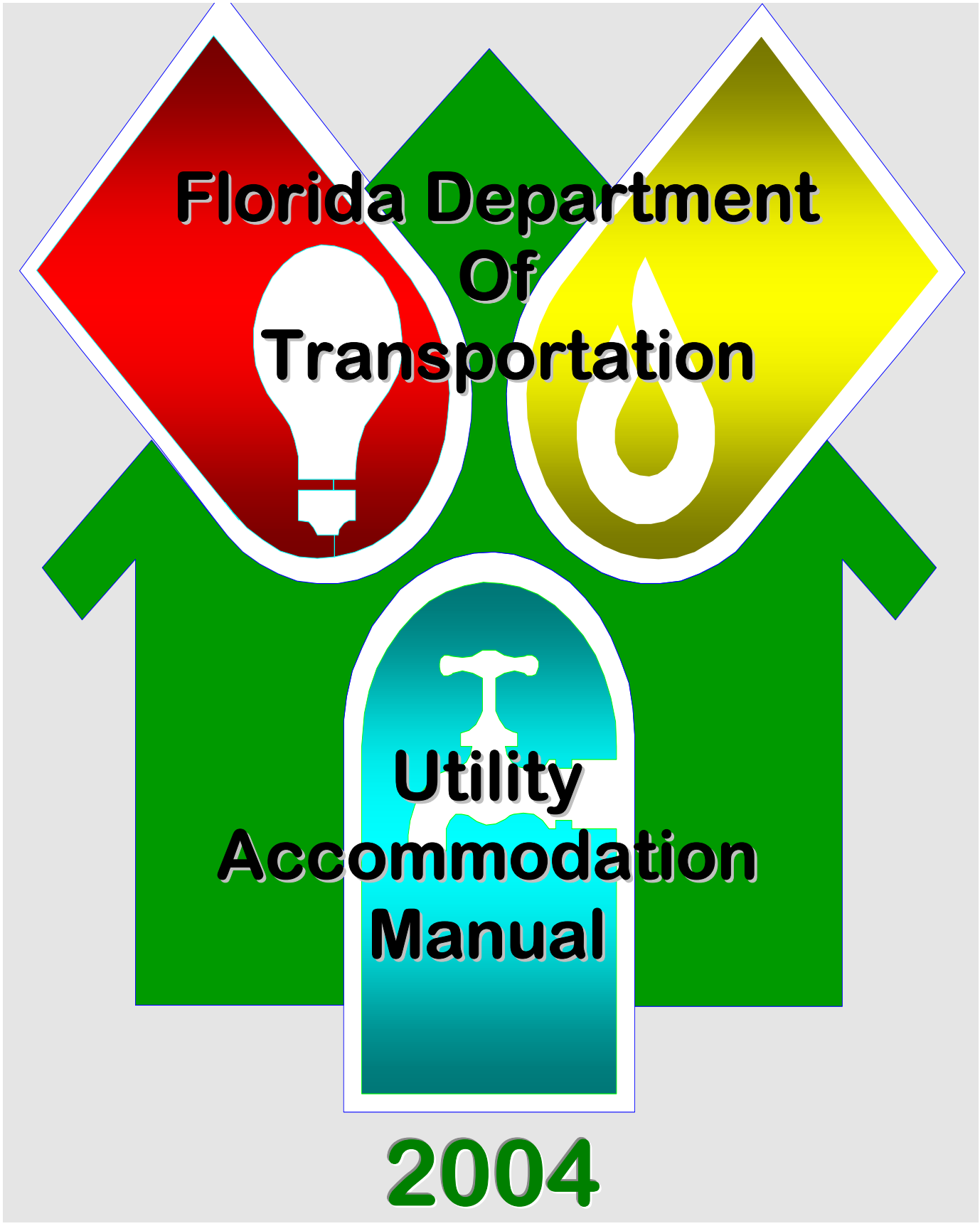

Florida Department
Of
Transportation
Utility
Accommodation
Manual
2004

PREFACE

The intent of the ***Utility Accommodation Manual*** is to provide direction, policy, criteria, and regulations for the accommodation of utilities within **Florida Department of Transportation** rights-of-way. The criteria in the ***Utility Accommodation Manual*** shall be applied through the exercise of sound engineering judgment.

Pursuant to **Section *334.044(1), Florida Statutes***, the **Florida Department of Transportation** has the responsibility for coordinating the planning of a safe, viable, and balanced State transportation system serving all regions of the state, and to assure the compatibility of all components, including multi-modal facilities. The ***Utility Accommodation Manual*** sets forth the criteria and procedures of the **Florida Department of Transportation** for the accommodation of utilities within State Transportation Facility rights-of-way pursuant to **Sections *337.401 - 337.404***, ***Florida Statutes***. **Sections *337.401 - 337.404, Florida Statutes***, are a part of the Florida Transportation Code, as set forth in **Section *334.01***, ***Florida Statutes***, and are applied in accordance with the purpose of the ***Florida Transportation Code***, as set forth in **Section *334.035***, ***Florida Statutes***.

Section 337.401(1), *Florida Statutes*, provides the **Florida Department of Transportation** with the specific authority to prescribe and enforce reasonable rules or regulations governing the placing and maintaining of utilities along, across, or on any State Transportation Facility. **Section *337.401(2), Florida Statutes***, provides that the **Florida Department of Transportation** may grant the use of the rights-of-way for a utility in accordance with **Florida Department of Transportation** rules or regulations and that no utility shall be installed, located, or relocated unless authorized by a written permit issued by the **Florida Department of Transportation**. **Section *337.401(2), Florida Statutes***, further provides that the permit holder is responsible for any damage resulting from the issuance of such permit. **Section *337.403(1), Florida Statutes***, provides that any utility found by the **Florida Department of Transportation** to be unreasonably interfering in any way with the convenient, safe, or continuous use, or the maintenance, improvement, extension, or expansion, of such public road or publicly owned rail corridor shall, upon 30 day's written notice to the Utility or its agent by the authority, be removed or relocated by such Utility at its own expense except as provided in paragraphs (a), (b), and (c). ***Section 337.403(3), Florida Statutes,*** provides that whenever an order of the authority requires such removal or change in the location of any utility from the right-of-way of a public road or publicly owned rail corridor, and the owner thereof fails to remove or change the same at his or her own expense to conform to the order within the time stated in the notice, the authority shall proceed to cause the utility to be removed. The expense thereby incurred shall be paid out of any money available therefore, and such expense shall, except as provided in subsection (1), be charged against the owner and levied and collected and paid into the fund from which the expense of such relocation was paid.

Utilities Liaison – The **Florida Department of Transportation** provides sources of Liaison activities and information at the State and District level through several sources. These include direct contact, phone, email and web search. The Chief Liaison person on Utility Accommodation Standards and Criteria is the State Utility Engineer, located in Tallahassee, Florida. This person should be consulted on matters of statewide significance only except where otherwise noted in this ***Utility Accommodation Manual***. For matters relating to Utility Permits, the District Maintenance Office is the appropriate contact point. Each Office has Utility Permit Engineers to address permitting related issues. For issues related to **Florida Department of Transportation** Construction of Design Projects in the Work Program, the District Utility Engineer is the appropriate

contact.

The "MyFlorida.com" web site is available for accessing general information about Florida Government services. Information related to the **Florida Department of Transportation** business, documents, and the ***Five Year Work Program*** can be found at http://www.dot.state.fl.us/. Utility specific information is found by selecting "Doing Business with FDOT" and then selecting "Utilities Office".

Recognizing that all utility owners serving the public have a common obligation to provide their services in a cost effective manner, the **Florida Department of Transportation** will coordinate its advance planning of highway projects with the affected utilities to facilitate the relocation of the utility in order to eliminate costly construction delays. As part of the project planning and development process, the **Florida Department of Transportation**, its consultants and contractors will consider the cost of utility work necessary for the proposed project. The **Florida Department of Transportation** will keep Utilities informed of future transportation projects by advertising its five year work plan and request the utilities to advise the **Florida Department of Transportation** of the location of existing and proposed structures within proposed project corridors. Exhibit L is a flowchart of the process for communicating general issues to the Utility Industry. This allows the Utility to track and interact on issues that may or may not result in a change in **Florida Department of Transportation** processes.

