, some components are, by necessity, above ground, such as the relief or venting stack and instrumentation box and shall meet any clear zone requirements discussed in Section 5.6 of this Manual. An exception may be granted for the installation of a temporary above ground regulator station on right-of-way in certain cases, such as cold weather. The permit application shall include a detailed Traffic Control Plan describing how the regulator station will be protected. The temporary installation shall be removed within thirty (30) calendar days from the date of its installation. No permit shall be issued for a temporary above ground regulator station installation without prior review of the ATLDOT permitting team.

5.2.5.8 Power and Communication Facilities

Wiring cabinets, transformers, pedestals, pad-mounted devices, and similar appurtenances which protrude more than four (4) inches above the ground line shall meet the same requirements for location of above ground facilities. (See Section 5.6 of this Manual.)

5.2.5.9 Pipeline Facilities

Above ground enclosures and decoy-style lifelike rocks, etc., providing engineered features for freeze protection, security, service access for testing, accessibility for repair and positive drainage to prevent submergence of piping systems, shall not be allowed on right-of-way.

5.2.6 Installation Methods and Controls

Installation or replacement of facilities along or crossing the existing right-of-way can, for the most part, be controlled by end-product specification. However, safety of traffic and preservation of the earth structure supporting the pavement require some restriction of methods used in the operations. Trenching, boring, plowing, or tunneling for underground installations shall not be closer to any edge of the surfaced portion of the right-of-way than specified in the permit. Acceptable methods of installation are discussed below:

5.2.6.1 Open Cut (Trenched) Construction

5.2.6.1.1 Controls for Trenched Construction

The essential features for trench and backfill construction are restoration of the structural integrity of entrenched roadbed, security of the carrier against deformation likely to cause leakage, assurance against the trench becoming a drainage channel and against drainage being blocked by the backfill. Bedding is important for all pipes. Trenched construction, bedding, and backfill normally will be adequately controlled if the utility conforms to the City's specifications for earth work and culverts. Specific controls follow:

1. Trenches less than a depth of five (5) feet are to be cut to have vertical faces with a maximum width of two (2) feet or outside diameter of pipe plus eighteen (18) inches and shored where necessary to prevent caving. Trenches at a depth five (5) feet and greater shall be shored with some type of protective system, sloped, and shielded to prevent loss of trench wall support. The shoring shall extend eighteen (18) inches above the surrounding area.

   A trench box or shield may be required when excavation is in unstable soil conditions or greater than five (5) feet deep. This protective system is either designed or approved by a registered professional engineer or is based on tabulated data prepared or approved by a registered professional engineer.

   Designing a protective system can be complex because of the number of factors involved: soil classification, depth of cut, water content of soil, changes due to weather and climate, or other operations in the vicinity. The design method, which can be applied for both sloping and shoring, involves using tabulated data, such as tables and charts, must be approved by a registered professional engineer.

   Considerations for sloping and shoring will be based on soil test or as a minimum shall be sloped at 1 1/2:1. Excavations over twenty (20) feet in depth shall be designed and approved by a registered design professional.

2. Bedding shall be provided as specified by the utility or pipe manufacturer for the type of conditions encountered. Bedding typically consists of granular soil free of lumps, clods, cobbles, and frozen materials, and is graded to a firm-but-yielding surface without abrupt changes in bearing value. Unstable soils and rock ledges shall be undercut from the bedding zone and replaced by suitable material.

3. Backfilling of trenches must be accomplished immediately after the pipeline or other utility is placed therein or as directed by the City. Backfill shall be placed in two stages:

- First stage - side fill to the level of the top of pipe. Side fill shall consist of granular material laid in six (6) inch layers, each consolidated by mechanical tamping and controlled addition of moisture, to a density of 95% as determined by AASHTO T-99 Method D or GDT-67.
- Second stage - overfill to former surface grade. Overfill shall be layered and consolidated to match the entrenched material in cohesion and compaction. The top twelve (12) inches shall be compacted to 100% of specified density.

Consolidation by saturation or ponding will not be permitted. See the City's specifications for additional information on backfill material.

4. Concrete structures, such as sidewalks and ditch paving, damaged by utilities during trenching operations or other construction activities shall be removed and replaced in full sections. A section's size will be determined by the sawed joint or expansion joint of the adjacent section or by the City's Inspector. In any case, no section shall be less than five (5) feet in length.

5.2.6.1.2 Controls for Plowing

The essential features for plowing construction are:

1. The required location for buried cable or wire will be determined after a thorough consideration of such factors as width of right-of-way, type of road, type of terrain, drainage, and soil conditions. Regarding the latter, sandy-loamy soil offers the best condition for plowing, whereas dry clay soil and soil with more than incidental rock may require underground installations to be placed by machine trenching.
2. Minimum bury for this type of installation shall be twenty-four (24) inches.
3. Plowing is only permitted behind the ditches or beyond the toe of fill slopes. In areas where there is no defined roadbed, plowing will be permitted at a minimum distance of twenty (20) feet from the pavement. It is generally not acceptable to plow under the following conditions:
    a. In areas of steep slopes, unless an offset plow can be used to avoid excessive damage to the slopes
    b. In areas that are too wet to support the equipment being used
    c. In areas of heavy vegetation, unless the path is cleared in advance of cable placement
    d. In areas with a heavy presence of rocky soils
    e. In areas with numerous utilities
4. Acceptable equipment must be on site and in good mechanical condition prior to beginning any plowing operation. All work done in any day must be restored during the same day. Static or vibratory plowing will be allowed provided satisfactory results are being obtained. Some considerations necessary to satisfactory results:
    a. Must maintain the minimum depth as specified
    b. Must make the rip as narrow as possible for the facility being placed
    c. Sliding or slipping of equipment will not be allowed
    d. At least three (3) passes must be made over the rip with equipment heavy enough to restore the rip
    e. Excessive damage of the right-of-way will not be allowed

f. Variations in the proposed locations of the facility will not be permitted

5. The utility will maintain continuous supervision during all plowing operations, either by an employee of the utility or by some independent contractor other than the contractor performing the plowing. The company will make an in-depth final inspection of the work and make any needed corrections at that time. An inspection will be made in approximately six (6) months by the City. The utility will be responsible for correcting any erosion resulting from its construction at any time after the work is completed.

5.2.6.2 Pavement Cuts

Pavement cuts can significantly disrupt and interfere with the public's use of the right-of-way. Among other things, excavation can disrupt traffic flow, impede public mobility, and create barriers for pedestrians and bicyclists to navigate. The City's right-of-way is a valuable public asset which the City holds in trust for its citizens; therefore, the City discourages pavement cuts.

5.2.6.2.1 General Controls

No open cuts in the pavement will be allowed, except by permit and for reasons where it is shown there is no other practical alternative. In no event will an open cut be permitted when it is reasonably practical to bore, tunnel, etc., under the roadway. The ATLDOT permitting team may require test holes in the pavement for the purpose of investigating the location of nearby utilities or performing repairs or taps to existing facilities. (See Section 5.2.6.2.3 of this Manual.)

Whenever the ATLDOT permitting team is requested to authorize an open cut, such request must be supported by detailed reasons why other methods are not practical and giving details relative to the maintenance history and service life of the facility. The City requires:

1. that backfill, and repaving be performed under its direction at the expense of the utility.
2. the utility remains liable for cost of repair if the backfill subsides or the patched pavement fails.

The City shall require an inlay or overlay beyond the cut limits for the full width of the lane, lanes, or road surface to improve the road smoothness and appearance depending on the age of the last paving operations as follows:

- Existing pavement up to four (4) years old – mill and/or overlay one hundred (100) feet each side of trench.
- Existing pavement four (4) years up to seven (7) years old – mill and/or overlay fifty (50) feet each side of trench.
- Existing pavement over seven (7) years old – pavement repair shall be replaced in kind using construction procedures in accordance with the City's specifications.

Refer to the City's Public Right-of-Way Manual for further details concerning pavement cut restoration.

If field conditions warrant, as shown above, milling may be required prior to repaving. When approval of the ATLDOT permitting team is granted, the following provisions shall be adhered to:

1. The trench edges in paved areas shall be saw cut to neat lines before starting to break and remove the pavement slab.
2. Materials and methods of compaction shall be adopted to achieve prompt restoration of traffic service:

a. In trenching across the right-of-way, only one-half of the paved surface is to be opened at one time. The open half shall be completely backfilled and compacted before opening the other half.

b. Closure of intersecting streets, road approaches, or other access points for trenching operations will not be permitted. Upon trenching across such roads or streets, the utility shall utilize steel running plates of sufficient thickness to support traffic or other satisfactory methods for traffic entering or leaving the road or adjacent properties. Immediately after the utility facility authorized by the permit has been placed, the intersecting street, road approaches, or other access point shall be restored to a condition similar or equal to that existing before such open cut was done and, in a manner, satisfactory to the City. Spot resurfacing may be required.

3. Steel plates – refer to the City's Public Right-of-Way Manual for detailed information and criteria for using metal plates.

   If the utility fails to adhere to the above controls, the City retains the right to remove the plate and perform the necessary work to adequately restore the roadway and the expenses of said work shall be paid and collected as provided in Section 3.4.3 of this Manual.

5.2.6.2.2 Surface Restoration

This shall be performed with great care and attention to detail to ensure that the structural strength and surface quality of the road is restored.

For trenches over four (4) feet wide, the subbase, base, and paving shall be replaced in kind using construction procedures in accordance with the City's specifications.

For trenches up to four (4) feet wide, the repaired area should be acceptable, if the following procedures are used:

1. Asphaltic Concrete Pavements - Pavement and trench to be opened to width as shown in Figure 4, Stage 1 (at end of Section 5.2.6.2.3 of this Manual). After the utility facility and any necessary bedding has been placed, the backfill and overfill material shall be placed, as described in 5.2.F.1.a.(3), up to the subbase. At this point, the pavement shall be cut back at least twelve (12) inches on each side of the trench, or to visible over breaks, whichever is greater, to a depth of two (2) inches with a concrete saw. This will ensure a straight vertical edge for the patch.

   After making the saw cut, the pavement to be removed should be broken into small pieces and removed. The broken edge below the saw cut is left rough and irregular but is approximately a vertical plane to provide an aggregate interlock between the patch and the existing pavement.

   The subbase material shall be carefully placed and shaped. Water shall be added as necessary to provide a damp, but not wet, subbase before the concrete base is placed. The vertical face of the existing pavement shall be sprayed with a fine mist of water to moisten the surface. To further improve the probability of

   obtaining a bond between the old pavement and the concrete base to be placed, the vertical face of the old pavement shall be painted with a solution of Portland cement and water mixed to the consistency of heavy paint.

   The new Class B concrete base shall then be placed before this surface dries out. The base shall be placed with care, making sure it is worked back into all corners and into the rough surface of the

existing pavement. This must be done to provide interlocking between the old pavement and new base being placed.

After the concrete base has cured, the surface of the concrete base and vertical edges of the existing paving must be clean and dry before the tack coat is applied. The tack coat shall be applied to the surface of the new concrete base and brushed into the corners and onto the vertical edges of the old pavement to provide a bond and to seal out water. The hot asphaltic plant mix surface material shall be immediately placed after the surface of the tack coat has dried to the point that it is sticky to the touch.

2. Portland Cement Concrete Pavement - Utility cuts in Portland cement concrete pavement are discouraged by the City. Pavement cuts, when allowed, will require complete or partial slab replacement. The City's Inspector will determine the extent of slab replacement on a case-by-case basis if an open cut is allowed. Procedures for slab removal and replacement established by the City for construction and maintenance projects will be used. All work will be in accordance with the City's specifications and construction details. Details for required dowels in replacement concrete and for sawing and sealing joints will be furnished by the City with approved permits.

3. Flowable Fill - Commonly used as a fill or backfill in utility construction, flowable fill is a low strength, slurry-like fill material primarily used in below grade in applications such as utility trenches, where low strength and ease of placement are required, and is typically placed using conventional ready-mix concrete trucks. This mixture can fill all voids in irregular excavations and hard to reach places (such as under and around pipes), is self- leveling, and hardens in a matter of a few hours, and can be placed in one lift with minimal labor without the need for compaction in layers. In many cases, these materials are designed so that they are comparable in strength to the surrounding soil after hardening, making excavation later possible. It requires no vibration or tamping and reaches 95% or more compaction within a few hours of placement. It generally is made from a blend of cement, fly ash, sand, and water. While flowable fill's initial costs may be higher than most soil or granular backfill materials, by the time labor and other factors are added in, flowable fill may be the best and most economical choice.

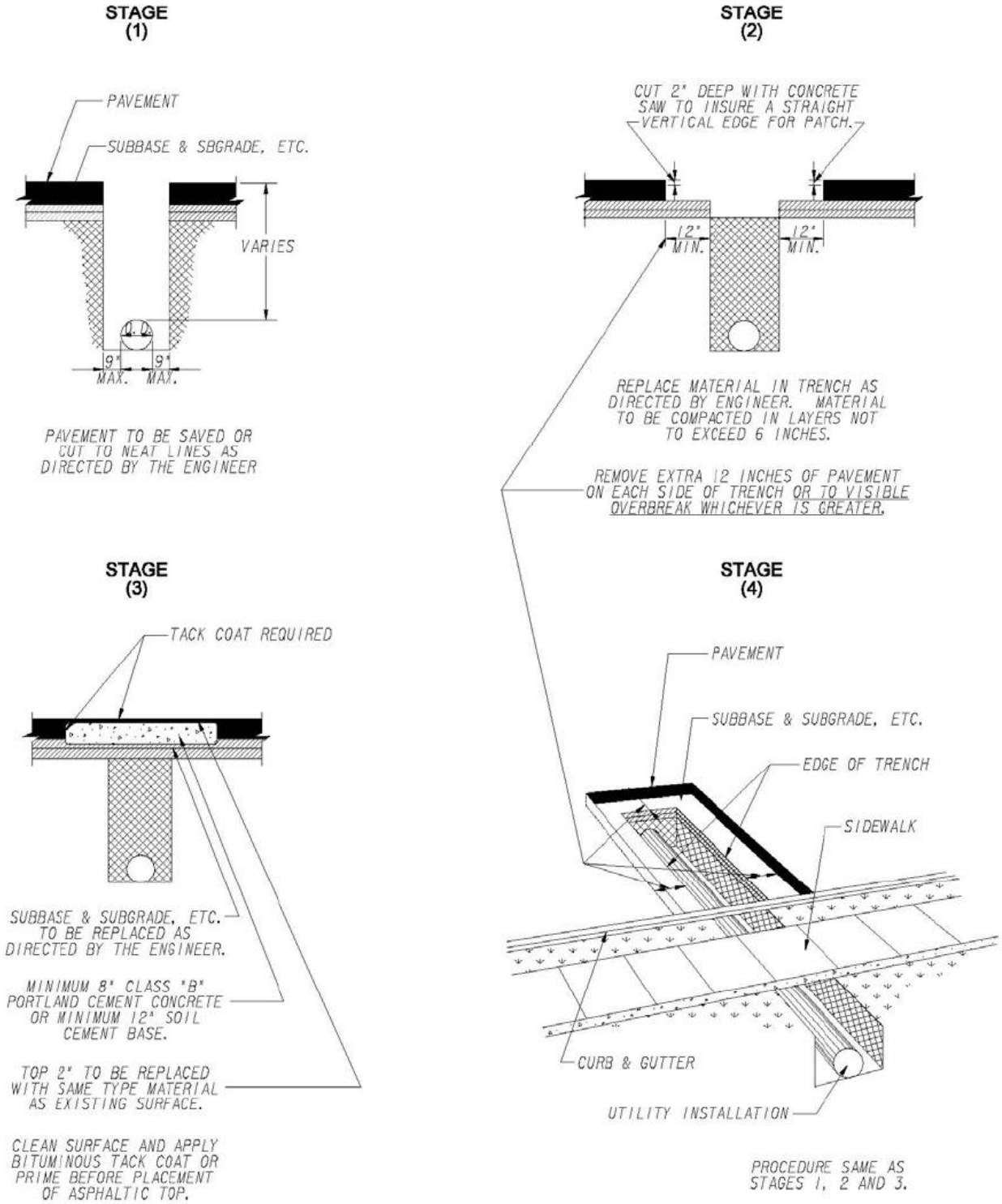
   Flowable fill is sometimes referred to as controlled density fill (CDF), controlled low strength material (CLSM), lean concrete slurry, and unshrinkable fill. Fine aggregates or fillers (usually sand) are often used in flowable fill mixtures that are produced at ready-mix plants, especially higher strength CLSM mixtures. Portland cement and/or supplementary cementitious materials and water are essential ingredients in all flowable fill mixtures, since it is the hydration of these cementitious materials that enables the flowable fill mixture to harden and develop strength. Acceptable materials and construction with flowable fill within the right-of-way shall conform to current City specifications.