TABLE OF CONTENTS

EXHIBITS

REFERENCES

APPENDICES

Chapter 1
INTRODUCTION

1.1 Purpose

The ***Utility Accommodation Manual*** is established to regulate the location, manner, installation and adjustment of utility facilities along, across, or on any Transportation Facility under the jurisdiction of the **Florida Department of Transportation**.

1.2 Authority

Sections 337.401- 337.404, *Florida Statutes*
Rule 14-46.001, *Florida Administrative Code*

1.3 Scope

The ***Utility Accommodation Manual*** is used by the **Florida Department of Transportation** Utilities, Construction, Maintenance, and Design Offices for compliance review and issuing permits for utility installations as authorized under **Sections *337.401 - 337.403, Florida Statutes***, and ***Rule 14-46.001***, ***Florida Administrative Code***. Utility companies use the ***Utility Accommodation Manual*** as criteria for application for utility permits.

Since all utility owned facilities on **Florida Department of Transportation** rights-of-way must be authorized by permit, all utility design work, to the extent allowed by Florida law, must comply with the requirements herein. Therefore, District staff and consultants performing utility work on the **Florida Department of Transportation** rights-of-way must also adhere to the ***Utility Accommodation Manual***. The requirement of a permit is a statutory mechanism for documenting and controlling appropriate use of the rights-of-way.

1.4 General

The **Florida Department of Transportation *Utility Accommodation Manual*** draws upon many resources as guidelines to establish standards for utility work or placement and reimbursement costs within the rights-of-way. For example, see the **US Department of Transportation, Federal Highway Administration*, Federal-Aid Policy Guide***. When a **Florida Department of Transportation** standard is found to be more stringent, the **Florida Department of Transportation** standard shall apply.

Disputes pertaining to utility accommodation that cannot be resolved with Senior Management in the District by mutual agreement shall be referred to the State Utility Engineer or designee for resolution or coordination. Disputes over exceptions to Non-Limited Access Policy or Criteria/Standards shall be referred to the State Roadway Design Engineer or designee for resolution. Disputes that can not be resolved in the

District regarding utility accommodation across District boundaries, by intrastate utilities, shall be referred to the State Highway Engineer or designee.

While the ***Utility Accommodation Manual*** governs matters concerning future location, and the manner and methods for the installation, adjustment, and maintenance of utilities on **Florida Department of Transportation** rights-of-way, it does not alter current regulations pertaining to authority for their installation, nor does it determine financial responsibilities for placement or adjustment thereof.

The presence of existing above ground and underground facilities in **Florida Department of Transportation** rights-of-way will be presumed to be properly permitted in accordance with the existing guidelines in effect at the time of their installations, whether or not documentation to that effect exists. The Permittee will relocate or adjust existing utility facilities to comply with the current ***Utility Accommodation Manual****:*

(1) When transportation facility improvement projects necessitate relocation,
(2) Analysis of crash evidence (physical or recorded) indicates a need to relocate the utility facility, unless the relocation,

(a) Conflicts with other standards, codes or regulations that provide for the public health and safety, or
(b) Will not be economically feasible for the benefit desired.

To the extent such data is necessary to comply with the requirements of the ***Utility Accommodation Manual*** the **Florida Department of Transportation** will make crash history available upon request. Individual crash reports, if necessary, shall be obtained by the utility agency organization from the Florida Department of Highway Safety and Motor Vehicles Office.

Where the Permittee has a compensable interest in the land occupied by the facilities and such land is to be jointly owned or used for a transportation facility and utility purposes, the **Florida Department of Transportation** and Permittee shall agree in writing as to the obligations and responsibilities of each party. In any event, the interest to be acquired by or vested in the **Florida Department of Transportation** in any portion of the rights-of-way of a transportation facility project to be occupied, used, or vacated, by utilities, shall be of a nature and extent adequate for the construction, safe operation and maintenance of the transportation facility.

The ***Utility Accommodation Manual*** is also used to assess utility permit applications and to issue permits for work that are in the interest of public safety, protection, utilization, and future development of utilities and transportation facilities. Due consideration will be given to public service afforded by adequate and economical utility installations, as authorized under **Section *337.401***, ***Florida Statutes*** and ***Rule 14-46.001***, ***Florida Administrative Code.***

1.5 Distribution

The ***Utility Accommodation Manual*** is issued by the State Utilities Engineer and is furnished to **Florida Department of Transportation** personnel at no charge, upon request. For persons external to the **Florida Department of Transportation**, acquisition must be obtained by purchase at the following address:

Maps and Publications Sales
605 Suwannee Street
Mail Station 12
Tallahassee, Florida 32399-0450
Phone: (850) 414-4050
Fax: (850) 487-4099
http://www.dot.state.fl.us/MapsAndPublications/

The ***Utility Accommodation Manual*** may be viewed or printed at no cost by accessing the following web site. "http://www.dot.state.fl.us/rddesign/utilities/files/utilities.htm" Adobe Acrobat Reader is required to view or print the ***Utility Accommodation Manual***.

1.6 Revisions and Additions

Revisions and additions to the ***Utility Accommodation Manual*** and the utility permit form are developed in accordance with the ***Florida Administrative Procedures Act***. The ***Utility Accommodation Manual*** and utility permit form are incorporated by reference into ***Rule 14-46.001***, ***Florida Administrative Code*****.**

The State Utility Engineer will also coordinate the periodic review of the ***Utility Accommodation Manual*** by affected parties, including the Utility Industry, for continued need and updating. Users of the ***Utility Accommodation Manual*** may submit any suggestions for improvement or modifications at any time to the State Utilities Engineer. Suggestions must be submitted in writing either to the below postal or internet address.

State Utilities Engineer
Florida Department of Transportation
605 Suwannee Street
Mail Station 32
Tallahassee, FL 32399-0450
http://www.dot.state.fl.us/rddesign/utilities/files/utilities.htm

In order to keep the Utility Industry informed, the **Florida Department of Transportation** has created a Utility Liaison Process for **Florida Department of Transportation** Process Changes as follows:

See Exhibit "L" for a flow chart that is intended to summarily describe a process for providing a window of opportunity for the Utility Industry to access information and input

on proposed changes by the **Florida Department of Transportation** that might impact them. It is specifically noted that most changes that are employed by the **Florida Department of Transportation** are the result of changes in national standards as adopted by government or agencies such as the Federal Highway Administration, American Association of State Highway Transportation Officials, Department of Environmental Protection, etc. Utilities are encouraged to become involved in reviewing and inputting regarding proposed changes by the National Associations and Professional Special Interest Groups before they are adopted by the organizations, and the **Florida Department of Transportation** is required to comply.

The **Florida Department of Transportation** will require its various offices to publish information via the Utility Web Site regarding proposed procedural changes, standards, criteria, or rules that may affect the Utility Industry. The purpose is to standardize utility notification and provide for early involvement on issues that are being considered. Changes that impact Utilities will be conducted in accordance with the ***Florida Administrative Code, Chapter 120*** Rule Adoption Process.

1.7 Forms

The ***Utility Permit*** (***710-010-85, Utility Permit*** - See Exhibit J) may be obtained from the **Florida Department of Transportation** local Maintenance Office or the District Maintenance Office. All utility forms and agreements may be obtained through the District Utility Office or at the following internet address.

http://www.dot.state.fl.us/rddesign/utilities/files/utilities.htm

1.8 Training

No special training is required to use the ***Utility Accommodation Manual***. However, some functions addressed in the ***Utility Accommodation Manual*** require persons to be skilled or certified in a particular area of expertise. (Examples of this include herbicide application certification addressed in Chapter 7, or Maintenance of Traffic setup or design, addressed in Chapter 8, etc.)

Chapter 2
DEFINITIONS and ACRONYMS

2.1 Definitions

Actual Crossing Operation: That phase of the work authorized by the utility permit, when the casing or un-cased carrier pipe is being placed within the physical limits prescribed to determine the required casing length as set forth in the Section "Alternative Methods of Underground Installation." This will not include preliminary work, such as jacking pit construction, equipment set-up, etc.