5.2.6.2.3 Test Holes

The ATLDOT permitting team may routinely permit test holes in the pavement for the purpose of investigating the location of nearby utilities to comply with Georgia Utility Facilities Protection Act, O.C.G.A. § 25-9. The ATLDOT permitting team may require the utility to consider other locations for pavement crossings to reduce or eliminate the number of test holes necessary. Test holes shall be shown on the permit plans and shall not exceed twelve (12) inches in diameter. In the event multiple test holes are required to locate existing facilities as per O.C.G.A. § 25-9, if three (3) or more test holes per lane are required, the lane shall be open cut and repaired as per Section 5.2.6.2 of this Manual.

The ATLDOT permitting team may also require test holes for the purpose of repairing leaking underground facilities or new taps to existing facilities if the pavement in the area is less than three (3) years old. The work consists of rotary core boring and the reinstatement process of coring test holes in the roadway and the use of vacuum excavation or comparable nondestructive equipment in a manner as to cause no damage to the existing utility facility. After excavating a test hole, performing the survey, or making a repair to the existing facilities, backfill and then reinstating pavement core test hole in asphalt and concrete roads, sidewalks, and other paved surfaces. All work shall conform to the City's specifications.

Figure 4. Utility Installation by Open Cut Stage Construction



5.2.6.3 Trenchless Construction

5.2.6.3.1 Techniques

Where there are few existing underground utility lines, trenchless construction shall be considered. Trenchless techniques for installing utility facilities under a right-of-way without disturbing the surface may include driving, piercing, dry boring, horizontal directional drilling, auger, and slurry boring, pipe jacking and tunneling, impact moiling and ramming, and pipe bursting. These techniques shall follow the manufacturer's requirements and specifications. However, the City may require additional special assurances or specifications for installations utilizing these methods.

5.2.6.3.2 Controls for Trenchless Construction

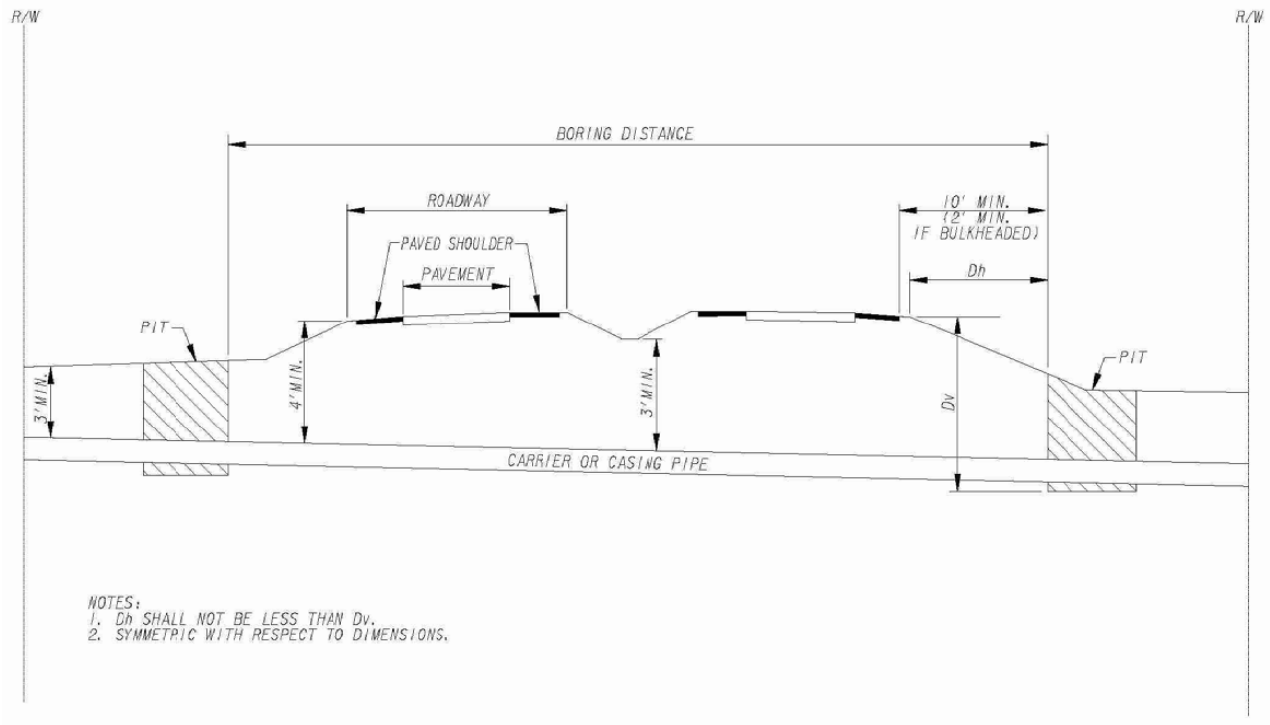
Controls for trenchless construction are as follows:

1. If possible, the temporary access points shall go from or beyond the ditch line in cut areas and beyond the toe of the slope in fill areas. The lateral dimension between the surfaced area of the right-of-way and temporary access points shall be not less than two (2) feet, if bulk-headed, and not less than ten (10) feet if not bulk-headed (see Figure 5, Section 5.2.6.3.2 of this Manual). The horizontal distance from the shoulder point to the edge of the boring pit shall be not less than the vertical distance from the shoulder point to the bottom of the boring pit.
2. Backfilling of temporary access points shall be compacted to at least 95% of the maximum laboratory dry density to within one (1) foot of the top of the embankment. Compact the top one (1) foot of the embankment to at least 100% of the maximum laboratory dry density. Special backfill material may be required to achieve 100% compaction. The maximum laboratory dry density will be determined from representative samples of the compacted material using GDT 67.
3. Where unstable soil conditions exist, boring or tunneling operations shall be conducted in such a manner as not to be detrimental to the right-of-way being crossed. Soil coring indicating the type of subsurface material and verifying the absence of rock may be required.
4. If an obstruction, such as rock, is hit during construction and the bore is to be abandoned, the void shall be grout filled immediately. Abandoned casings shall be backfilled with grout as well.
5. The use of water under pressure (jetting) or puddling will not be permitted to facilitate boring, pushing, or jacking operations. Horizontal directional drilling using approved drilling fluids, such as bentonite, may be used in accordance with Intelligent Horizontal Directional Drilling guidelines.
6. For horizontal directional drilling, the utility shall furnish, in addition to permit plan requirements in Chapter 3 of this Manual, a bore plan (utilizing supporting calculations including bore planner software such as Vermeer's Atlas Bore Planner or equivalent) showing the proposed methods for the installation of directional bores. No directional boring work will be allowed until the utility's submitted plan is approved by the ATLDOT permitting team. This plan shall include, but is not limited to, the following:
    - Boring machine type and model
    - Proposed alignment of bore both horizontally and vertically. Boring will not be allowed in select backfill areas such as at mechanically stabilized wall locations.
    - Location of all proposed boring entry and exit pits
    - Cross sections of the existing ground

- Entry angle (%) with respect to horizon
- Plan shall show the rod cover (inches)
- Rod selection:
    - Diameter (inches)
    - Rod length (feet)
    - Bend (feet radius) limit
- Tooling:
    - Pilot bit diameters (inches)
    - Reamer diameter (inches): the diameter of the reamer shall not exceed 1.5 times the diameter of the product bundle installation
    - Identify soil type/mud factor – sand, gravel, cobble rock or same mixed with clay or reactive shale
- Product bundle:
    - Diameter (inches)
    - Quantity
    - Bend (foot radius)
- Sonde:
    - Ascending limit
    - Descending limit

7. The minimum depth of cover under travel lanes or the paved shoulder shall be four (4) feet.
8. The installation shall include a locatable conduit system, with identification markers on each side of the City's right-of-way.
9. The utility shall continuously monitor the location and alignment of the pilot drill progress to ensure compliance with the proposed installation alignment and to verify depth of the bore. Monitoring may be accomplished by computer generated bore logs which map the bore path based on information provided by the locating/tracking system. Readings or plots shall be obtained on every drill rod and shall be provided to the City's Inspector daily. Upon completion of the bore, the utility may be required to furnish an as-built drawing along with a report of the monitoring of the drilling fluids during the pilot hole and back reamed hole, if available.
10. Excess drilling fluids shall be contained at the entry and exit points until recycled or removed from the site. The utility shall ensure that all drilling fluids are disposed of in a manner acceptable to the appropriate Federal, State, and local regulations. The utility's work will be immediately suspended by the City's Inspector whenever drilling fluids seep to the surface other than in the boring entrance or exit pit, or when a paved surface is displaced. The utility shall then propose a method to prevent further seepage and/or displacement, and shall remove and dispose of any drilling fluid, slurry, and soil from the paved surface prior to resuming the boring operation.

Figure 5. Detail for Boring or Tunneling



5.3 Existing Facilities Retained Under Pavement

The City's policy is that existing utility facilities, currently not under pavement, may be retained under the new pavement once the project is completed (i.e., widening project constructing new travel lanes). The City realizes that the utility may need to make pavement cuts to repair facilities due to leaks, service connections, etc. However, the utility shall adhere to the pavement cut restoration requirements detailed in the City's Public Right-of-Way manual.

General Considerations - Utilities shall be responsible to permanently patch any pavement cut and maintain this patch should it become settled, cracked, broken or otherwise faulty. Permanent patching of pavement cuts shall be performed within three (3) weeks of the time of the actual pavement cut, weather permitting. The utility shall inform the City's inspector upon completion of the permanent patching. It is also required that permanent patching complies with Section 5.2.6.2 of this Manual and the City's Public Right-of Way Manual.

5.3.1 Controls

The following controls are for pavement cuts due to emergency repairs or new service connections:

1. No oblique pavement cuts will be allowed.
2. The repair of the pavement due to an emergency repair or new service connection shall be replaced as per Section 5.2.6.2 guidelines.
3. Concrete pavement cuts exceeding sixty (60) square feet will require reinforcing steel. Number three (#3) re-bar at twelve (12) inches on center at a minimum 1½ inch clearance from the bottom of the concrete slab.

4. Overlays/milling and inlays will match existing cross slopes and will be made in accordance with City's specifications.
5. Any exceptions will be granted on a case-by-case basis by the ATLDOT permitting team.
6. Test Holes in the pavement due to an emergency repair or new service connections shall follow the guidelines as per Section 5.2.6.2.3.

5.4 Manholes

The following guidelines are to be followed in treating manholes along the City's roadway and resurfacing projects.

5.4.1 Roadway Projects

If manholes are located either inside or outside of the existing pavement but will be within the identified project's pavement. (i.e., new travel lanes, acceleration, and deceleration lanes, etc.)

1. Manholes will be relocated outside the limits of the new pavement whenever practical. The ATLDOT permitting team must approve any manhole to be retained in the pavement.
2. If a manhole has been permitted to remain in place, then all manhole covers will normally be paved over during construction. When adjustments are required, the manhole frame should be set at least six (6) inches below pavement grade. Prior to paving over the manhole, the utility should ensure the stability of the manhole so that it will not move under traffic loads and cause pavement failure. The City's Construction PM will confirm that the manholes have been inspected by utility and that they are stable before paving begins.
3. Side entry tunnels may be constructed to high activity manholes depending on the distance and size of the manhole. Side entry should be used even though it may be necessary to enlarge, and center rack the manholes. Plans should show where tunnels are proposed, and the following data must be furnished for each manhole to assist in evaluation of proposals:
    a. Size of manhole, number of ducts and description of its use
    b. Number and size of cables and other equipment
    c. Estimated annual activity
4. Prior to the paving operation, the utility should make sure that cables are airtight and take any other reasonable steps to eliminate the future need to enter the manholes through covers in the pavement.
5. If the manhole has been permitted to remain in place, adjustment of manholes to grade will be required. The method of raising the manholes to grade shall conform to the City's standards. (See Section 5.4.4 of this Manual.) Manholes should not be adjusted to final grade until after the final surface paving is completed.
6. After a project has been completed, a permit will be required to cut the pavement over a manhole. The permitting will be handled in the following manner:
    a. When manholes are to be entered to pull new cables into the duct system, the proposed treatment of each manhole whether it will be paved back over or raised to grade will be addressed in the permit (i.e., requesting to add the new cable).

b. When manholes are to be entered for any other purpose, the proposed treatment for each manhole will be addressed in the required permit for pavement cuts.

c. In emergencies, a permit will not be required at the time of the emergency. (See Section 3.10 of this Manual for requirements.) For removal of the asphalt, (see Section 5.4.4.2 of this Manual). For replacement of the asphalt, the surfaces of the area to be patched will be tacked before hot asphaltic pavement is placed and compacted in the patch. The mix will be placed in lifts not exceeding two (2) inches and compacted. Final surface will be smooth and at grade with the surrounding pavement.

5.4.2 Resurfacing Only Projects

This category covers where manholes currently are in the existing pavement and the roadway is to be resurfaced only, without milling or widening.

The ATLDOT Utility Coordinator will notify the utility of a planned resurfacing project. The utility will determine which manholes and valves to either restore to grade, as per the “Approved Manhole Method”, or leave under asphalt.