Area Design Engineer: A **Florida Department of Transportation** Central Office employee responsible to the State Roadway Design Engineer who is assigned as Liaison to a District for technical assistance and coordination of engineering issues.

Adequate: The ability to satisfy a requirement of the **Florida Department of Transportation**.

As-Built Plans: Plans that depict the actual location of a facility after construction as determined by physical measurements in the horizontal and vertical plane.

Auxiliary Lane: The portion of the roadway adjoining the traveled-way used for access ramps, speed changes, turning, storage for turning, weaving, truck climbing, or other purposes supplementary to through traffic movement.

Border Area: The area between the roadway and the rights-of-way line.

Border Width: A lateral distance required to accommodate roadway infrastructure and is measured from the edge of the traveled-way to establish minimum rights-of-way requirements beyond the pavement limits.

Business Day: Monday through Friday, excluding the following holidays: New Year's Day, Martin Luther King, Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and the following Friday, Christmas Eve and Christmas Day. Any holiday that falls on a Sunday will be observed on the following Monday.

Clear Run-out Area: An area referred to by the American Association of State Highway Transportation Officials as additional clear zone space that is needed because a portion of the required clear zone falls on a non-recoverable slope.

Clear Zone: The unobstructed relatively flat area that is provided beyond the edge of the lane for errant vehicles. The American Association of State Highway Transportation Officials describes this as the total roadside border area starting at the edge of the traveled-way, available for safe use by errant vehicles. This area may consist of a shoulder, a recoverable slope, a non-recoverable slope, or a clear run-out area. The desired width is dependent upon lane type, traffic volume and speed, and on the roadside geometry. See

Tables 5.1.2.3. and 9.1.2.2. and Figure 5.1.2.3. Note: The previously mentioned "border area" is not the same as "border width." Also, see Horizontal Clearance.

Compensable Interest: Having established real property rights.

Competent: Legally fit or qualified, and adequate for the stipulated purpose.

Conduit: An enclosure for protecting a utility facility (e.g., wires and cables).

Contractor: The individual, firm, or company, properly licensed in the State of Florida by the State, County, or City and is contracting with the **Florida Department of Transportation** or a Permittee to work, furnish materials, or work as a subcontractor for a prime contractor.

Control Zone: Areas in which it can be statistically shown that accidents are more likely to involve vehicle departure from the roadway and greater frequency of contact with above ground fixed objects. See Section 9.2 for details of the defining conditions.

Controlled or Regulated Species: Any undesirable species prohibited by permit, or which grows in such a manner as to inhibit the survival and spread of planted species. Specie designation may be obtained from the District Environmental Management Office and is usually set by state law or local ordinance.

Criteria: Criteria, also referred to as a standard, is the **Florida Department of Transportation's** selected and documented value or range of values, process, specification, or method to be employed, that is intended to be applicable for the majority of conditions and applications for which it is defined, and is based on cost effective and sound engineering principles.

Design Build: A process whereby the **Florida Department of Transportation** can contract with a firm to accomplish designing and building a transportation facility, under a single contract as an integrated process. The contract may include all rights-of-way and utility functions normally performed by the **Florida Department of Transportation**.

Design Speed: The maximum safe speed that can be maintained over a specified section of a highway when conditions are so favorable that the design features of the highway govern. Note: The design speed is not the same as the posted speed along a facility. Design speed was evaluated using a professional driver. It does not relate to actual field operational characteristics or the ability of a typical driver. A design speed is usually selected to be 10 to 15 mph greater than the posted speed. Using a posted speed as a design speed will normally result in providing less than normal intended design safeguards.

Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System: A document that contains standard detail drawings used in the design, construction, and maintenance of state highways (also known as the Design Standards or Standard Index).

Designating: The process of using a surface geophysical method or methods to interpret the presence of a subsurface utility and to mark its approximate horizontal position (its designation) on the ground surface. (Note: The word Locates is often used to identify this process.)

District: The local **Florida Department of Transportation** office.

District Utility Engineer or Administrator: The **Florida Department of Transportation** employee in charge of utility negotiations at the District level.

Driving Lane: Any traffic, travel, or auxiliary lane.

Emergency: A situation or occurrence of a serious nature, developing suddenly and unexpectedly, and demanding immediate action, that will affect a reduction in public safety, disruption of utility service, or damage to the **Florida Department of Transportation** rights-of-way. An emergency situation requires the use of proper Maintenance of Traffic setup, when practical.

Encasement: A methodology which serves one of two purposes. It may be a technique used to provide added protection for either a utility facility or the surrounding environment, by surrounding the utility facility with concrete or a conduit designed to resist potential impacts or loading.

Erosion Control: Practices used to minimize soil loss from the **Florida Department of Transportation** rights-of-way and the discharge of turbid runoff. Erosion control may be regulated by local, state or federal regulations.

Equal Material: Products that perform in an equivalent manner in similar circumstances for an intended application.

Exception: A **Florida Department of Transportation** authorization required when the design values and policy applied by the Utility are not in compliance with **Florida Department of Transportation** values or policy for any of the following elements:

- Vertical Clearance
- Horizontal Clearance
- Limited Access Rights-of-way Use (Including Bikeways, Rails, Trails)
- Control Zone Use
- Mechanically Stabilized Earth or
- Proprietary Earth Walls

Extremely Aggressive Environment: A corrosive environment for a structure defined by any of the following conditions:

- Any corrosive environment for a structure situated over water containing more than 6,000 ppm chlorides, regardless of bridge clearance over water.
- Any corrosive environment for a structure situated within one half mile of any major body of water containing more than 12,000 ppm chlorides.
- Any corrosive environment for a structure situated such that a combination

of environmental factors indicates that a significant corrosion potential exists.

Fixed Object: Any above ground rigid non-frangible base object exceeding four (4) inches in height above the surface of the immediate area.

Frangible Base: A design used at the base of poles or signs, which allows separation of the top portion from the bottom. The purpose is to minimize vehicular impact damage through the use of designed shear, slip planes, or a combination of the two.

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

Inspector: An authorized representative of the **Florida Department of Transportation** Maintenance Office or Resident Construction Engineer.

Interference with Traffic: Obstructing, impeding, or otherwise disrupting the intended use of the facility.

Joint Use: When collocation occurs on or in a utility facility such as poles, ducts, or trenches, etc.

Landscaping: Enhancing the aesthetics of the facility through the use of vegetation, contouring, or decorative fixtures including irrigation, or other features pursuant to ***Rule 14-40***, ***Florida Administrative Code.***

Landscape Manager: Florida Department of Transportation district representative responsible for design, review, and coordination of landscaping issues.

Landscape Permittee: An individual, corporation, or municipality currently possessing a **Florida Department of Transportation** approved Highway Landscaping Maintenance Memorandum of Agreement, or Permit for Landscaping on **Florida Department of Transportation** rights-of-way pursuant to ***Rule 14-40, Florida Administrative Code*.**

Limited Access Facility or Rights-of-Way: A street or state highway, or appurtenances thereof, especially designed for through traffic, and over, from, or to which owners or occupants of abutting land or other persons have no right or easement of access, light, air, above, at the surface, or below the ground, or view by reason of the fact that the property abuts upon such limited access facility or for any other reason.

Locates: An information gathering process that may or may not involve a formal survey to identify and define the position of a utility, vertically and horizontally. (See also “Designating”)

Maintenance Engineer: A **Florida Department of Transportation** Maintenance Engineer or designee who approves utility permits, inspects, and has the authority to revoke said permits within his/her area of responsibility. (This person is usually the local **Florida**

Department of Transportation Maintenance Engineer of the area in which the permitted utility work is to be performed).

Maintenance of Traffic: The method by which traffic control through a work zone will be handled.

Major Crossing: Pipe crossings eight (8) inches or greater in outside diameter; crossings under limited access facilities; crossings requiring well point dewatering; and other crossings of an unusual and difficult nature as determined by the local Maintenance Engineer on a case by case basis.