1. All types of manholes will be paved over during the resurfacing project.

   The utility, at its option, may raise manholes to final grade using the "Approved Manhole Method” during the time of the project by including a request with their submitted permit including the Utility Adjustment Schedule (UAS); and in response to the ATLDOT Utility Coordinator’s project notification letter.

2. Prior to the resurfacing operation, the utility should make sure that cables are airtight and take any other reasonable steps to eliminate the future need to enter the manholes through covers in the pavement. The manhole covers should be checked for stability before resurfacing to ensure that they will not move under traffic loads and cause pavement failures. The ATLDOT’s Construction PM will confirm that the covers have been inspected by the utility before resurfacing begins.

3. To ensure no pavement failures, the City may require the utility to adjust certain manhole frames and covers to grade utilizing the “Approved Manhole Method” when a manhole will not have enough asphalt cover.

5.4.3 Milling and Resurfacing Projects

This category is where the roadway surface will be milled and repaved without widening.

As soon as the City determines what roadways/streets will be milled and resurfaced for the next paving season, they should forward this information to the ATLDOT Utility

Coordinator. The ATLDOT Utility Coordinator will notify the utility of a planned resurfacing project and request detailed information on their existing facilities. Upon receipt of the utility information, the ATLDOT Utility Coordinator will create a table with the utility owner’s name, type of facility and quantity, listing the number of manholes, valve covers, or other utility facilities that will require adjustment due to the milling and resurfacing or reconstruction/full depth projects and any other pertinent information necessary for the City to prepare the contract documents.

There are three different cases in this category that determine if manholes and valves will need to be lowered and raised or if information is included in the contract instructing the contractor to work around the manhole(s).

5.4.3.1 Case I: Existing Concrete Manhole (Milling & Replacing Same Grade)

This case is where the existing manhole was constructed utilizing a "Barton-Southern" style manhole (see Detail 1, at the end of Section 5.4.4.3) with a concrete-squared section (of various size) on the surface surrounding the top of the ring or frame. The utility will not be required to lower any concrete-square manholes which may be in conflict if the following conditions exist:

1. The existing "Barton-Southern" style manhole is in good condition, with the concrete surrounding the manhole having no major cracking, spalling, looseness or otherwise unsound.
2. The depth of the asphalt being milled is being replaced.
3. Traffic can be maintained without lowering the manhole during the operations.

   If the above conditions exist, then a Special Provision shall be prepared by the City and incorporated into contract stating that the contractor will work around the manhole(s) listed using other appropriate methods such as hand milling.

   If any of the above conditions do not exist, the utility will be required to lower and raise this type of concrete-square manholes as per the "Approved Manhole Method".

5.4.3.2 Case II: Existing Concrete Manhole (Milling & Replacing Different Depth Finish Grade)

In this case the existing manhole was constructed utilizing a "Barton-Southern" style manhole (see Detail 2, at the end of Section 5.4.4.3) with a concrete-squared section (of various size) on the surface surrounding the top of the ring or frame. The milling operation will remove more asphalt than the paving operation will replace; the utility will be required to lower any concrete-square manholes which may be in conflict as per the "Approved Manhole Method".

5.4.3.3 Case III: Existing Asphalt Manhole

For this case, the utility will be required to lower any standard manholes (see Figure 6, at the end of Section 5.4.4.3) that has asphalt surrounding the ring or frame, that will conflict with the milling of road surface as per the "Approved Manhole Method". The utility will determine which manholes to either restore to grade or leave under asphalt.

5.4.4 Reconstructing Manholes "Approved Manhole Method"

The following guidelines are for lowering and raising manholes of the concrete- squared type, asphalt type, and new manholes under all three Cases listed above which are, or will be, located within the pavement.

5.4.4.1 Lowering the Manhole

1. Remove the asphalt from the manhole cover and the lip of the manhole frame. The utility's personnel will have pre-marked the cover's position. At this time, the set of the cover within the frame will be checked and the following actions taken:

   a. If the cover is worn so that it is not level with the top of the frame, the existing frame and cover are to be removed and replaced with a new frame and cover equipped with a gasket.

   b. If the cover can be made to rock within the frame due to uneven wear of the contact surfaces, either the frame or cover or both shall be replaced as in (a) above.

   If neither condition (1) nor (2) exists, continue with Step 2.

2. Remove a thirty (30) inch area surrounding the manhole ring (unless removing the Barton-Southern style manhole then the entire section of concrete must be removed) and excavate to a solid surface below the base of the frame. This solid surface may be either compacted fill or concrete. The depth of the excavation is determined based on the frame height plus two (2), three (3) inch ring risers at all points.

   The jack hammer is used to extend the vertical cut down to the solid surface. Ensure that no undermining of the existing surface occurs.

   All asphalt, concrete, and fill are removed from this excavation. Loose material is shoveled and finally blown out with an air hose.

   CAUTION: Do not undermine the existing asphalt. The wall is to be vertical, not sloped. Undermining will cause the existing asphalt to crack with time. Sloping will cause varying thicknesses in the concrete and create uneven stresses.

3. Remove the cover and lift the existing frame off the surface on which it rests. Remove all loose mortar, loose bricks, and other material from this surface down to the required elevation until a solid base is attained both in the excavation and beneath the existing frame.

4. Replace the frame measuring to the finish grade to verify that the correct depth has been attained with the addition of the two (2), three (3) inch rings. If the original frame is to be used, the frame shall be wire brushed or sandblasted until all rust and debris has been removed. Small pieces of concrete or asphalt bonded to the frame need not be removed if they withstand the brushing or sand blasting.

5. Metallic shims shall be used under the manhole frame to level with the pavement. Using strings stretched across the pavement in both directions (both perpendicular to and parallel to the roadway); ensure that the level of the manhole matches the pavement.

   NOTE: Any new manholes being constructed shall have one-half (½) inch anchor bolts fastening the frame to the manhole.

   CAUTION: No tolerance is permitted here.

   The shims are to be cast iron, stainless steel, or hot dipped galvanized steel. They may be built up with flat plates made of the same material if necessary. Broken pieces of brick, rocks, or other material are not to be used as shimming material. The frame is to be shimmed in four (4) locations only, at one point on each side of the frame, both perpendicular to and parallel to the roadway.

6. Place and inflate an expandable tube inside the frame so that it seals off the open area between the underside of the frame and the surface on which the frame previously rested. This allows the collar to be poured at the same time the excavation is filled.

7. Using a hand or machine operated tamping device, moisten the excavation and tamp the earth until it is tightly compacted.

8. Pour Class “A” concrete cap a minimum of twelve (12) inches in diameter around the entire manhole to a minimum depth of twelve (12) inches in height; (see Detail 4, at the end of Section 5.4.4.3 bullet 5.). Under no circumstance is the concrete to reach a height above the frame.

   CAUTION: This is a critical step. The excavation must be moistened before concrete is placed to keep it from drawing water from the concrete and thereby contributing to defects in the concrete. Moisture also improves the tamping process. Tamping must be performed to ensure a solid surface that will not settle when the concrete is placed.

Using trowels, work the concrete until it is level creating a smooth finish, leaving no depressions or ridges around the frame. This will require continual reworking due to the concrete will tend to flow downhill and must be worked until it holds its shape.

9. Allow the concrete to cure as per the City's specifications.

   CAUTION: Do not place concrete when the temperature is expected to drop below 40 degrees in the next six (6) hours.

10. Replace manhole lid and repair the roadway by temporary paving over the manhole until the milling and paving operation has been completed.

    Once this has been completed and smoothness testing has been approved by the ATLDOT Construction PM, the manhole may be raised as per Section 5.4.4.2 of this Manual.

5.4.4.2 Raising the Manhole

1. Remove the asphalt three (3) inches surrounding the manhole cover and the lip of the manhole frame. The utility's personnel should have pre-marked the cover's position. All loose asphalt is to be removed from this excavation. Loose material shall be shoveled and finally blown out with an air hose.
2. Remove the manhole lid and thoroughly clean the frame around the area where the lid sits; then install two (2), three (3) inch steel locking rings (see Detail 4, at the end of Section 5.4.4.3 bullet 5), from East Jordan Iron Works or equivalent. It is vital that the manufacturer's instructions for the installation of the rings be closely followed. According to the manufacturer, with proper installation, this item is capable of dampening traffic loads, dissipating vibrations and reducing water infiltration.

   For future resurfacing projects of these manholes, the utility will only remove the steel locking rings as necessary to allow for the milling and paving operations and add rings as appropriate to bring to final grade, (see Section 5.4.4.3 of this Manual).

   Note: In non-traffic lane situations the utility can use the non-locking steel rings.

3. Replace the manhole lid, and then fill the crevice around the rings with epoxy asphalt (example Perma-Patch) as necessary, using a hand or machine operated tamping device to ensure no voids exist.

5.4.4.3 Lowering and Raising Ring Risers

Before this work can begin, a determination needs to be made on the depth of the milling and the thickness of how much asphalt is being replaced. If the milling operation is less than three (3) inches only one (1) steel locking ring will be removed. (For example, the Steps a through e below are based on the milling and inlay depth of two (2) inches. If the depth of the milling and inlay is greater additional rings will be required).

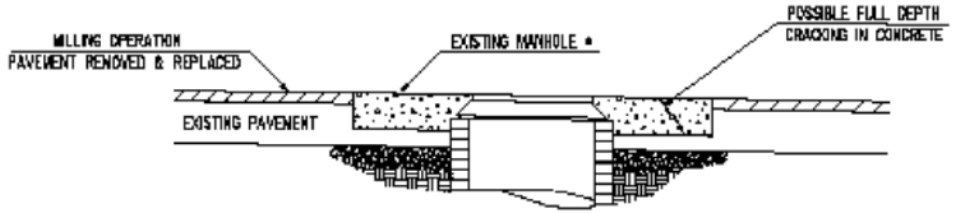
1. Remove the asphalt three (3) inches surrounding the steel locking ring down to the lip of the second steel locking ring. The utility's personnel should pre-mark the cover's position. All loose asphalt is to be removed from this excavation. Loose material shall be shoveled and finally blown out with an air hose.
2. Remove the manhole lid and the first steel locking ring; then thoroughly clean the second steel locking ring around the area where the manhole lid will be replaced. Replace the manhole lid and repair the roadway by temporarily paving over the manhole until the milling and paving operation has been completed.

Once this has been completed and smoothness testing has been approved by the ATLDOT Construction PM, the manhole may be raised.

3. To raise the manhole that has been paved over, remove the new asphalt from the manhole lid to three (3) inches surrounding the manhole cover and the lip of the second steel locking ring riser. The utility's personnel should have pre- marked the cover's position. All loose asphalt is to be removed from this excavation. Loose material shall be shoveled and finally blown out with an air hose.
4. Remove the manhole lid and again thoroughly clean the frame around the area where the lid sits, re-install one (1), three (3) inch steel locking rings, from East Jordan Iron Works or equivalent (if the milling operation depth was greater than the repaving depth, the height of the ring riser will change). It is vital that the manufacturer's instructions for the installation of the rings be closely followed. According to the manufacturer, with proper installation, this item is capable of dampening traffic loads, dissipating vibrations and reducing water infiltration.
5. Replace the manhole lid, and then fill the crevice around the rings with epoxy asphalt (example Perma-Patch) as necessary, using a hand or machine operated tamping device to ensure no voids exist.

Figure 6. Manhole Diagrams (two-page figure)

* NOTE: REFERRED TO AS 'BARTON-SOUTHERN' STYLE MANHOLES WHEN DEALING WITH AT&T/BELLSOUTH FACILITIES, BUT OTHER UTILITIES MAY HAVE CONSTRUCTED SIMILAR TYPE MANHOLES, BUT TYPICALLY ON A SMALLER SCALE.



CASE I: EXISTING CONCRETE MANHOLE
MILLING & REPLACING SAME GRADE

CONDITION 1: MILLING OPERATION: REMOVE AND REPLACE ASPHALT AT THE SAME DEPTH.

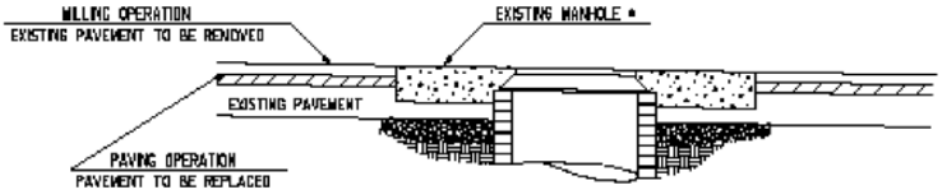
CONDITION 2: THE EXISTING MANHOLE IS IN GOOD CONDITION WITH NO CRACKS, SPALLING, ETC. IN THE CONCRETE SURROUNDING THE MANHOLE.

CONDITION 3: TRAFFIC CAN BE MAINTAINED WITHOUT LOWERING THE MANHOLE DURING THE OPERATIONS.

IF ALL 3 OF THE ABOVE CONDITIONS ARE MET, A NOTE WILL BE PLACED IN THE PLANS GIVING THE NUMBER OF MANHOLE(S) THE CONTRACTOR WILL MILL AROUND. IF ANY OF THE ABOVE CONDITIONS FAIL THE MANHOLE WILL BE LOWERED AND RAISED UTLIZING THE "APPROVED MANHOLE METHOD" (SEE DETAIL 4).

DETAIL 1
NOT TO SCALE

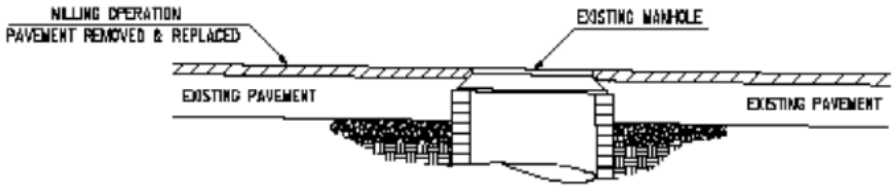
* NOTE: REFERRED TO AS "BARTON-SOUTHERN" STYLE MANHOLES WHEN DEALING WITH AT&T/BELLSOUTH FACILITIES, BUT OTHER UTILITIES MAY HAVE CONSTRUCTED SIMILAR TYPE MANHOLES, BUT TYPICALLY ON A SMALLER SCALE.



CASE II: EXISTING CONCRETE MANHOLE
MILLING & REPLACING DIFFERENT DEPTH FINISH GRADE

CONDITION 1: MILLING OPERATION: REMOVING A DEEPER DEPTH OF ASPHALT THAN THE PAVING OPERTATION WILL REPLACE. THE MANHOLE WILL BE LOWERED AND RAISED UTLIZING THE "APPROVED MANHOLE METHOD" (SEE DETAIL 4).

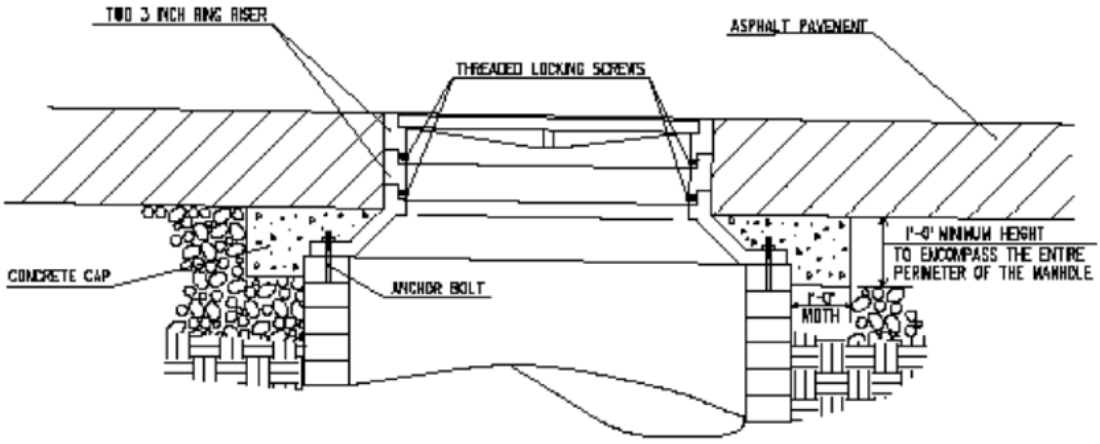
DETAIL 2
NOT TO SCALE



CASE III: EXISTING ASPHALT MANHOLE
MILLING & REPLACING SAME GRADE

CONDITION I: MILLING OPERATION WILL REMOVE AND REPLACE ASPHALT AT THE SAME DEPTH. THIS TYPE OF MANHOLE WILL BE LOWERED AND RAISED USING THE "APPROVED MANHOLE METHOD" (SEE DETAIL 4).

DETAIL 3
NOT TO SCALE



CASE IV: DIAGRAM OF "APPROVED MANHOLE METHOD"
REQUIRED ON ANY NEW INSTALLATION OR WHEN EXISTING MANHOLES MUST BE LOWERED & RAISED

DETAIL 4
NOT TO SCALE

5.4.5 Abandoned Manholes

When approved for abandonment and prior to backfilling, the bottom of the structure shall be broken up in such a manner that water will readily pass through and all pipes entering the manhole shall be plugged or grout filled. The top portion of the manhole structure shall be removed to establish a minimum of three (3) feet cover from subgrade or finish grade when not under the pavement; and filled with granular embankment (sand) or suitable backfill material that can readily meet the requirements of the City's specifications.

5.5 Utility Tunnels and Utility Bridges

5.5.A. General Considerations - A utility tunnel or utility bridge occasionally is provided for a pipeline or other facilities crossing a freeway at a strategic location. Where it can be foreseen that several utility crossings will be needed, the cost of the tunnel (either a large casing or a box culvert) or of the bridge may be less than that for the alternate of several untrenched or separately encased pipelines. Where it appears that these conditions exist, the City will take steps as necessary to ensure that adequate study is made by the utility companies to anticipate their needs for future crossings and to converge their facilities to a joint-use single crossing or increase the size of their facilities through the tunnel to meet the projected customer needs.

5.5.1 Controls

5.5.1.1 Tunneling Specifications

Tunneling under any existing roadway shall be accomplished in accordance with the City's specifications. In addition to requirements in the specifications, the City requires the space between the utility carrier and the tunnel liner to be filled with a sand cement grout.

5.5.1.2 Isolation of Hazardous Materials

In a combined tunnel or bridge, provisions shall be made to isolate mutually hazardous transmittants, such as fuels and electric energy, by compartmentalizing or by auxiliary encasement of incompatible carriers. The utility-tunnel or utility-bridge structure shall conform in appearance, location, bury, earthwork and markers to the culvert and bridge practice of the City.

5.6 Overhead Power and Communication Lines

5.6.1 General Considerations

The type of construction required clearances, and location of utility facilities are important, major factors needed to preserve the safety, appearance, operation, and maintenance of the City's right-of-way. Critical components for locating utility facilities are the distance from the of edge of pavement, curb line location, sidewalk width, existing structures, and available space within the right-of-way.

The safety, appearance, operation, and maintenance of right-of-way are enhanced by keeping this space as free as possible from above ground obstacles. Where ground-mounted utility facilities are to occupy this space, they shall be placed as far as possible from the edge of pavement. The nature and extent of roadside development and the ruggedness of the terrain are controlling factors for locating poles, guys, and related facilities at the back of the right-of-way.

5.6.2 Controls for Overhead Facilities

5.6.2.1 Types of Construction

1. Longitudinal installations on the right-of-way shall be limited to single-pole structures.
2. Only one (1) pole line will be permitted for longitudinal installation within a segment of the right-of-way or with operating clearance on the right-of-way unless proven impractical. Thus, joint use shall be considered, as indicated by Rule 222 of Part 2 of the National Electrical Safety Code (NESC). This is of particular significance at locations where the right-of-way widths approach the minimum needed for safe operations or maintenance requirements or where separate installations may require extensive removal or alteration of trees. Existing dual pole lines are treated as exceptions.
3. Crossings associated with longitudinal facilities shall be minimized with consideration given to geometrics, service lines, safety, and aesthetics. Repetitive crossings will not be permitted strictly to reduce clearing or easement requirements.

5.6.2.2 Horizontal, Vertical, and Radial Clearances

The clearances for power and communication lines shall conform to the current National Electric Safety Code (NESC) and the current AASHTO Roadside Design Guide applicable for the system, except where greater clearances are required as follows:

1. Horizontal - See Section 5.6.2.3 of this Manual, for horizontal clearances.
2. Vertical - The minimum vertical clearance above the roadway shall be twenty-two (22) feet for electric lines, and eighteen (18) feet for communication and cable television lines. These clearances may be greater, as required by the National Electric Safety Code (NESC) and governing laws.
3. Radial - A minimum radial clearance of twenty (20) feet shall be provided from the nearest part of all bridge structures.
4. Overlashing – When a new cable, fiber or other line is lashed or attached to an existing messenger wire or cable, factors that will be considered when reviewing overlashing requests are:
    a. All interstate and limited access rights-of-way crossings will be required to conform to current GDOT requirements and specifications.
    b. When a permit is requested to overlash an existing facility and the existing facility does not meet current NESC requirements, or the proposed facility to be overlashed will cause a violation of the NESC, the entire aerial crossing will be required to be upgraded to meet the vertical requirements of eighteen (18) feet above pavement.
    c. Overlashing to existing cables at current crossings that meet the NESC shall be exempt from the current policy on eighteen (18) feet minimum vertical clearance.

    All other existing conditions not covered by case 1 through 3 above will require an exception request with the utility's permit submittal and include verification that the cases do not apply.

    These clearances are in effect for installations beginning from the published date of this Manual.

5.6.2.3 Longitudinal Installations

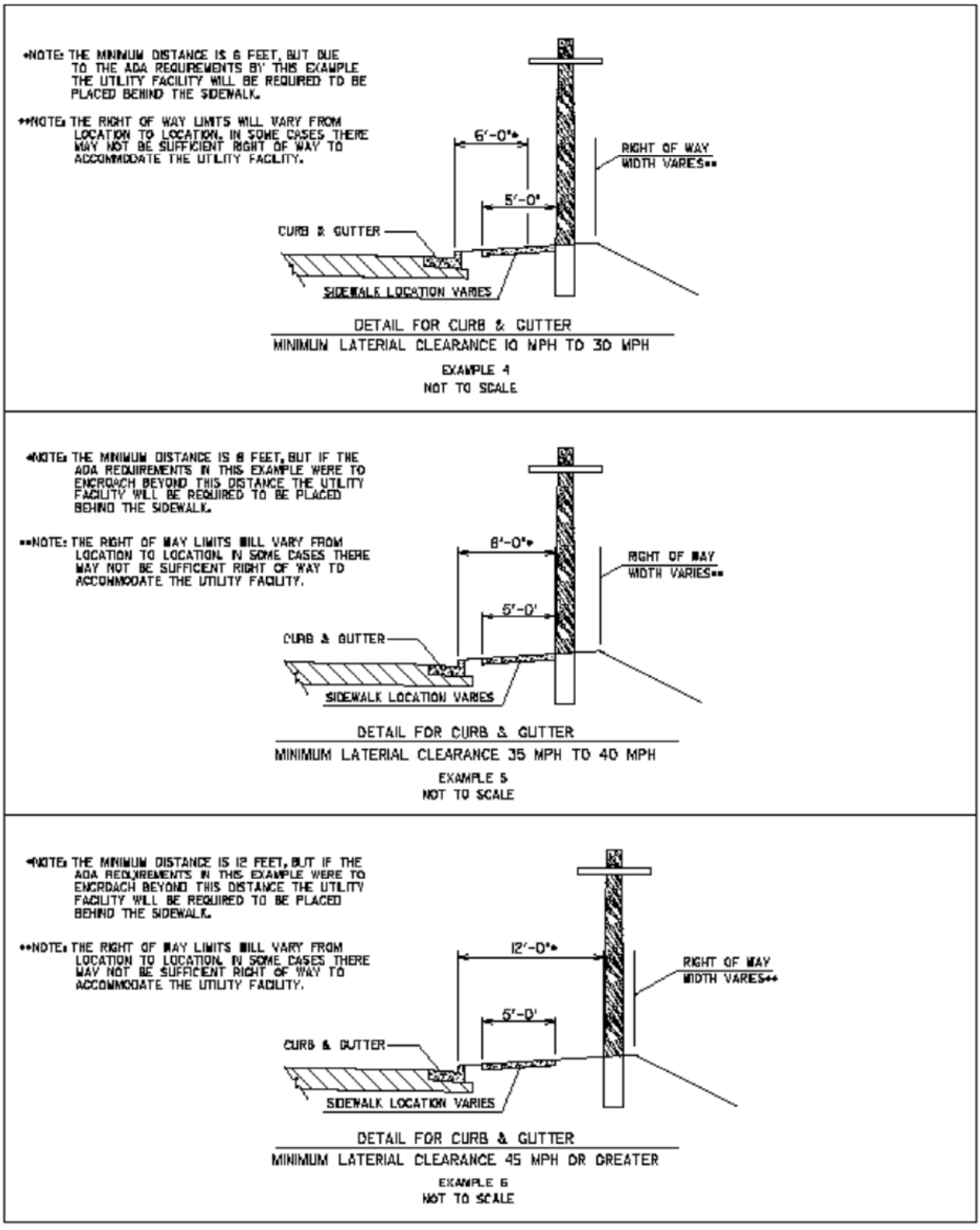
1. The location of poles, guys, and related ground-mounted utility facilities on freeways and other right-of-way having partial or full control of access are to conform to current GDOT requirements and specifications.

2. In general, poles and related facilities are to be located as near as practical to the right-of-way line.
3. Utility obstacles shall be located with characteristic of traffic and the least obstructive for maintenance operations. The AASHTO Roadside Design Guide's (current edition) clear zone guidelines should be used to determine the desired distance for above ground utility installations. Each permit will be reviewed to control new utility facilities from being installed in the shaded zones. (See Section 5.6.2, Figure 8 to Figure 14 of this Manual). The desirable location shall be at the back of the City's right-of-way. When the utility can demonstrate that the setback distances are not practical and accident data supports a safe roadside environment, the Roadside Design Guide, current edition, should be used as a guide in determining exceptions.
4. Normally, utility pole lines should be constructed to avoid the outside of curves. Exceptions may be considered on a case-by-case basis when the utility company can show the impracticality of all other alternatives. The Roadside Design Guide will be used as a guide when evaluating exceptions when accident data supports a safe roadside environment.
5. In keeping with the nature and extent of development in urban areas, such facilities shall be located as near as possible to the right-of-way line. Where there are curbed sections, the utilities are to be located as far as practical behind the face of curb. See below for the minimum lateral clearances and the respective posted speed limits:

Minimum Lateral Clearance	Posted Speed Limit (mph)
12'	45 greater
8'	35 < x < 45
6'	< 35

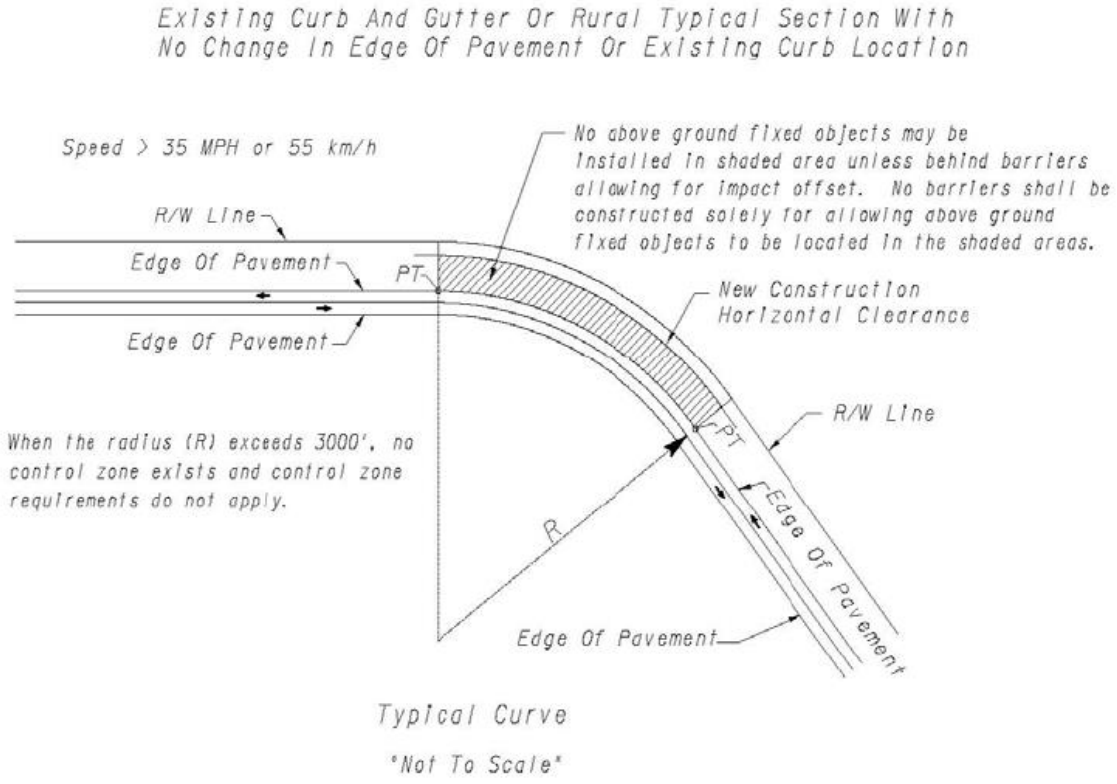
The lateral clearance is measured from the face of curb to the face of pole or facility. However, in all the above cases, the facility shall not encroach upon current ADA sidewalk clearances; (see Examples 4 thru 6 in Figure 7).