Major Utility Facilities: Those facilities that if required to relocate will: experience a significantly high dollar impact, or will impact other utilities or the **Florida Department of Transportation** in the same manner, or will potentially conflict with construction activities and scheduling.

Manhole, Hand Hole, Pull-Hole: An opening in an underground system by which access may be achieved for the purpose of making installations, inspections, repairs, connections, and tests.

Manual on Uniform Traffic Control Devices: The Federal Highway Administration ***Manual on Uniform Traffic Control Devices*** is incorporated by reference under Department of Transportation ***Rule 14-15.010, Florida Administrative Code***. This document is available for downloading from the Internet at the Federal Highway Administration's website listed as follows:

http://mutcd.fhwa.dot.gov/kno-millennium.htm.

Mechanically Stabilized Earth Wall (synonymous with Proprietary Earth Wall): An engineering process that allows vertical walls to be employed without constructing a foundation for supporting the load. This is accomplished by distributing the stress through lateral stabilizing materials such as straps or fabrics between layers of soil.

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

National Pollutant Discharge Elimination System: A program administered by the Florida Department of Environmental Protection pursuant to ***Section 403.0885, Florida Statutes*****,** to regulate point source discharges of storm water into surface waters of the State of Florida from certain municipal, industrial, and construction activities.

Non-Operating Rail Corridor: Any **Florida Department of Transportation** owned linear rights-of-way previously used as a railroad corridor where rail service has been discontinued.

Non-Restricted Rights-of-Way Area: An area where sufficient border width exists to permit utilities to locate above ground fixed objects in compliance with minimum clear zone requirements.

One-Call: This is the term applied to the clearinghouse designed to prevent disruption of utility services and operating under the provisions of ***Chapter 556***, ***Florida Statutes.*** (Also referred to as Sunshine State One-Call, Inc.).

Operating Railroad Corridor: Any **Florida Department of Transportation** owned railroad corridor that contains one or more operating railroads.

Pavement: A hardened surface used as a paved travel way, normally an asphaltic or cementitious concrete surface designed to carry the anticipated traffic for a specified design period.

Permit: A limited use agreement that is issued by the **Florida Department of Transportation** to a Utility as required in ***Section 337.401(2), Florida Statutes,*** and subject to adjustment, removal or relocation of the affected utility upon a **Florida Department of Transportation** determination that the utility is unreasonably interfering in any way with the convenient, safe, or continuous use, or the maintenance, improvement, extension, or expansion, of the public road or publicly owned rail corridor.

Permit Application Package: Florida Department of Transportation Utilities Form No. 710-010-85 (See Exhibit J) and all support documentation. Refer to Chapter 3 of the ***Utility Accommodation Manual***.

Permittee: A Utility Agency/Owner (permit holder), permitted by the **Florida Department of Transportation** to construct and maintain its facilities within the **Florida Department of Transportation's** transportation facilities, and responsible for any damages resulting from the issuance of said permit. A consultant or contractor performing work for the Utility Agency/Owner is not a Permittee.

Placed Out-of-Service (Deactivated): Wording used when a Permittee is allowed to leave its facilities in place and within the **Florida Department of Transportation's** rights-of-way after the facility is no longer active. This is allowed only by mutual agreement when immediate removal would cause greater disruption of the public's use of the facility than obstruction by allowing it to remain. Allowing a facility to be left in place is considered temporary and must be removed at any time in the future at the request of the **Florida Department of Transportation**. All Placed Out of Service facilities are intended to remain out of service.

Qualified Welder: A person who has been tested and demonstrated their ability to produce welds that meet the requirements of ***49 Code of Federal Regulations, Part 192.227.***

Relining: A process exclusive to the repair of the wall linings of pipes and conduits to prevent ground water seepage into the system, and not to be misconstrued with re-stringing of wires or cables on poles or inserting facilities into ducts.

Relocation: Any and all work associated with the adjustment of a utility facility (horizontally or vertically).

Resident/Project Engineer: The Florida Department of Transportation employee in charge of **Florida Department of Transportation** construction projects.

Restricted Rights-of-Way Area: An area where insufficient border width exists to permit utilities to locate above ground fixed objects in compliance with minimum clear zone requirements.

Resurfacing, Restoration, and Rehabilitation: Work undertaken to preserve and extend the service life of an existing highway and enhance highway safety.

Rights-of-Way: Any part or access to a **Florida Department of Transportation** Facility, above, at the surface, or below the ground**.**

Rights-of-Way User: The individual, firm, company, or governmental agency having a facility within any part of a **Florida Department of Transportation** Facility.

Routine Maintenance: The regular or normal care and upkeep of a facility.

Scenic Enhancement Areas: Areas or structures set aside by statute or local ordinance for the preservation of environmental or cultural resources.

Scenic Highways Coordinator: A person located in the District Environmental Management Office responsible for coordination and review of Corridor Management Plans.

Standard Specifications for Road and Bridge Construction: A text document that provides specifications under which Florida roads and bridges will be constructed, inspected and paid for (also referred to as the ***Standard Specifications***).

Standards: A standard, also referred to as criteria, is the **Florida Department of Transportation's** elected and documented value or range of values, process, specification, or method to be employed, that is intended to be applicable for the majority of conditions and applications for which it is defined, and is based on cost effective and sound engineering principles.

State Utility Engineer: The individual in charge of promulgating and developing **Florida Department of Transportation** policy and procedures for utility accommodation on **Florida Department of Transportation** rights-of-way.

Subsurface Utility Engineering: 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 estimates, implementation of utility accommodation policies, and utility design.

Traffic Control Plan: Documentation of how a safe flow of traffic will be conducted through an area in which construction or maintenance activities are being performed. Documentation shall include defining all materials, traffic control devices, and activities required to accomplish this task.

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

Transportation Facility: Defined by ***Section 334.03(31), Florida Statutes***, as any means for the transportation of people and property from place to place, which is constructed, operated, or maintained in whole or in part from public funds. The term includes the property or property rights, both real and personal, which have been or may be established by public bodies for the transportation of people and property from place to place.

Traveled-Way / Traffic Lane: The designated widths of roadway pavement, exclusive of shoulders and marked bicycle lanes, marked to separate opposing traffic or vehicles traveling in the same direction. These lanes include through travel lanes, auxiliary lanes, turn lanes, weaving, passing, and climbing lanes. They provide space for passenger cars, trucks, buses, recreational vehicles and, in some cases, bicycles.

Travel Lane: The designated widths of roadway pavement marked to carry through traffic and to separate it from opposing traffic or traffic occupying other traffic lanes. Generally, travel lanes equate to the basic number of lanes for a facility.

Utility Appurtenances: Any and all features or parts of a utility facility, above or below ground that are installed as a part of the facility, whether primary or secondary to its function.

Utility Facilities: All privately, publicly, or cooperatively owned lines, facilities, and systems for producing, transmitting, or distributing communications, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, and storm water not connected with highway drainage, and other similar commodities, including television transmission signals, publicly owned fire and police signal systems, and street lighting systems, which, directly or indirectly serve the public or any part thereof. The term "Utility" shall also mean the Utility Agency/Owner or Permittee, inclusive of a wholly owned or controlled subsidiary. This term does not include wireless telecommunications providers who provide cellular or digital communications to the public.

Utility Work by Highway Contractor: Work accomplished in compliance with ***Section 337.403(1)(b), Florida Statutes***. This work was historically referred to as a JPA or Joint Participation Agreement.

Vegetation: All trees, shrubs, vines, legumes, grasses, or other plant material.