Figure 7. Details for Curb and Gutter Minimum Lateral Clearance



6. The location of overhead utility installations on exceptionally narrow right-of-way, streets with closely abutting structures or trees are special cases which must be resolved in a manner consistent with the prevailing limitations and conditions. The City will work with the utility to determine an acceptable location based on roadway alignment, expected operating speed, and other design and environmental features of the right-of-way or street. Before locating the utility at other than the right-of-way line, consideration shall be given to designs employing self-supporting, armless, single-pole construction with vertical arrangement of wires or cables, or other techniques that are accepted industry practices and are conducive to safe mobility. Exception to standard horizontal clearances may be made where poles and guys can be placed at locations behind guard rails, beyond deep drainage ditches, on top of steep slopes, behind retaining walls, and other similarly protected locations.
7. In general, pole replacement in existing lines, or the addition of mid-span poles, may be made to coincide with existing poles along the street, except that additional setback may be required for new, single poles being installed if there are advantages to be gained because of critical location such as on curves, at intersections, and if the alignment can be satisfactorily arranged.
8. Guy wires to ground anchors and stub poles shall not be placed between a pole and the traveled way where they encroach upon the clear zone.
9. Where irregularly shaped portions of the right-of-way extend beyond the normal right-of-way limits, variances in the location from the right-of-way line shall be allowed as is necessary to maintain a reasonably uniform alignment for longitudinal overhead and underground installations.
10. Longitudinal installations of poles, guys or other related facilities shall not be in a right-of-way median. On crossings of a right-of-way, such facilities should not be in a right-of-way median less than one hundred (100) feet in width. Poles and other appurtenances for right-of-way lighting may be in the median if other alternatives are determined to be impractical and where adequate protection is provided to the public.
11. Each permit will be reviewed to prevent new utility poles from being installed in the shaded control zones (see Figure 8 to Figure 14 on the following pages) to the extent as possible.

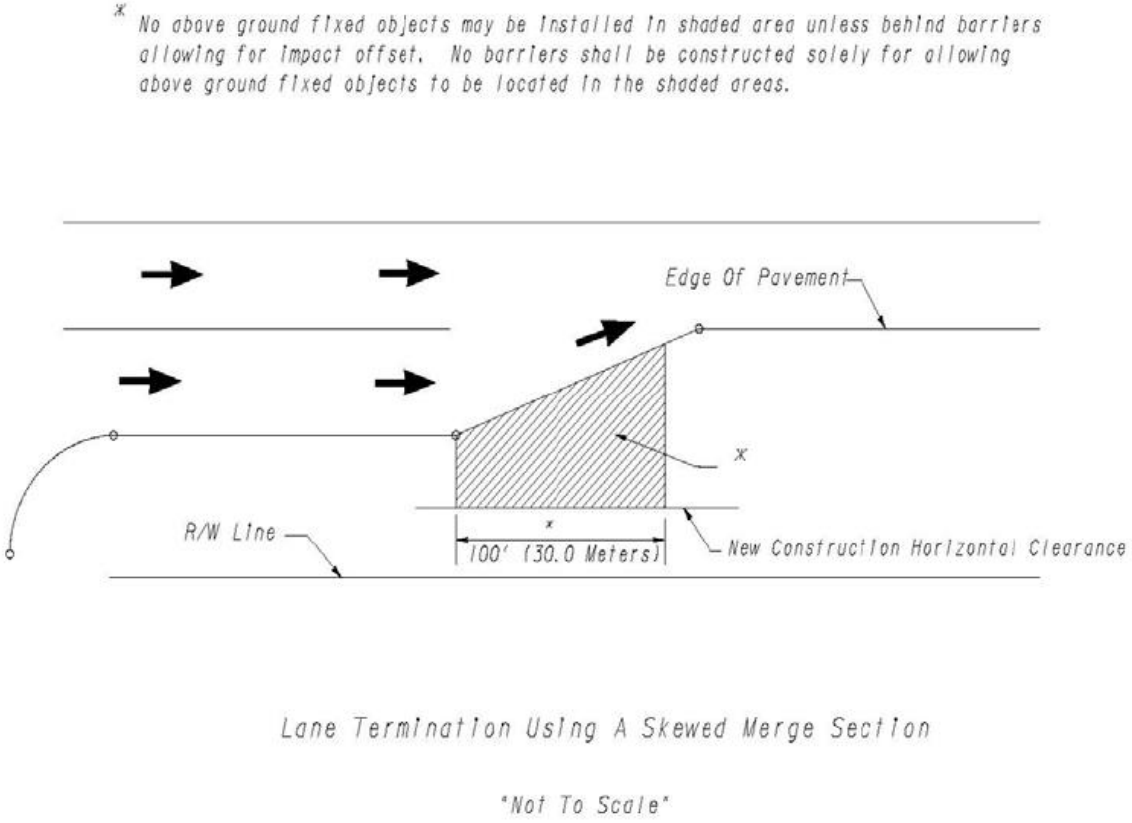
Figure 8. Existing Curb and Gutter with No Change in Edge of Pavement



As shown in Figure 8, poles on the outside of a curve usually have a higher exposure to vehicle impacts. This is particularly important for situations where there is a single curve after a long straight section of roadway or where one curve is substantially more severe than other curves which are in proximity. However, for winding roadways with sequentially occurring curves in opposite directions, it would not normally be cost effective or desirable for the pole line to cross the road repeatedly to achieve the inside curve placement.

When a pole line is placed on the inside of a severe curve, e.g., a curve with a radius of less than seventeen hundred (1700) feet, it may be necessary to place strain poles on the outside of the curve. These strain poles should be of a design criterion to meet National Cooperative Highway Research Program (NCHRP) 350 TL-2 design. Pole guys and strain poles should only be used if they can be designed in such a way that the fallen pole guy wire will not pose a hazard to traffic.

Figure 9. Lane Termination Using a Skewed Merge Section



Lane drops, deceleration lanes, kinks, tee-intersections, and sections where pavement narrows are several locations where poles should be avoided. This is especially important when it can be reasonably foreseen that an inattentive or physically impaired driver might not be able to accurately perceive these locations. Another cause of this problem is a traffic conflict, where a driver is prevented by another vehicle from changing lanes or moving laterally. If it is impractical to span these critical zones without a pole, consideration should be given to the use of a guardrail or crash cushion. These locations are common in areas where developers are required to build the ultimate cross section along their development. Figure 9 thru Figure 13 show locations of areas that poles would be vulnerable.

Figure 10. Deceleration for Right Turn with Tangent

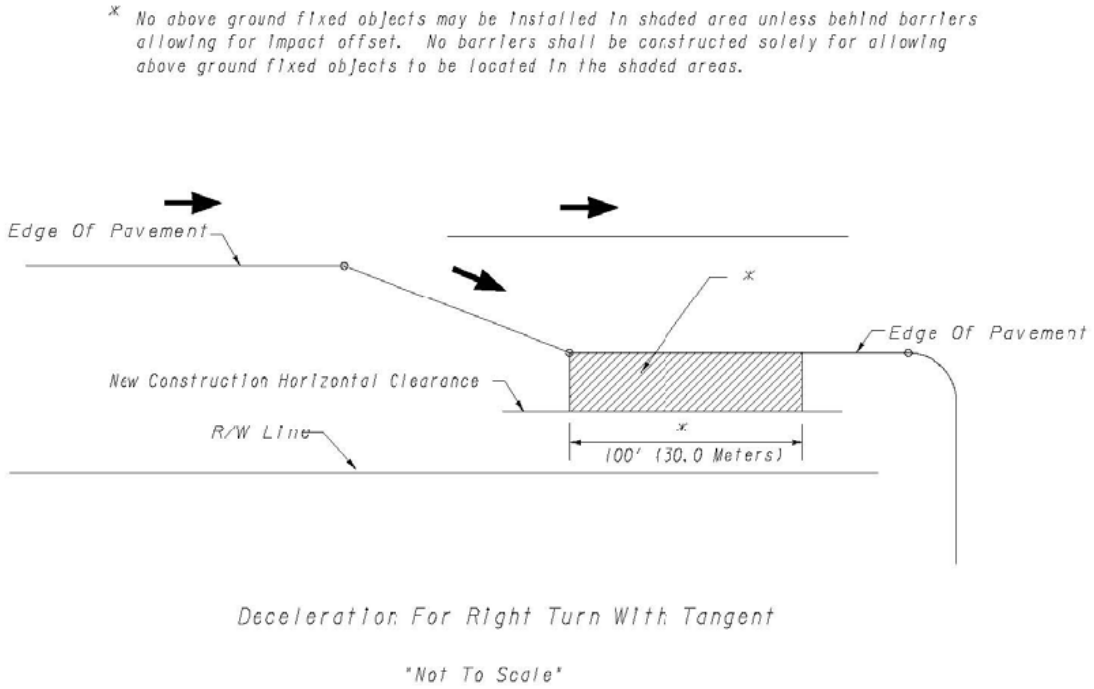


Figure 11. Typical Kink in Alignment

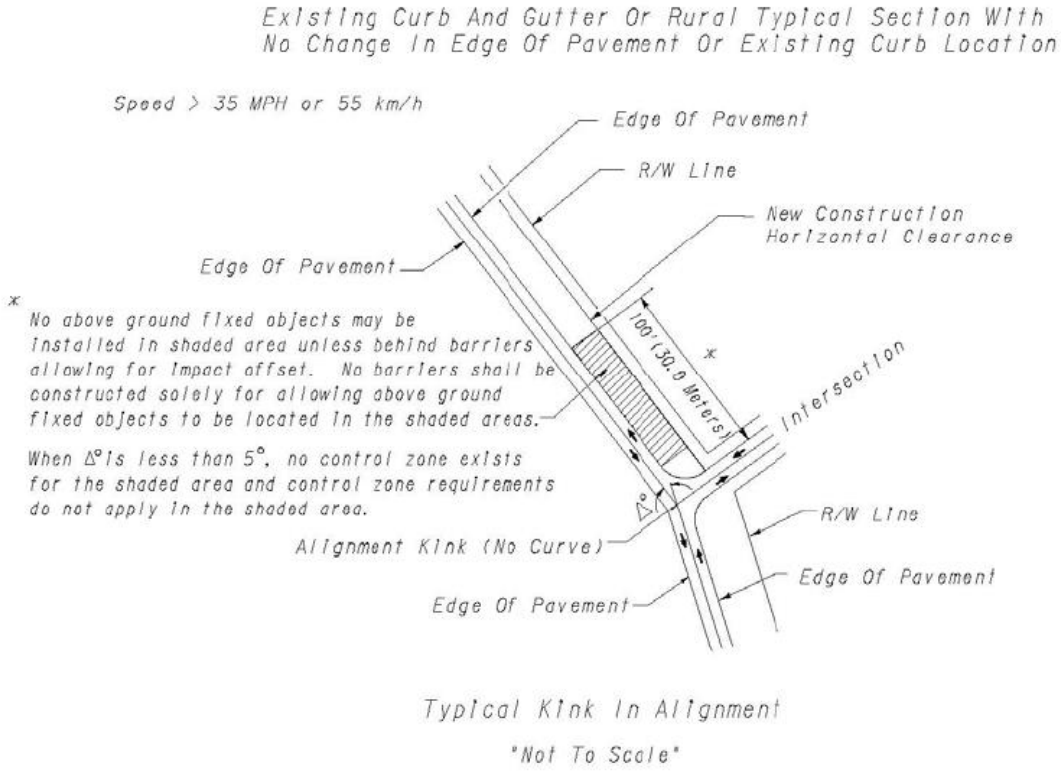
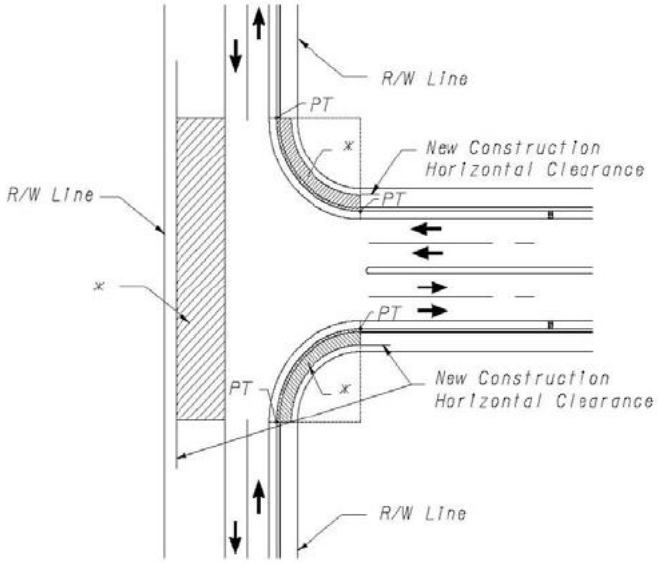


Figure 12. "T" Intersections

* No above ground fixed objects may be installed in shaded area unless behind barriers allowing for impact offset. No barriers shall be constructed solely for allowing above ground fixed objects to be located in the shaded areas.

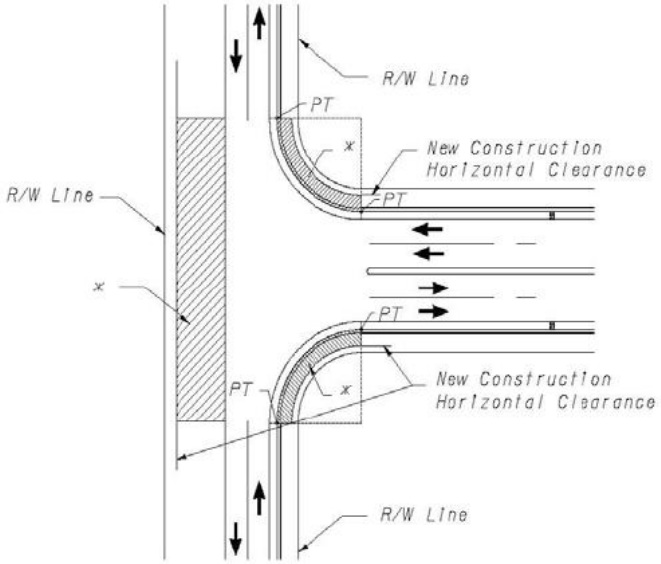


"T" Intersections

"Not To Scale"

Figure 13. Intersecting Streets

* No above ground fixed objects may be installed in shaded area unless behind barriers allowing for impact offset. No barriers shall be constructed solely for allowing above ground fixed objects to be located in the shaded areas.