2.2 Acronyms

ADE: Area Design Engineer

ADA: The Americans with Disabilities Act of 1990

ASTM: American Society of Testing and Materials

CADD: Computer Aided Drafting and Design

C.F.R.: Code of Federal Regulation

DEP: Florida Department of Environmental Protection

DUE: District Utility Engineer or Administrator

EMO: The **Florida Department of Transportation** Environmental Management Office: Formerly called the Project Development and Environment Office (PD&E)

F.A.C.: ***Florida Administrative Code***

FDEP: Federal Department of Environmental Protection

FDOT: Florida Department of Transportation

FHWA: Federal Highway Administration

FIHS: Florida Intrastate Highway System

F.S.: ***Florida Statutes***

LA or LA R/W: Limited Access or Limited Access Rights-of-Way

MOT: Maintenance of Traffic

MUTCD: Manual on Uniform Traffic Control Devices

MSE: Mechanically Stabilized Earth Wall (Also synonymous with Proprietary Earth Wall)

NESC: National Electrical Safety Code

NPDES: National Pollutant Discharge Elimination System

OSHA: Occupation, Safety, and Health Administration

PD&E: This is the old **Florida Department of Transportation** terminology still found in some publications referring to the **Florida Department of Transportation** Project Development and Environment Office. This Office has been renamed the Environmental

Management Office or EMO. It also refers to the Project Development and Environment phase of the plans production process.

RRR: Resurfacing, Restoration, and Rehabilitation

R/W: Rights-of-Way

SUE: Subsurface Utility Engineering

TCP: Traffic Control Plan

UAM: ***Utility Accommodation Manual***

UAO: Utility Agency/Owner

U.S.C.: United States Code

UWHC: Utility Work by Highway Contractor

Chapter 3
UTILITY PERMIT

3.1 Utility Permit

A Utility Permit Application (see Exhibit J) must be submitted by the, UAO per ***Section 337.401, F.S.*** An engineer or contractor may prepare and process a permit application for a utility owner, but shall not be identified as the Permittee. The permittee shall be responsible for ensuring its engineer or contractor complies with the provisions of the ***UAM***.

A permit must be approved or authorized by the **FDOT** before any utility is installed, relocated, or any facility placed out of service (deactivated), that is reactivated on the **FDOT** R/W, whether it is for aerial or underground installations or attachment onto bridge structures, except as noted in the ***UAM***. When ownership of an existing utility facility changes, the new owner must provide an affidavit acknowledging transfer of ownership of such facilities and describing the boundaries. The new UAO acknowledges that the utility facility continues to be bound by the conditions of the permit when it was originally permitted.

Permit Form 710-010-85, (Exhibit J) may be obtained by the applicant from the local Maintenance Office, District Maintenance Office, or District Utility Office. Any deviation from the approved permit shall be subject to the approval of the local Maintenance Engineer, or designee, prior to installation. Deviations from **FDOT** design criteria may require an exception.

During an emergency situation, the UAO should protect the public safety by making necessary repairs or adjustments, complying as much as is practical with the requirements of the ***UAM***. No advance permit approval is required. However, permits for pavement cuts shall be submitted within five (5) business days after the repairs are completed. This does not limit any permit requirements of other agencies.

If the Permittee's work operations encounter remains of an archaeological or historic nature, all earth disturbing activity shall be temporarily discontinued in the immediate vicinity of the discovery and the Permittee shall notify the approving Maintenance Engineer's Office of the discovery. The approving Maintenance Engineer shall notify the Staff Archaeologist at the **FDOT**, EMO in Tallahassee to determine the disposition thereof. No work will resume until direction is given by the approving Maintenance Engineer.

Submittal of a combination of an approved "***Utility Work Schedule***", ***Form No. 710-010-05***, and an authorized signed **FDOT** utility agreement may be deemed equivalent to a permit. The intent is to eliminate unnecessary duplication of processes. Completion of the standard permit process in such cases is not required except that the above two documents shall have attached to them ***Permit Form No. 710-010-85*** completed through the signature section of the Permittee including the date. This is necessary to obtain a

permit number and to generally identify the work area. All other permit related provisions or information is defined in the work schedule or utility agreement. This section does not remove the Utility's obligation to comply with any and all provisions contained within this rule except as modified by the above submitted and approved agreement, nor does it preclude the requirement to supply whatever engineering justification or documentation is necessary for design approval, including any exception that may be required.

A copy of the approved permit application package must be available at the job site at all times.

3.2 Permit Application

3.2.1 Each copy of the permit application shall contain at a minimum, plans or information showing the following criteria in the bullets listed in Section 3.2.1:

- Schematic plans of the proposed installation (not necessarily to scale) showing the beginning and ending project limits.
- The horizontal offset from a well-defined feature of the Transportation Facility (to be determined by the permit engineer) to the proposed utility installation.
- The R/W limits and limited access line.
- As applicable, pavement/rail width and distance from edge of pavement/rails to utility.
- The roadway/railroad section and milepost numbers, station numbers and bridge number (if applicable).
- Material, function, type and size such as 12" HDPE 500 maximum psi plastic gas or sewer pipe, or metal 2x3 foot conduit for (power with voltage).
- All utility poles or other above ground facilities and other pertinent details. With the exception of utility or single pole appurtenances mounted fifteen (15) feet or higher above the ground, appurtenances larger than eight (8) cubic feet must have their location and size shown on the permit.
- One or more typical cross sections to adequately reflect the underground location of the utility facility.
- All known utilities in the proposed installation area shall be shown. However, if only aerial facilities requiring no additional poles are involved, then only aerial facilities need be shown on the permit drawing.
- If above ground or underground facilities involve only one side of the R/W, then only involved utilities on that side of the R/W need to be shown on the permit drawing.

- In all cases, the Permittee shall list all known R/W users in the installation area on the permit form, and notify each of them by copy of the permit drawing, whether they are known to be impacted or not.

- The minimum vertical clearance above or below the pavement shall be shown.

- The approximate distance and direction to either the nearest town, major road intersection, bridges, or railroad crossings.

- Other significant physical features such as vegetation, wetlands, or bodies of water shall be indicated on the plans. The District Landscape Manager may be contacted for assistance to determine any potential impact to **FDOT** vegetation.

- A simple key map showing the location of this proposed facility should be included.

- When the proposed utility work requires MOT, the permit application package must include a TCP. See Chapter 8 for specific criteria.

- In order to document existing conditions of the work area prior to any utility work, a minimum of one and maximum of six pictures, based on the complexity of the project, must be submitted with the application as a remedy for claims or final approval concerns. The number of pictures can be minimized (or the requirement waived) by the Permit Engineer.

3.2.2 For attachment to structures, the application shall include all applicable construction plans and specifications for the accommodation of the utility.

3.2.3 When the Permittee is not a corporation, the owner's signature must be on the permit. All signatures must be original. The names and titles of all persons signing the permit application must be typed or printed legibly to the left of their signatures.

3.2.4 When the Permittee is a corporation, the signature of either the owner or an approved representative, whose name or position/title is on file with the **FDOT** for that corporation, must appear on the permit. All signatures must be original. The names and titles of all persons signing the permit application must be typed or printed legibly to the left of their signatures.

3.3 Processing

3.3.1 The applicant will submit two (2) originals and two (2) copies of permit application packages to the **FDOT** local Maintenance Office in the area in which the work is to be performed.

3.3.2 The local Maintenance Engineer or designee is authorized to approve permit applications, except as specified elsewhere in the ***UAM***. Those applications that local Maintenance Engineers are not authorized to approve, will be forwarded to the District Maintenance Engineer for action.

Exceptions to the Limited Access Policy must be approved by the State Highway Engineer or designee. Upon approval, executed permits will be distributed to the applicant, permits inspector, the local Maintenance Engineer or designee, and the District Permit Engineer's Office file.

3.3.3 Each permit shall be processed in an expeditious manner, in order to minimize any unnecessary delays for the applicant. The local Maintenance Office will notify the applicant if processing is anticipated to exceed thirty (30) days, when installations fall within areas in which no work is scheduled per the Five Year Work Program. In all cases, the permit will be processed in accordance with ***Section 120.60, F.S***., and requirements found within the ***UAM***. Permits will be approved and issued if all requirements of the ***UAM*** are met.

3.3.4 For installations in **FDOT** R/W affected by the **FDOT** Five Year Work Program or safety improvement projects (excluding permits on projects not in the production cycle which are covered in Section 3.3.4), the local Maintenance Office will submit the permit application to the District Maintenance Office or designee.

The District Maintenance Office will be responsible for the coordination and tracking of the permit application. Coordination by Maintenance includes the District Utilities Office, Environmental Office (Landscape Manager, Scenic Enhancement, Contamination Impact Coordinator), and the Structures Office as appropriate.