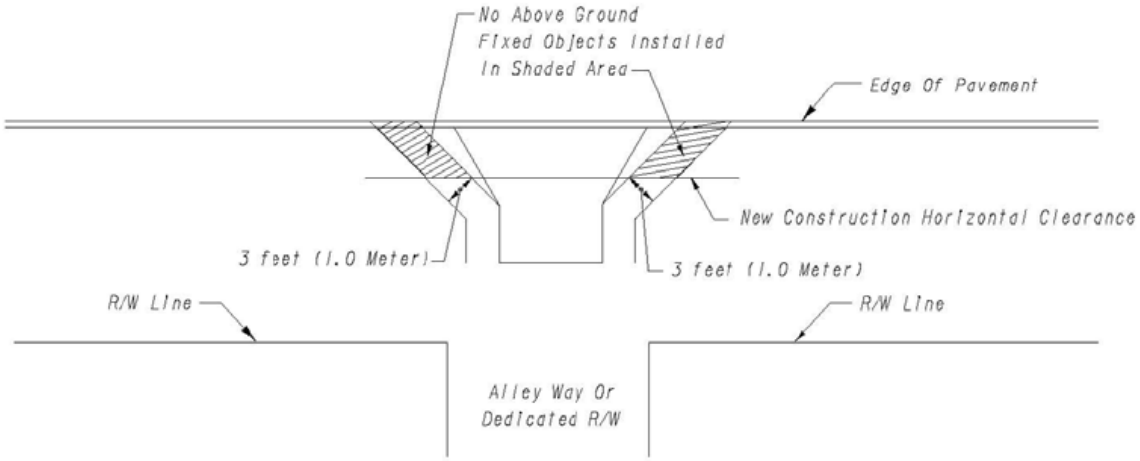


"T" Intersections

"Not To Scale"

Where critical traffic conflicts can be foreseen, especially at intersections of high-speed roadways, pole placement may be designed to avoid the most critical secondary collisions. For example, if the major roadway is north-south in direction and the minor roadway is east-west, the most critical quadrants for a secondary collision (collision of a vehicle with a pole after an initial two vehicle collision) are the northeast and southwest quadrants. Thus, the preferred placement for poles at this intersection would be the northwest and/or southeast quadrants, as shown in Figure 13.

Figure 14. Alley Way or Easement



Alley Way Or Easement

"Not To Scale"

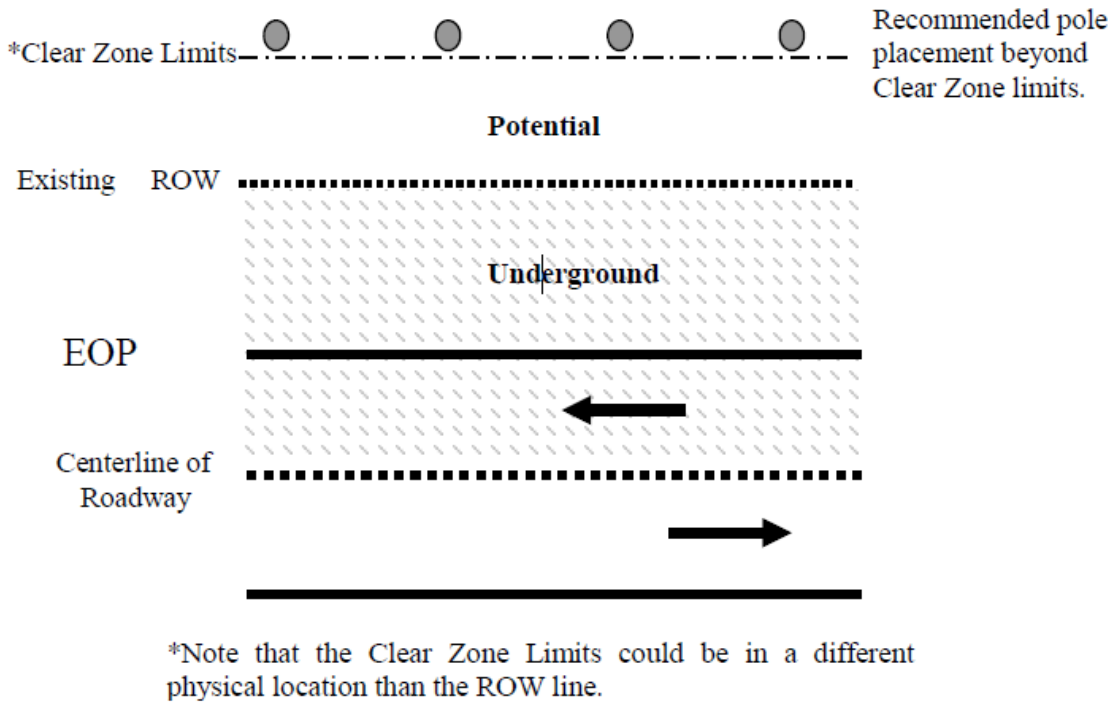
12. Rural Shoulder (ditch typical sections) - For all new utility facilities, the provisions in this Manual will apply in full since there is a range of locations available for placement. Greater safety for the traveling motorist may be obtained with relatively little increase in cost for the utility.

    Clear Zone is greater than Right-of-Way - In the situation where the clear zone limits are wider than the right-of-way, the utility will not be permitted to install poles and/or above ground utility appurtenances within the right-of-way. The utility may consider underground installation as an option.

    If the utility elects to install poles or above ground utility appurtenances that are outside of the right-of-way, the City strongly encourages the utility to consider placement of said poles and appurtenances so that the clear zone is maintained (see Figure 15).

    Where the utility feels that the desirable setbacks are not practicable, the utility bears the responsibility of demonstrating that alternative limits or treatments are more appropriate.

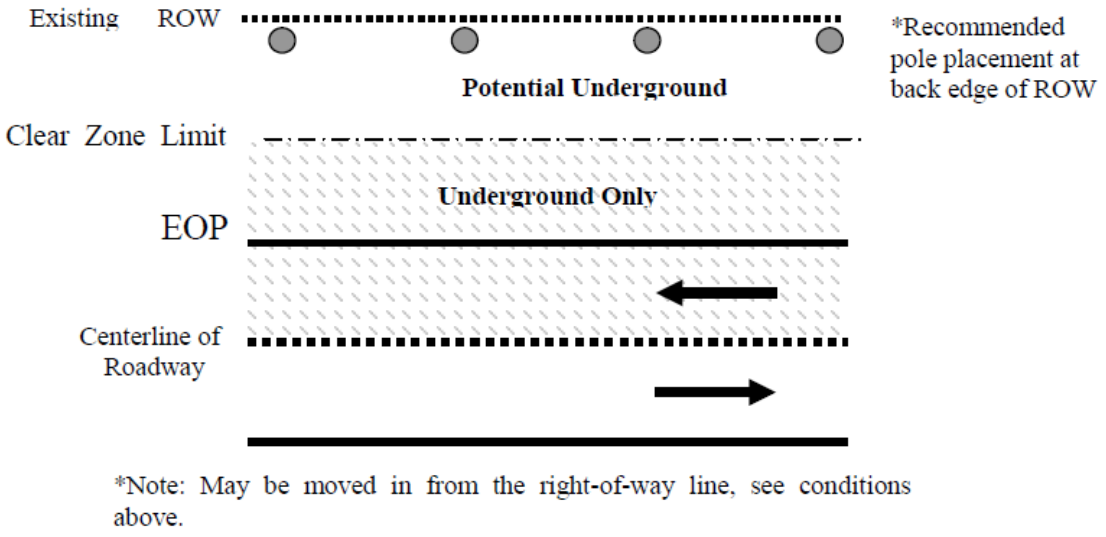
Figure 15. Recommended Pole Placement Beyond Clear Zone Limits



Right-of-Way is greater than Clear Zone - In the situation where the right-of-way is wider than the clear zone limits, the utility may be permitted to install poles and/or above ground utility appurtenances within the right-of-way but will not be permitted to install any poles and/or above ground utility appurtenances within the clear zone limits (see Figure 16). The utility may consider underground installation as an option within the clear zone limits.

Note: All utility facilities are to be installed at the back edge of the right-of-way. Exceptions to this policy may be allowed if other utilities occupy this location; in this case the facilities may be moved in a nominal distance as determined by the ATLDOT Utility Coordinator. Also, new pole line facilities may be moved inward from the back of the right-of-way line to remove the need for additional easements off the right-of-way. In both cases this distance will be determined based on the clear zone limit and right-of-way width.

Figure 16. Recommended Pole Placement at Back Edge of ROW



13. Urban Shoulder (curb and gutter section) - In keeping with the nature and extent of roadside development along roadways in urban areas, such facilities shall be located as near as possible to the right-of- way line and outside the clear zone limits. Where there are curbed sections, the utilities are to be as far as is practical behind the face of curb, preferably behind the sidewalk area. See section 5.6.2.3 bullet 5 of this Manual for above ground facility lateral clearance criteria.

5.6.2.4 Right-of-Way Crossings

When the location of poles or other support structures for lines crossing the right-of-way will be outside the right-of-way the following shall apply:

1. The ATLDOT permitting team will review the identified project list and determine if the proposed installation conflicts with an active project. A permit shall be issued if it is determined that there is no conflict. The utility shall clearly show on the plans the minimum vertical clearance above the roadway.
2. If it is determined that there is a conflict with an active project, then the utility should agree to install their facilities beyond the limits of any proposed (additional) right-of-way which is required for the active project. It would be in the best interest of both parties as well as the public for the utility to locate their facilities in such a manner that will avoid conflicts and eliminate the need for additional costs due to the planned project. A permit will be issued if the utility demonstrates that they can install their facilities in such a manner that will avoid conflicts with the active project.

5.6.2.5 Identification

1. Poles – Each pole shall bear a nameplate or label listing the following:
    a. Identifiers consisting of the utility company name and utility company phone number. The identifier shall be capital letters and shall be of a type size large enough to be legible without the aid of magnification.

b. Any other statements or labeling requirements imposed by the rules governing the FCC operation of the specific class of equipment attached to the pole expect that such statement(s) of compliance may appear on a separate label at the option of the utility.

c. The nameplate or label shall be permanently affixed to the pole and shall be readily visible at the time of installation. As used here, permanently attached part of the pole. Alternatively, the required information may be permanently marked on a nameplate of metal, plastic or other material fastened to the pole by welding, riveting, etc., or with a permanent adhesive.

d. Such a nameplate must be able to last the expected lifetime of the pole in the environment in which the pole will be placed and must not be readily detachable.

e. Where it is shown that a permanently affixed nameplate is not desirable or is not feasible an alternative method of positively identifying the pole may be used if approved by the City. The proposed alternative method of identification and the justification for its use must be included with the permit for authorization.

2. Overhead communication - Cable pole attachments shall bear a tag or label listing the following:

a. Identifiers consisting of the utility company name and utility company phone number. The identifier shall be capital letters and shall be of a type size at least three-quarter (3/4) inches tall with black letters on an orange background. The identifier shall be legible from the ground.

b. Any other statements or labeling requirements imposed by the rules governing the FCC operation of the specific class of equipment attached to the pole, except that such statement(s) of compliance may appear on a separate label at the option of the utility.

c. Communication cable attachments shall be marked on the following poles: every end pole, every junction pole and every fifth pole on longitudinal installations. Multiple attachments on the same pole shall be marked.

d. Such tag or label must be able to last at least ten (10) years in the environment in which the attachment is made. Older tags shall be replaced as the poles are visited.

5.6.3 Communication Cables Crossings

The installation of heavy aerial cables (generally any cable larger than one (1) inch in diameter) over divided right-of-way shall be prohibited. These lines usually are difficult to maintain over high-speed traffic. It is in the best interest of the right-of-way user to require communication cables crossing divided right-of-way to be placed underground or in duct on bridges.

5.6.4 Power Transmission Lines

Due to the size of the structures, transmission facilities larger than 115 KV, are not allowed for longitudinal installations on the right-of-way. However, exceptions may be granted on a case-by-case basis by the ATLDOT permitting team when the applicant can substantiate factually that all alternates have been studied and that no other practical alternate exists.

5.7 Installation On or Near Right-of-Way Structures

5.7.1 General Considerations

Attaching utility lines to a right-of-way structure can adversely affect the structure's integrity, safe operation of traffic, efficiency of maintenance, and its appearance. Where it is feasible and reasonable to locate utility lines elsewhere attachments to bridge structures are to be avoided.

On existing bridge structures, attachments of water or sewer lines are limited in size to twelve (12) inches or smaller. Water or sewer lines larger than eight (8) inches shall not be suspended from the slab. Gas lines exceeding 300 psi pressure will not be approved for bridge attachment. However, where other locations for a utility line to span an obstruction prove to be extremely difficult and unreasonably costly, consideration may be given for attaching the utility line to a bridge structure by a method acceptable to the City. Such methods should conform to engineering considerations for preserving the right-of-way and its safe operation, maintenance, and appearance. In these respects, the following considerations predominate.

5.7.2 Controls for Bridge Attachments

Since right-of-way structure designs and site conditions vary, the adoption of standardized methods to accommodate utility facilities on structures is not feasible. Each proposed bridge attachment will be considered on its individual merits and shall be separately designed. All design details for utility attachment to bridges shall be submitted to the ATLDOT's Bridge Engineer on copies of the project's bridge plans for approval prior to the permit being approved.

5.7.2.1 Structural and Design Requirements

1. Utility facilities are to be designed in accordance with all governing codes.
2. Bridge attachment of a utility facility will not be considered unless the structure in question is of a design that is adequate to support the additional load and to accommodate the utility facility without compromise of right-of-way features, including ease of bridge inspection and maintenance.
3. Where a utility facility is carried beyond the back of an end wall or bridge abutment, generally it shall be required to extend beyond the approach slab and curve or angle to align outside the roadbed structure in as short a distance as is operationally practicable. Preferably it should be in the first or closest bay of the structure (i.e. - not on the outside of the bridge). Where attachment is considered, coring or cutting of edge beams or approach slabs will not be allowed. On end walls, whose primary purpose is to retain the end fill, approval may be granted to core reasonable sized holes provided critical reinforcement is not cut.
4. Acceptable utility attachment methods are hangers and/or roller assemblies suspended either from inserts in the underside of the bridge deck or from hanger rods clamped to the flange of some superstructure member. Hanger assemblies shall not be placed on an expansion joint, or at a bearing stiffener or similar structural features.

   Where attachments are allowed, chemical anchors, expansion type anchors or a combination of both may be permitted. Chemical anchors are NOT ALLOWED IN THE DIRECTION OF TENSION IN OVERHEAD APPLICATIONS. However, anchorages may be permitted in combination of additional "fail-safe" connections. Generally, shear type connections are preferable. Diaphragms or cross frames will not be used to support utility facilities. However, approval may be granted to core

reasonable sized holes in diaphragms provided critical reinforcement is not cut. Coordination with the ATLDOT's Bridge Engineer is required for attachments to bridges.

Utility facilities shall not be suspended from bridge slabs in areas where concrete deck panels have been used in construction. Bolting through the bridge deck, drilling into prestressed concrete beams or post tensioned portions of any concrete structure will not be permitted. No welding will be allowed on any existing structural steel on any bridge. No clamping attachments that create a stress concentration will be permitted on any structural steel structure.

5. The utility company will be required to make satisfactory provisions for the lineal expansion and contraction of its facility due to temperature differentials. Line bends or expansion couplings are most prevalently employed for this purpose. Bridge structures shall not be used as thrust blocks for utility facilities under pressure.
6. All material attached to or used in the bridge structure pipe or duct line attachments must be approved by the ATLDOT Bridge Engineer. All metal components shall be galvanized or made from stainless steel.
7. Manholes for utility access will not be allowed in the bridge deck.
8. Utilities will not be allowed on bridges where bridge fills or abutments are retained by reinforced earth-type walls.