The District Maintenance Office will send the permit application to the District Utility Office for its recommendation. The District Utility Office will consult with all applicable District Offices before making a recommendation back to the District Maintenance Office. The District Maintenance Office will approve or deny the permit within thirty (30) days based on the District Utility Office's recommendation and return it to the local Maintenance Engineer or designee for distribution and entering into the permit database. The District Maintenance Office will notify the applicant if additional information is needed.

The **FDOT** Maintenance Office will be responsible for coordinating permit requests with the **FDOT** Construction Office for projects that are scheduled within the Five Year Work Program.

3.3.5 For projects that are in the plans production cycle, all permits are to be submitted to the local Maintenance Office. The local Maintenance Office will obtain a permit number and will send the permit package to the District Maintenance Office. The District Maintenance Office will approve or deny the application, based on coordination and review by the District Utility Office and the local Maintenance Engineer or designee. The local Maintenance Office will return the application package to the applicant or will notify the applicant if additional information is needed.

3.3.6 All permit applications involving scenic enhancement areas are to be reviewed and approved by the District Maintenance Engineer or designee upon consultation with the District Scenic Enhancement Coordinator.

3.3.7 All permit applications involving attachment onto bridge structures shall be reviewed and recommended for approval or denial by the State Materials Engineer and the District Structures and Facilities Engineer prior to approval by the District Maintenance Engineer or designee.

3.3.8 Where a permit involves the attachment to a structure of a utility facility carrying hazardous material (flammable, toxic, or corrosive), the application will be referred to the District Maintenance Engineer and the District Structures Engineer for review and comment prior to approval by the local Maintenance Engineer or Designee.

3.3.9 The applicant shall notify, in writing, all known involved utility agencies using the R/W at the location of the proposed installation. This notification shall state the applicant's intentions in order to determine any objections caused by the proposed installation. Any objections to the applicant's proposed construction by affected utility agencies must be made in writing and forwarded to both the applicant and to the applicable local Maintenance Engineer within ten (10) days of the applicant's notification letter. Such objections must be specifically defined.

3.3.10 All permit applications for R/W subject to easements from the U.S. Forest Service shall be forwarded to the District Maintenance Engineer for coordination with the U.S. Forest Service.

3.3.11 Utility permits on railroad corridors and LA R/W require "Exceptions" for longitudinal installations but otherwise will be handled the same way as other utility permits and subject to prior real property rights.

For the South Florida Rail Corridor use criteria in the bullets listed for Section 3.3.11:

- The standard permit application and the pertinent standard railroad application package shall become part of the total package. All Permittees must follow the instructions on the application package.

- The local Maintenance Engineer or designee will forward four (4) copies of the package to the CSX Railroad for its concurrence and/or approval.

- No permit will be approved by CSX without receipt of the appropriate processing fee. Per agreement with CSX, the sole responsibility of the **FDOT** is to forward the application package and processing fee when supplied by the Permittee. It is CSX's responsibility to collect the fee from the Permittee if not included in the application package.

- After receipt of the approved four (4) packages from the CSX and the **FDOT** permit approval, the local Maintenance Engineer or designee will distribute the permit as appropriate.

Two (2) copies and one (1) original of both the CSX package and the permit will be submitted to:

Florida Department of Transportation–District Four
Manager, South Florida Rail Corridor
3400 West Commercial Blvd.
Fort Lauderdale, Florida 33309-3421
Phone: 1-800-930-3368

3.3.12 The Permittee will notify the approving authority upon completion of the utility construction. The approving authority or designee will complete page 2 of ***Permit Form 710-010-85*** and file it in the District Permit Engineer's Office, with a copy sent to the Permittee.

3.3.13 The **FDOT** requires the UAO to comply with the permitting requirements of other governmental entities where otherwise required by law. One example is the DEP which is the NPDES storm water permitting authority and is responsible for promulgating rules and issuing permits, managing and reviewing permit applications, and performing compliance and enforcement activities. This program requires a permit (separate from any **FDOT** Permit) for storm water discharge into waters of the State that disturbs one (1) acre or more of land. Furthermore the NPDES permitting program is separate from the State's storm water/environmental resource permitting programs found under ***Part IV, Chapter 373, F.S.,*** and ***Chapter 62-25, F.A.C.,*** and local storm water/water quality programs, which have their own regulations and permitting requirements.

3.4 Signing & Sealing Utility Plans

The following applies:

3.4.1 TCP - When **FDOT** TCP standards must be significantly compromised and a true, alternate TCP is required, it must be prepared, signed, and sealed by a qualified licensed, Florida professional engineer. See Chapter 8.

3.4.2 Any installation, which requires a structural modification to an **FDOT** facility, must be signed and sealed. An example of this would be a request to hang a utility facility from an existing bridge.

3.4.3 Utility Work by Highway Contractor (UWHC) Documents for UWHC prepared for Utilities by their own engineers (exempt under ***Chapter 471***, ***F.S***.) do not require signing and sealing. However, documents prepared by an engineering consultant for a Utility must be signed and sealed.

3.5 Installations Not Requiring Permits

3.5.1 Permits are not required for placing new poles within an existing permitted facility pole line unless noted otherwise in the ***UAM***. The fact no permit is required does not eliminate the requirement to comply with RRR criteria. For example, when horizontal clearance criteria are not complied with, an exception must be obtained in accordance with Chapter 13 of the ***UAM***. Where timeliness of installation is essential, and an exception is required, the Utility may install the pole at their risk, prior to obtaining an exception. An exception request must be submitted to the **FDOT** within fourteen (14) calendar days of final

installation of the pole. Failure to comply or obtain exception approval will subject the Utility to the requirement of immediate removal of the pole, at the Utility's sole cost and expense, including any necessary legal fees of **FDOT** in seeking compliance.

3.5.2 A permit is not required for replacement of an individual pole when the diameter or width does not exceed an additional six (6) inches of the original pole.

3.5.3 Permits are not required for service drops or span guys emanating from or attached to poles located within the R/W and properly covered by an existing permit, except for rail corridors and LA R/W. It is intended that Rail Corridors and LA R/W shall not be used for utility distribution services.

3.5.4 Permits are not required for underground service connections, provided that they do not cross or begin in the pavement and trenching is at a right angle to the pavement. However, notice will be given to the affected local Maintenance Engineer prior to construction in all instances, and the Permittee shall notify all known underground utility agencies of the pending excavation in accordance with ***Chapter 556, F.S.***

3.5.5 Permits are not required for temporary utility work approved by the **FDOT** Resident/Project Engineer during **FDOT** construction projects.

3.5.6 Permits are not required for maintenance on or replacement of existing aerial facilities, or inserting a product into an existing conduit or pipeline permitted by the **UAO**, provided there is no pavement cutting, and any duct work can be done within the permitted time frame.

The Permittee shall give a minimum of forty eight (48) hours advance notice, and identify limits of work to the local **FDOT** Maintenance Engineer. When a permit is required due to pavement cuts or scheduling issues, a new justification is not required. New permit requirement support documentation shall be limited to maintenance of traffic and safety issues, details of what is to be installed in the pipeline or conduit, schedule to accomplish the work, and a copy of any separate agency environmental permit, if required.

3. 6 Installations Requiring Permits

3.6.1. Permits are required for all underground installations and all overhead lines and crossings, except where noted in Section 3.5.

3.6.2 Permits are required for all additional facilities using criteria listed in the bullets in Section 3.6.2:

- It is necessary to place a pole within the R/W where there is not an existing pole line.
- It is necessary to place a pole adjacent to a buried cable where the existing permit does not include a pole line.

- It is necessary to place a pole beyond the limits of an existing approved pole line. For purposes of this provision, the limits of an existing approved pole line shall mean the distance from the edge of the pavement/rails to the approved pole line plus a maximum of 10% of that distance, but still within the R/W and no closer to the edge of the pavement/rails. The outside edge of the through travel lane shall be the point of reference in lieu of the edge of pavement/rails.