5.7.2.2 Clearances

1. Utility facilities attached to bridge structures shall maintain a vertical clearance at least equal to that of the structure at any point.
2. Utility location on a structure which would inhibit access to any part for bridge inspection, painting or repair will not be allowed. Clearances of the utility facility from bridge members shall conform to all governing codes.
3. Generally, acceptable utility installations are those which will occupy a position beneath the structure's floor between the outer girders or beams, or within a cell.
4. New utility installations on an existing bridge shall be placed a minimum of eighteen (18) inches from existing utilities.

5.7.2.3 Aesthetics

1. Utility facilities attached to the outside of bridges are unsightly and susceptible to damage. They will not be permitted unless the utility can show that there is no reasonable alternative.
2. Utility facility mountings are to be of a type which will not rattle due to vibrations caused by traffic. The support rollers, saddles or hangers shall be coated or padded with neoprene or otherwise equipped to muffle vibration noise.

5.7.2.4 Restoration

1. When the utility facility is to pass through a bridge abutment or end wall of an existing bridge, the utility company shall neatly restore the disturbed areas by methods which will prevent any leakage of water or backfill through the substructure elements. Where such construction is proposed, the hole created in the bridge end wall or abutment to permit passage of the facility shall be of the minimum size. The annular space between end wall or abutment and pipe shall be filled with a suitable material of a nature to seal such opening and effectively prevent the leakage of any

moisture or backfill material through the abutment. Where a pipe or conduit is to be "sleeved" through the end wall or abutment, the sleeve shall be tight sealed into the opening and the annular space between the pipe conduit and the sleeve sealed with mastic.

2. The utility will be required to restore or repair any portion of bridge or right-of-way disturbed by the installation or use.

5.7.2.5 Encasement

1. Since a pipeline carrying a volatile fluid or gas under pressure can cause damage or injury if there is a leak, it poses a certain element of risk when mounted on a bridge. Likewise, attachment of a pipeline carrying a non-volatile fluid, such as sewer or water, also poses a certain element of risk, with respect to leakage, where mounted on an above ground structure such as a bridge crossing a freeway, right-of-way, street, road, railroad, or water. In either case, when such a carrier is placed in a casing pipe of leakproof construction, leakage can be detected and exhausted at vents or drains and the casing becomes a "second line of defense" against the hazard of explosion. Casing shall be required for all such pipeline attachments throughout the bridge. Exceptions to this requirement shall be approved by the ATLDOT Bridge Engineer. The casing pipe shall be carried beyond the back of the bridge abutment and approach slab and be effectively opened or vented at each end to prevent possible build-up of pressure and to detect leakage of gases or fluids.
2. When a casing is not provided for a pipeline attachment to a bridge, additional protective measures shall be taken. Such measures may include a higher factor of safety in design, superior design and construction, radiograph testing of welds and hydrostatic testing.
3. Communication and electric power line attachments are to be suitably insulated, grounded, and carried in protective conduit or pipe from the point of exit from the ground to re-entry. The cable shall be carried to a manhole located a minimum of forty (40) feet beyond the end wall of the structure. Carrier pipe and casing pipe shall be suitably insulated from electric power line attachments.
4. Utility facilities shall be encased when they are located under bridge approach slabs. The casing shall extend from the end wall to a point beyond the approach slab.

5.7.2.6 Cathodic Protection

1. Utility facilities, such as gas, water, etc., which are attached to bridge structures shall be free of any impressed direct current for cathodic protection or shall be electrically isolated from the bridge.
2. When utility lines containing impressed direct current are to be attached to a bridge structure, the following precautions shall be taken unless other suitable protection is detailed on permit plans and details.
    - Insulating flanges or connections shall be installed beyond each backwall of the bridge structure for the purpose of insulating or isolating the section of the facility attached to the bridge structure from the underground sections of the facility containing impressed direct current for cathodic protection.
    - If necessary, the direct current shall be continued across the bridge through an insulated wire attached to the underground facility at each end of the bridge. This insulated wire shall be enclosed in metallic conduit. Both this conduit and the facility or its casing shall be insulated from the bridge structure. This conduit shall be grounded to a ground rod at each end of the bridge.

5.7.2.7 Shut-off Valves

On all facility attachments carrying gas or liquid under pressure, which, by nature of the transmittant or its pressure, might cause damage or injury if escaping on or in the vicinity of the right-of-way structure, there shall be emergency shut-off valves. Such valves shall be placed within an effective distance each side of the structure unless the facility is equipped with nearby shut-off valves or operates under effective control by automatic devices.

5.7.3 Controls for Utilities Near right-of-way Structures

Buried, non-pressurized utility installations allowed under bridges shall be no closer than five (5) feet laterally and shall be above the footings or ten (10) feet laterally to piles or trestle pile bents. Buried pressurized utility installations under bridges shall be no closer than ten (10) feet laterally and shall be cased for a minimum distance of twenty-five (25) feet from the edge of footing. Requests for placement of utilities near reinforced earth type walls may be allowed after special review by the City. Minimum lateral clearance between a bridge and an underground utility crossing a limited access right-of-way shall be one hundred (100) feet.

5.8 Special Case Utilities (Irrigation, Drainage and Clay Pipelines)

Irrigation, drainage, and clay pipelines installed across right-of-way generally shall be designed and constructed in accordance with the City's specifications for culverts. Ditches and canals that closely parallel the right-of-way shall be discouraged.

5.8.1 Controls for Public Right-of-Way by Private Irrigation Lines

The following controls are required to protect the right-of-way and permit reasonable access to adjacent property owners accommodating these special case utility facilities.

5.8.1.1 Right-of-Way Crossings

Right-of-Way crossings by irrigation lines shall be permitted under similar conditions and standards as apply to underground utility lines and are as follows:

1. Crossing shall be installed at right angles to the centerline of the road insofar as possible.
2. Open cutting of pavements will not be permitted. Crossings shall be bored beneath the pavement and a permanent casing installed. Minimum cover from top of pavement to top of casing shall be four (4) feet (unless 4-lane roadway, then minimum depth is ten (10) feet). Casings larger than four (4) inches in diameter shall be required to utilize boring type construction.
3. Lines installed as permanent installations shall be buried across the right-of-way with a minimum cover of three (3) feet except for the section beneath the pavement.
4. Temporary lines may be laid across the right-of-way on top of the ground outside the ditch lines or toe of fill. Temporary lines are those which will remain in place for no more than two (2) days during each period of use.
5. Irrigation lines shall not be installed inside cross drainpipes or culverts. Lines may cross underneath bridges, either below ground or on top of the ground in accordance with paragraphs 1 and 3 above. "Lines may be placed inside cattle passes or other structures designed for access across the road."

6. Immediately upon completion of each installation the applicant shall restore the right-of-way to original condition. This shall include backfilling and compacting excavations, dressing slopes, and grassing, as necessary.

5.8.1.2 Longitudinal Installations

Irrigation lines shall not be installed parallel to the roadway along the right-of-way. Short exceptions, up to one hundred (100) feet, may be made in conjunction with a road crossing where necessary to reach a location with suitable topography to install the crossing.

5.8.1.3 Controls

Permits for irrigation line crossings will be administered by the ATLDOT's permitting team.

1. The Permit General Provisions (Rules and Regulations) issued shall apply to irrigation line permits. A copy of these rules shall be attached to the applicant's copy of each approved permit so that there is no misunderstanding as to the responsibilities and liability of the applicant.
2. A bond shall be required for each irrigation line permit. The minimum bond will be $5,000 per lane. A larger amount may be required at the discretion of the ATLDOT permitting team, depending upon the nature of the installations and the potential damage to the roadway. The bond must be in hand before the permit is approved and shall be required to remain in effect for a period of twelve (12) months after permit work is completed.
3. Permit requests which follow all the above requirements may be approved by the ATLDOT permitting team. Any request for exceptions to this policy shall be forwarded to the ATLDOT permitting team.

5.8.2 Controls for Clay Pipelines

Due to clay pipelines being considered a special case "utility", privately owned, and not serving a public purpose under the usual concept of a utility, the following policy and procedure shall apply to use of the City's right-of-way by these facilities.

5.8.2.1 Right-of-Way Crossings

Right-of-Way crossings by clay pipelines shall be permitted under similar conditions and standards as apply to underground utility lines as follows:

1. Crossing shall be installed at right angles to the centerline of the road in so far as possible.
2. Open cutting of pavements will not be permitted. Crossings shall be bored beneath the pavement and a permanent casing installed. Minimum cover from top of pavement to top of casing shall be four (4) feet (unless 4-lane roadway, then minimum depth is ten (10) feet).
3. Clay pipelines shall not be installed inside cross drainpipes or culverts. Lines may cross underneath bridges, or placed inside cattle passes, or other structures designed for access across the road.
4. Immediately upon completion of each installation the applicant shall restore the right-of-way to original condition. This shall include backfilling and compacting excavations, dressing slopes, and grassing, as necessary.

5.8.2.2 Longitudinal Installations

Clay pipelines shall not be installed parallel to the roadway along the right-of-way. Short exceptions, up to one hundred (100) feet, may be made in conjunction with a road crossing where necessary to reach a location with suitable topography to install the crossing.

5.8.2.3 Controls

Permits for clay pipeline crossings will be administered by the ATLDOT's permitting team.

1. The permit general provisions (rules and regulations) shall apply to clay pipeline permits. A copy of these rules shall be attached to the applicant's copy of each approved permit so that there is no misunderstanding as to the responsibilities and liability of the applicant.
2. All applications for new installations should be reviewed by the ATLDOT permitting team, including a field investigation.
3. A bond will be required for all clay pipeline installations. The amount of the bond will be set by the ATLDOT permitting team, taking into consideration the nature of the installation and the potential for damage to the roadway during construction and in event of a pipeline failure. The initial bond shall be executed and attached to the permit application before it will be approved.
4. Bonds shall be renewable annually for as long as the pipeline remains within the right-of-way. Upon each annual review the ATLDOT permitting team may change the required amount of the bond at their discretion.

5.9 Lighting Procedures

For lighting guidelines and procedures, the City has generally adopted the American Association of State Highway and Transportation Officials (AASHTO) policy Roadway Lighting Design Guide (current edition). The City also utilizes the GDOT Design Policy Manual which provides information concerning the lighting of future construction, reconstruction projects and permitted lighting features on right-of-way. It is not intended that existing lighting systems, (beginning on the date of the adoption of this Manual) be modified because of the policies outlined in this policy. The remainder of this section will address items not included in the AASHTO guide and/or to provide further clarification on utility lighting permits based on the GDOT Design Policy Manual. For a complete copy on all lighting policies and procedures, design requirements, permits, lighting standards or pole locations, and luminary heights, refer to Chapters 5 and 14 of the GDOT Design Policy Manual and/or the City of Atlanta Right of Way Manual. Please note that all new designs and installations should incorporate an electric service metered pedestal.

5.9.1 General Requirements and Controls

All permits to place lighting facilities within the City's right-of-way are to be applied thru the City's permit portal. The ATLDOT TIM engineering team will review and determine exactly what type of lighting permit has been received. There are four (4) different guidelines or types as follows:

1. Residential Lighting - Consisting of one (1), two (2) or more luminaries only for the purpose of lighting private property while utilizing existing pole facilities. The applicant is paying for entire cost. The ATLDOT TIM engineering team will review electrical hookups, height of lights and position. Once reviewed and accepted by the ATLDOT TIM engineering team, the ATLDOT permitting team will approve the utility permit.

2. Business Lighting – Consisting of two (2) or more luminaries while utilizing existing pole facilities for the purpose of lighting private property with the applicant paying for entire cost. The applicant is paying for entire cost. The ATLDOT TIM engineering team will review electrical hookups, height of lights and position. Once reviewed and accepted, the ATLDOT permitting team will approve the utility permit.

   If the request consists of two (2) or more luminaries on new pole facilities for the purpose of lighting private property with the applicant paying for entire cost, then the ATLDOT TIM engineering team will review pole/light standard locations and electrical hookups and the City's Traffic PM will review the height of lights and position. Once reviewed and accepted by the ATLDOT TIM engineering team and City's Traffic PM, the ATLDOT permitting team will approve the utility permit with the Memorandum of Agreement attached or leasing agreement through Georgia Power Company.

3. Governmental Lighting (Minor) - Consisting of a request to light a section of a State Route that is not located on the National Highway System and the Local Government or Applicant is paying for the entire cost of the lighting system with no more than four luminaries. ATLDOT TIM engineering team will review pole/light standard locations and electrical hookups and the height of lights and position. Once reviewed and accepted, the ATLDOT permitting team will approve the utility permit.

4. Governmental Lighting (Major) - Consisting of a request to light sections of a State Route that is not located on the National Highway System and the Local Government or Applicant is paying for the entire cost of the lighting system with five or more luminaries. ATLDOT TIM engineering team will review pole/light standard locations and electrical hookups and height of lights and position. Once reviewed and accepted, the ATLDOT permitting team will approve the utility permit.

5.9.2 Information to Accompany Permit

In addition to the items required to be shown on a standard utility permit as per Section 3.7.1 of this Manual, the utility shall submit with the permit application the illumination and uniformity ratio, lamp rating, horizontal location of luminaries, lighting style, luminary type, and mounting height.

5.9.3 Lighting Pole/Light Standard Locations

Lighting pole/light standards shall be located with characteristics to traffic and the least obstructive for maintenance operations. The AASHTO Roadside Design Guide's (current edition) clear zone guidelines are to be used to determine the desired distance for pole/light standard installation. Each permit will be reviewed to prevent new utility pole/light standards from being installed in the shaded control zones (see Section 5.6.2, Figure 8 to Figure 14 of this Manual) to the extent as possible.

5.9.3.1 Non-Breakaway Pole/Light Standards

Pole/light standards without breakaway features are acceptable only when located beyond the distance required by the clear zone guidelines. Pole/light standards may be located behind existing guardrail if protected from all directions of travel. If located behind guardrail, pole/light standards shall be offset sufficiently to allow for deflection of the guardrail under impact.

When determining the required clear zone distance, first check whether a clear zone has been previously established for the route from the ATLDOT PM. If a clear zone has not already been established, then posted speed and the roadside geometry is the determining factor.

5.9.3.2 Breakaway Pole/Light Standards

Any pole/light standards that are not located outside of the clear zone shall be mounted on an AASHTO compliant breakaway mounting. The Local Government or Applicant shall consider the size of the base when measuring horizontal clearance due to breakaway or frangible bases are generally wider than the pole/light standard. The minimum distance for breakaway pole/light standards is as follows:

Rural Shoulder - The horizontal distance from the edge of travel way or the edge of the auxiliary lane to the base of the light standard should be no less than twenty (20) feet.

Urban Roadways - In urban roadway conditions, pole/light standards should be positioned in accordance with rural shoulder guidelines or as close to the right-of-way line as possible. If it is not feasible to comply with this guide, light standards shall be placed directly outside of the sidewalk and at least seven (7) feet from the face of curb (although not feasible in the Central Business District). Coordination of pole/light standard placement with sidewalks and other roadside features shall ensure that at least four (4) feet of usable sidewalk remains, and that the lights do not conflict with other permitted features or elements on the urban shoulder.

Median - Median lighting is only acceptable if integrated with concrete median barrier installations and/or existing barrier.

5.9.4 Wire Requirements

Where breakaway bases are required, overhead wiring will not be permitted. In cases where wood poles or light standards without the breakaway feature are permissible, overhead wiring will be permitted. Where overhead wiring is permitted, conductor crossings will not be permitted from pole to pole on a staggered pole arrangement. Only normal conductor crossings will be permitted to complete circuit wiring.

5.9.5 Removal of Lighting Facilities

When any lighting installation or system ceases to be maintained or operated for a period of sixty (60) consecutive calendar days, notice shall be given by ATLDOT TIM engineering team, in writing to the Local Government or Applicant to whom the permit for installation was issued. The notice will advise the Local Government or Applicant that if the lighting is not restored or work begun to restore in fifteen (15) consecutive calendar days from the date of the written notice, such lighting will be considered a hazard and subject to removal by State forces with all materials and equipment removed becoming the property of the City for disposal or other use as deemed appropriate. Any cost to the City to remove said facilities shall be reimbursable by the applicant as per Section 2.5.3.3 of this Manual.

5.10 Wireless Facilities

5.10.1 Guidelines

The following policies and procedures are for accommodating and controlling access of wireless telecommunications facilities and mini cell antennas on the right-of-way and other non-right-of-way real property owned by City, by either attaching to existing utility poles or certain City facilities (signal and strain poles only). This section is not intended to hinder a utility's ability to operate their own Distribution Automation Devices (e.g., sectionalizing devices, reclosers, breakers, etc.) with communications to line devices. In addition to the following guidelines, SB66 shall govern the installation of small cell facilities within the right-of-way.

The City's intent is to accommodate wireless communications facilities by issuing encroachment permits after a Right of Way Agreement has been agreed to and executed by both the applicant and the City. The Right of Way Agreement and encroachment permits will give guidance to wireless applicants concerning the placing of wireless facilities within the right-of-way and other non-right-of-way real property owned by City.

In no case will wireless telecommunications facilities and/or antennas be allowed or permitted on limited access or interstate rights-of-way. Additionally, the installation of new pole(s) or pole lines, cell towers, and/or monopoles will not be allowed within right-of-way or on surplus property owned by the City.

5.10.2 Agreements

A Right of Way Agreement will specify the terms and conditions to be followed in conjunction with all work performed within the right of way. All agreements will include terms for compensation, as established for wireless telecommunications facilities and antenna communications providers, to cover administration costs by the City for use of the right of way. All agreements shall specify the initial and renewal terms.

5.10.3 Location

Pursuant to all the terms and conditions of the Agreement, the City agrees to permit the applicant certain space (the "Space") located on a portion of City's right-of-way and other non-right-of-way real property owned by City (the "Property"), for the installation, operation, and maintenance of small cell communications equipment. Terms for the applicant to locate on right-of-way and other non-right-of-way real property shall meet one of the following two agreement conditions:

5.10.3.1 Non-City Facilities

Specifically, the City shall permit applicant to place antennas and other associated equipment on existing poles, not owned by the City within the City's right-of-way; together with such additional space on the Property sufficient for the installation, operation and maintenance of antennas (the "Antenna Space") and associated communication equipment, whether on existing poles or ground- mounted, subject to permit requirements set forth in Section 5.10.4; together with such additional space on and over the Property for the installation, operation and maintenance of wires, cables, conduits and pipes (the "Cabling Space") running between and among the Cable Space and Antenna Space, not to exceed a maximum distance of fifty-two (52) feet, and to all necessary electrical and telephone utility sources located on the Property; together with the non-exclusive right of ingress and egress from a public right-of-way over the Property, seven (7) days a week, twenty-four (24) hours a day (provided, however, if lane closure is involved, subject to approved permit or work restrictions due to holidays and storm emergencies). In the event there are insufficient electric, and telephone, cable or fiber utility sources located on the Property, City agrees to grant applicant or the local utility provider the right to install such utilities on, over and/or under the Property necessary for applicant to operate its communications facility, if applicant or such utility provider has applied for and received a separate permit for additional work in accordance with Section 5.10.4.

NOTE: The City's permit only grants access to perform work within the City's right-of-way; the wireless applicant is also required to get written permission from the local utility (pole owner) before placing any antennas, wires, cables, equipment, etc. on any pole.

5.10.3.2 City Facilities

Specifically, the City shall permit applicant to place antennas and other associated equipment on existing signal and strain poles, owned by the City, within the City's right-of-way; together with such additional

space on the Property sufficient for the installation, operation and maintenance of antennas (the "Antenna Space") and associated communication equipment, whether on existing City owned poles or ground-mounted, subject to permit requirements set forth in Section 5.10.4; together with such additional space on and over the Property for the installation, operation and maintenance of wires, cables, conduits and pipes (the "Cabling Space") running between and among the Cable Space and Antenna Space, not to exceed a maximum distance of fifty-two (52) feet, and to all necessary electrical and telephone

Utility sources located on the Property; together with the non-exclusive right of ingress and egress from a public right-of-way, over the Property, seven (7) days a week, twenty-four (24) hours a day (provided, however, if lane closure is involved, subject to approved permit or work restrictions due to holidays and storm emergencies). In the event there are insufficient electric, and telephone, cable or fiber utility sources located on the Property, City agrees to grant applicant or the local utility provider the right to install such utilities on, over and/or under the Property necessary for applicant to operate its communications facility, if applicant or such utility provider has applied for and received a separate permit for additional work in accordance with Section 5.10.4.

5.10.4 Permits

Prior to commencing any work on the right-of-way and City-owned property, the applicant shall have applied for and obtained an approved permit from the ATLDOT permitting team. The permit will allow applicant the right to construct and maintain a public service utility line for a maximum distance of fifty-two feet (52') within the limits of a right-of-way and City-owned property. Applicant will apply for a permit for each separate location for which applicant desires to locate its equipment and abide by the terms of that permit.

The permit shall include, but be not limited to, items in Section 3.7.1., individual site plan designs for each location showing the proposed pole and attachments, utility services required, antenna height, and all details including a vicinity map. The placement of the wireless facility may require a letter from electric utility facility owner adjacent to the installation site to verify NESC requirements are met.

5.10.5 Use; Governmental Approvals

Applicant shall use the right of way for the purpose of constructing, maintaining, repairing, and operating a communications facility and uses incidental thereto. Applicant shall have the right to replace, repair, add or otherwise modify its utilities, equipment, antennas and/or conduits or any portion thereof and the frequencies over which the equipment operates, whether the equipment, antennas, conduits, or frequencies are specified or not on any exhibit attached to a permit, during the Term, as per the permitting procedures. It is understood and agreed that applicant's ability to use the right of way is contingent upon its obtaining, after the execution date of each permit, all the certificates, permits and other approvals (collectively the "Governmental Approvals") that may be required by any Federal, State or Local authorities, as well as a satisfactory building structural analysis which will permit applicant use of the Premises as set forth above. City shall cooperate with applicant in its effort to obtain such approvals and shall take no action which would adversely affect the status of the right of way with respect to the proposed use thereof by applicant unless:

1. Any of such applications for such Governmental Approvals should be finally rejected;
2. Any Governmental Approval issued to applicant is canceled, expires, lapses, or is otherwise withdrawn or terminated by governmental authority; and
3. Applicant determines that such Governmental Approvals may not be obtained in a timely manner, applicant shall have the right to terminate the applicable permit.

Notice of applicant's exercise of its right to terminate shall be given to City in accordance with the notice provisions set forth in the Agreement and shall be in effect.

5.10.6 Indemnification

Applicant shall indemnify and hold the City harmless against any claim of liability or loss from personal injury or property damage resulting from or arising out of the negligence or willful misconduct applicant, its employees, contractors, or agents, except to the extent such claims, or damages may be due to or caused by the negligence or willful misconduct of City, or its employees, contractors, or agents.

5.10.7 Insurance

Applicant will maintain commercial general liability insurance with a combined single limit not less than $2,000,000 for injury to or death of one or more persons and damage or destruction to property in any one occurrence. Applicant will include City as an additional insured. Failure to maintain insurance coverage shall constitute a violation of this policy and grounds for revocation of conditional use.

5.10.8 Interference

Applicant agrees to install equipment of the type and frequency which will not cause harmful interference which is measurable in accordance with then-existing industry standards to any equipment of City or other permitted users which existed prior to installation. In the event applicant's equipment causes such interference, after-installed, and after City has notified applicant in writing of such interference, applicant will take all commercially reasonable steps necessary to correct and eliminate the interference, including but not limited to, at applicant's option, powering down such equipment and later powering up such equipment for intermittent testing. In no event will the City terminate a permit or relocate the equipment if applicant is making a good faith effort to remedy the interference issue. City shall be entitled to power down immediately or cause to be powered down applicant's equipment where the interference is with traffic-control devices. City agrees that any other permitted users of the Property who currently have or in the future take possession of the right of way will be permitted to install only such equipment that is of the type and frequency which will not cause harmful interference which is measurable in accordance with then-existing industry standards to the then-existing equipment of applicant.

5.10.9 Removal at End of Term; Abandonment of Right-of-Way

Applicant shall, upon expiration of the Term, or within ninety (90) days after any earlier termination of a permit, remove its equipment, conduits, fixtures, and all personal property and restore the right of way to its original condition, reasonable wear and tear and casualty damage excepted. City agrees and acknowledges that all the equipment, conduits, fixtures, and personal property of applicant shall remain the personal property of applicant and applicant shall have the right to remove the same at any time during the Term, whether said items are considered fixtures and attachments to real property under applicable laws.

The applicant recognizes that the City holds an easement interest only in certain areas of its rights-of-way. Upon abandonment by City of a right-of-way or section thereof, applicant may have no rights against the owner of the underlying fee estate to maintain its facilities. Applicant shall have no right to cause the City to continue to operate the road. In the event, in its sole discretion, City determines it is in the public interest to abandon said right-of-way, the applicable permit shall terminate, and no further right-of-way fees will accrue.

5.10.10 Rights Upon Sale

Except as provided in Section 5.10.9 above regarding abandonment, should the City, at any time during the Term of any permit decide:

1. to sell or transfer all or any part of the Property to a purchaser other than applicant, or
2. to grant to a third party by easement or other legal instrument an interest in and to that portion of the Property occupied by applicant, or a larger portion thereof, for the purpose of operating and maintaining communications facilities or the management thereof, such sale or grant of an easement or interest therein shall be under and subject to the permit and any such purchaser or transferee shall recognize applicant's rights hereunder and under the terms of the permit. If City completes any such sale, transfer, or grant described in this paragraph without executing an assignment of the permit whereby the third party agrees in writing to assume all obligations of City under the permit, then City shall not be released from its obligations to applicant under the permit, and applicant shall have the right to look to the City and the third party for the full performance of the permit.

5.10.11 Environmental

Except as permitted by law, neither Party will allow any hazardous substances, including without limitation all pollutants, wastes, flammables, explosives, radioactive materials, hazardous materials, hazardous wastes, hazardous or toxic substances and all other materials defined by or regulated under any environmental law.

6 Vegetation Management

6.1 General References

For questions pertaining to pruning, removal or impacting trees on the City's right-of-way, please contact the COA Department of Parks & Recreation at (404) 546-6813 or email at parkscustomerservice@atlantaga.gov

For questions pertaining to pruning, removal or impacting trees on private property, please contact the COA Department of City Planning – Arborist Division at (404) 330-6874 or email at arborist.dpcd@atlantaga.gov

For detailed information about the City's vegetation management requirements and processes, including the ***City of Atlanta Tree Ordinance***, please visit the following webpage: Office of Buildings - Arborist Division | Atlanta, GA (atlantaga.gov)

Pruning is allowed if:

- no more than 20% of the live canopy is removed.
- proper pruning cuts are made (according to ANSI Standards)
- the canopy is still balanced when pruning is complete.

Types of pruning that are not allowed are trimming, tipping, topping, or flush cutting. Other practices not allowed on healthy trees are spiking, gaffs, or climbing spurs. More information can be found in the definition section of the Tree Protection Ordinance, Section 158-26. Please contact the Arborist Division for any questions.

Removal is the complete removal of trees. A permit is required for the removal of hardwood trees 6" in diameter at breast height (DBH) and greater, measured at 4.5' above ground, and pines 12" and greater DBH. Please contact the Arborist Division for the permitting process.

Impacting – digging within the Critical Root Zone (CRZ) of a tree requires a permit. To obtain a permit, site plans must be submitted showing the accurate location of tree(s), and proposed impact(s). The CRZ extends 1' for every inch diameter. See the Checklist for Tree Protection Plan for additional requirements. Please contact the Arborist Division for further information or questions.

It is the responsibility of the City Department to contact and obtain approval from the private property owner before work commences.

7 City Code of Ordinances/State Law and Reference Links

7.1 City of Atlanta Code of Ordinances – Part II – General Ordinances

- Chapter 34 – Cable Communications Regulations
- Chapter 134 – Special Assessments
- Chapter 138 – Streets, Sidewalks and Other Public Places
- Chapter 150 – Traffic and Vehicles
- Chapter 154 – Utilities
- Chapter 158 – Vegetation

City Code of Ordinance	O.C.G.A.
34	46-5-2 et seq.
138	32-4-90.2 et seq.
138-1.11	32-1-3(24)
138-5	32-7-1 et seq.
138-13	32-6-51
138-15	32-6-1 et seq.
138-43	21-1-1
138-73	25-9-1 et seq., 25-9-5, 25-9-6
138-164	32-4-42(6), 32-4-92(a)(10), title 36, ch. 66C
138-165	36-66C-2
138-166	36-66C-5(a)(1)-(7), 36-66C-5(b) (e)
	36-66C-6(c) (e) (f), 36-66C-7
	36-66C-7(h)(1)-(3), 36-66C-7(j)
	36-66C-7(k)(2), 36-66C-7(k)(2)(B)
	36-66C-7(n), 36-66C-10, 11, 12, 13
138-167	36-66C-7(l) (m) (o) (p), 36-66C-7(p)(1)

City Code of Ordinance	O.C.G.A.
138-168	36-66C-7(h)
154, Arts. III—V	36-34-5
154-73.3	31-2-5.2
154-73.4(2)	31-3-5.2
154-73.5(a), (d)	12-5-7(a)(1), (2)
154-120	30-60-17
154-211	50-18-70
158-27	Ga. Const. art. IX, § II, ¶¶ 3, 4
158-32	44-10-1 et seq.

7.2 Reference Links

City of Atlanta Code of Ordinances

City of Atlanta Public Right-of-Way Manual

Atlanta DOT - webpage

CITY OF ATLANTA

DEPARTMENT OF TRANSPORTATION

Prepared by

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