- Where a pole replacement exceeds the criteria of Section 3.5.2. If the horizontal clearance is reduced or the pole has been hit more than two (2) times in any three (3) consecutive years of the last five (5) years, it must be evaluated for relocation.

3.6.3 Permits are required for all above ground facilities placed in connection with underground installations when not included in the original permit. Permits are required for marker poles and riser poles, including pole mounted telephone closures for test or splice purposes.

3.6.4 Permits are required when installing a transportation facility lighting system, including installation on existing poles where existing poles are there by virtue of a permit.

3.6.5 A permit is required if a new pole is to be set within the R/W to accommodate a private or area light. A permit is also required for the installation of a private or area light on an existing pole within the R/W where the light pattern which shall conform to **FDOT** Highway Lighting Standards, is to be directed toward the pavement.

3.6.6 Permits are required when existing facilities are to be relocated permanently to another location within the R/W, whether caused by a betterment program for the R/W user, or by **FDOT** construction.

3.6.7 Permits are required for improvements or betterment requiring a physical change of existing facilities, except for routine maintenance or minor alterations such as changes in communications cables, transformer capacity, wire size of secondary circuits and primary circuits, or adding additional wires to an existing circuit of a 1 mile segment or less of an existing utility installation. A permit will be required for any alteration or addition to the utility installation (other than routine service drops or span guys), which will cross a transportation facility either overhead or underground. Normally, such alterations or additions will not be basis for requiring relocation of the existing facility.

3.6.8 Permits are required to reline any utility facility.

3.6.9 Permits are required if any pavement is to be cut, including driveways or sidewalks on **FDOT** R/W.

3.6.10 Permits are required for any pipe reconstruction, replacement, or restoration procedure that has a potential to cause damage such as displacement or heaving.

3.7 Additional Permit Requirements

3.7.1 The Permittee shall give a minimum of forty eight (48) hours advance notice to the approving local Maintenance Engineer prior to any construction or excavation, except in emergency situations.

For any excavation, construction, maintenance, or support activities performed by or on the behalf of the **FDOT**, within its R/W, the permittee may be required by the **FDOT** or its agents to perform the following activities with respect to a Permittee's facilities: physically expose or direct the exposure of underground facilities, provide any necessary support to facilities and/or cover aerial facilities as deemed necessary.

3.7.2 The Permittee should be aware that the utility permit does not authorize the use of overweight vehicles on the State Highway System. Permits for overweight vehicles must be obtained from the Office of Road Use Permits in Tallahassee. Permits for overweight and over dimensional vehicles are covered by ***Rule Chapter 14-26, F.A.C***.

3.7.3 The Permittee must comply with ***Section 335.15***, ***F.S.***, requiring notification of the temporary closing of an **FDOT** roadway. Whenever any road on the State Highway System is repaired, reconstructed, or otherwise altered in a manner which necessitates the closing of one or more traveled lanes of the roadway for a period of time exceeding two (2) hours, the party performing such work shall give notice to the local law enforcement agency, within whose jurisdictions such roadway is located, prior to commencing work on the project. The requirement of prior notification shall be waived only when the closing of one or more lanes is required for emergency conditions. This ***UAM*** Rule requires additionally, that the local Maintenance Engineer be notified, except in emergencies, a minimum of forty eight (48) hours in advance before closure to allow sufficient time for public service announcements and local agency response.

When utility work requires the use of temporary barriers or traffic channelizing devices that prevents a permitted over dimensional vehicle to travel through the work site on the pavement or shoulder, the Utility or its contractor shall be required to temporarily move such barriers or devices in an expedient manner to facilitate passage. If the Utility or its contractor cannot temporarily or expediently move the barriers or devices due to impracticality or work site constraints, the Utility must notify the local Maintenance Engineer seven (7) days prior to setup to prevent the **FDOT's** issuance of over dimensional vehicle permits through the site. Failure to provide such seven (7) day notification will result in the Utility's having to relocate the temporary barriers, at the Utility's expense, to permit passage of the oversize vehicle.

3.7.4 When construction deviates from the proposed design, as-built plans showing such deviations will be required by the local Maintenance Engineer for all installations.

Required as-built plans for facilities whose location is confidential will be maintained at the offices of the Permittee.

3.7.5 All new or replaced underground facilities within the R/W shall be made electronically detectable using techniques available in the Industry. Where as-builts are required in accordance with the ***UAM*** or ***FDOT Standard Specifications for Road and Bridge Construction 555, 556, or 557***, an as-built plan of the utility facility location including a depth tabulation (when plots or elevations are not provided) shall be furnished at the time of the certification of completion of the project for which a permit is given.

3.7.6 Minimum horizontal offset or vertical clearance dimensions shall be the greater of that required by either the ***UAM***, ***Rule Chapter 14-57***, ***F.A.C.*** for railroads, or where applicable, the clearance criteria for the South Florida Rail Corridor contained in ***Policy Statement 000-725-003***, ***South Florida Rail Corridor Clearance Policy***, as follows:

SOUTH FLORIDA RAIL CORRIDOR CLEARANCE POLICY

Grade-separated highway or pedestrian crossings or any other structure over the South Florida Rail Corridor shall be designed and constructed in such a manner that provides for an opening for the passage of tracks or fixed guide ways that is at least twenty four (24) feet three (3) inches high, measured from the top of the highest existing rail or proposed rail for the entire required clear span distance and of sufficient width to clear span the ultimate build-out track configuration reflected in the Track Master Plan at all points along that portion of the corridor that lies between Milepost SX964.9 at West Palm Beach and Milepost 1036.3 at Hialeah and all of Spur Line "B" between Milepost 1036.3 at Hialeah and end-of-line at Miami Intermodal Center at or near 21st Street. This vertical clearance is for new construction, provides for eventual installation of 25 kV catenary, allows for up to one 1 foot of track raise, and is based on the American Railway Engineering Association recommended load gauge of twenty one (21) feet.

More particularly, any proposed structure over the South Florida Rail Corridor shall be designed and constructed so as to provide a horizontal clear span of a minimum of one hundred (100) feet but not less than twenty five (25) feet from the center line of the outermost existing or proposed tracks according to the Track Master Plan at all locations in the South Florida Rail Corridor.

3.7.7 When the Utility or contractor installs underground structures exceeding eighty (80) cubic feet that will be used as manholes, or service points, the Permittee must attach to the permit a manufacturer's or builder's certification that the structure and all appurtenances to be installed meet or exceed the requirements of H.S. 20 Military load as shown in the Bridge Inspector's Reference Manual and incorporated into the ***Florida Administrative Code*** by reference in Rule Chapter 14-48.001.

3.7.8 All horizontal directional bores (reamer size) larger than six (6) inches must be approved by the State Utility Engineer or designee. However, the District Maintenance or Construction Office engineer is authorized to approve larger bores that comply with the conditions listed in the bulleted items in Section 3.7.8. If the Permittee can comply with the conditions contained in the bulleted items listed in Section 3.7.8, review and approval by the State Utility Engineer is not required. The **FDOT** prefers bores to be as shallow as practical but depth can only be determined by obtaining the necessary support information. Compliance with the conditions contained in the bulleted items in Section

3.7.8 are optional for the Utility in lieu of obtaining support soils and water table information, and does not automatically obligate the Utility to install facilities at ten (10) diameters.

- The utility bore depth will equal or exceed ten (10) times the bore size when the utility will be installed under **FDOT** pavement, or

- When installations are outside of the pavement area, the offset parallel to the pavement must be at least three and one half (3.5) times the bore size, or

- The soils blow count is at least thirty (30) blows per foot based on standard penetration tests in the area of installation.

- New bore installations must maintain at least three and one half (3.5) times the bore size clearance from vitrified clay sanitary pipe and any gas lines.

- The permit must demonstrate the location (vertically and horizontally) and type of all utilities within at least three and one half (3.5) times the bore size in the immediate vicinity of the proposed work of the Permittee.

3.7.9 If compliance with the conditions contained in Section 3.7.8 cannot be achieved, copies of support information listed in the bulleted items in Section 3.7.9 must be supplied to the District Maintenance or Construction Office Engineer if work is within the limits of an **FDOT** construction project, for review and approval by the State Utility Engineer, or designee, before a permit will be issued.

- Soils property, water table depth, and blow count information in the vicinity of the boring activity.

- The depth of soils information must extend to a depth equal to the lesser of: ten (10) times the bore (reamer diameter); two (2) feet into strata providing a blow count of thirty (30) or more; two (2) feet below the normal water table, but not less than eight (8) feet. For example, if a blow count of thirty (30) is reached at a depth of four (4) feet then the soils data need only proceed to a depth of eight (8) feet. See Exhibit “M” for guidance in approximating the minimum depth under the pavement that HDD should be placed. Factors such as clearance from other utilities, future construction considerations, and equipment setup limitations will also be taken into consideration in setting the final minimum depth.

- As an option to acquiring Geotech Services, the Permittee may use **FDOT** soils data from **FDOT** construction plans when available. It is the Permittee's responsibility to acquire this information, and not the **FDOT** to do the research.
- A copy of the regular required permit documentation.

3.7.10 If during the plans design or construction process it is determined that a domestic water supply line must pass through a storm drain structure, it must be shown on the design or construction plans and submitted to the DEP Administrator for Drinking Water per ***Rule Chapter 62-555.314(3)*** for review and comment. ***Standard Index 307*** provides accepted methods for addressing conflicts when and where they cannot be reasonably avoided. To be submitted along with the plans shall be a justification describing inordinate cost and the impracticality of avoidance. If identified and accomplished in accordance with ***Index 307***, approval is granted.

3.8 Permit Non-Compliance

When the Permittee fails to complete all requirements contained within the ***UAM*** or features of the installation as specified in the permit, and the **FDOT** determines that such noncompliance is unreasonably interfering in any way with the convenient, safe, or continuous use, or the maintenance, improvement, extension, or expansion, of the public road or publicly owned rail corridor, the following course of action shall be implemented in accordance with Sections 3.8.1 through 3.8.2.

3.8.1 **For non-FDOT construction permit non-compliance issues:** The approving Maintenance Engineer shall give written notice, by Certified Mail with return receipt, to the utility or its agent advising of the specific deficiencies and/or violations and requesting compliance with the permit provisions within 30 days per ***Section 337.403, F.S.***

For FDOT construction permit non-compliance issues: The District Design or Utility Office shall give written notice, by Certified Mail with return receipt, to the utility or its agent advising of the specific deficiencies and/or violations and requesting compliance with the permit provisions within 30 days per ***Section 337.403(1), F.S.*** except as provided for in paragraphs (a), (b), and (c).

3.8.2 If deficiencies and/or violations have not been corrected within thirty (30) days, a second notification shall be sent by Certified Mail with return receipt. This second notice shall advise the Permittee of the **FDOT's** intent pursuant to ***Section 337.403(3), F.S.***

The **FDOT** shall document all acts of non-compliance that have occurred with regard to each permit, including failure to respond to notifications of non-compliance. A copy of all permit documentation, written correspondence, memoranda or notes, certified mail receipts, etc., maintained in the District Office shall be forwarded to the Office of the General Counsel and the Secretary of Transportation in Tallahassee, if an administrative hearing is requested.

Chapter 4
APPLICATION OF CRITERIA, STANDARDS, SPECIFICATIONS, AND POLICY

4.1 Application Of Criteria

The State of Florida has adopted criteria from various sources such as AASHTO, ASTM, FHWA, FDEP, and the DEP. Some of these agencies have jurisdiction over the **FDOT** in specific areas and have rule making authority. Any reference to criteria that the **FDOT** is constrained to comply with by rule, must of necessity change as other agencies change their rule. It is the responsibility of the Utility to comply with the most up to date criteria as is required of the **FDOT**. As the **FDOT** is made aware of changes, this information will be communicated through liaison activities identified herein.

4.2 Application Of Standards

The ***FDOT Standard Indexes*** are intended to be used on **FDOT** R/W. In cases where the **FDOT** construction extends on to city, county, or private R/W, the property owner has the option of applying its own standard. The **FDOT** construction plans or permit shall incorporate the standard to be applied.

Users of the ***FDOT Standard Indexes, Series 600*** for MOT activities should be aware they contain information specific to the federal and state guidelines and standards for the preparation of traffic control plans and for the execution of traffic control in work zones, for construction and maintenance operations and utility work on the State Highway System. Certain requirements in these Indexes are based on the high volume nature of state highways. For highways, roads and streets off the State Highway System, the local agency (city/county) having jurisdiction may adopt requirements based on the minimum requirements provided in the ***MUTCD***, ***Part 6.***

4.3 Application Of Specifications

The ***FDOT Standard Specifications for Road and Bridge Construction*** as modified by Appendix A, are intended to convey to a contractor or permittee working on **FDOT** projects or on the **FDOT** R/W, what contractual relationship exists, and define the standard of care, manner of work, and deliverables. They were written assuming a contractual relationship exists with the **FDOT**. When a Utility conducts work on the **FDOT** R/W it is expected that the same provisions of standard of care, manner of work, and deliverables will be applied, except as amended by the ***UAM***. Any provisions relative to contractual relationship in the Standard Specifications do not apply. The ***UAM*** identifies either in the text or exhibits, or referenced standard indexes, what standard specifications apply to the Utility, except when it enters into a contractual relationship. Contractual relationships may exist in the form of a Joint Participation Agreement for work performed by the **FDOT** contractor per ***Section 337.403(1)(b), F.S.,*** or when a Utility performs advance relocation work itself or contracts that work out in accordance with ***Section 337.403(1)(c), F.S.*** In all cases the applicable standards or specification will be controlled by the appropriate agreement.

4. 4 Application of Criteria, Standards, Specifications When A Utility Damages State Infrastructure

The ***UAM*** contains specific references to criteria, standards, and specifications that must be complied with to obtain a permit.

In the Reference Section, at the end of the ***UAM***, the specific references are not listed individually. Only the parent document in which the specific references are found is listed in the Reference Section. This shall not be interpreted as incorporating the entire document into the rule. This also serves to inform the UAO what criteria, standard, and specification the **FDOT** uses in work which is not typically accomplished by the UAO in location and installation of infrastructure.

Section 337.402, F. S., states, "When any public road or publicly owned rail corridor is damaged or impaired in any way because of the installation, inspection, or repair of a utility located on such road or publicly owned rail corridor, the owner of the utility shall, at his or her own expense, restore the road or publicly owned rail corridor to its original condition before such damage. If the owner fails to make such restoration, the authority is authorized to do so and charge the cost thereof against the owner under the provisions of ***s. 337.404***."

4. 5 Application of Policy

4.5.1 **UTILITY ACCOMMODATION WHEN UTILITIES OCCUPY THEIR OWN EASEMENTS OR PROPERTY -** Coordination with Utilities should begin as early as possible in the initial phase of the project. At this stage, the **FDOT** should do an assessment of the utility options available and the estimated cost impact of each alternative option. Utilities are entitled to be made whole for the loss of their existing property rights. The **FDOT** will attempt to provide the utilities the same, but not greater, property rights than those which they originally possessed.

If the Utility is occupying its own easement or fee property, the **FDOT's** options include:

- designing the project to avoid the Utility property;
- replacing the original Utility property to be taken with comparable property and paying for relocation of the Utility to that property; or
- providing an easement to the Utility over **FDOT** right of way with equal rights to those lost by the Utility on their original property, including exclusive use and reasonable access for maintenance; or
- providing an easement to the Utility over **FDOT** right of way allowing property rights to the greatest extent possible, including exclusive use and maintenance responsibility,

plus monetary compensation for those rights which are lost and cannot be replaced; or

- providing any other arrangements agreeable to both the utility and the **FDOT** through permits and subordination.

To the extent possible, resolution of these issues should be resolved through engineering accommodations. Litigation should be the last resort.

4.5.2 **EXEMPT PUBLIC DOCUMENTS** - Certain documents are exempt from public disclosure pursuant to ***Section 119.07(3), F.S.*** Anyone requesting a document that meets the conditions referenced in the statute shall be required to sign the "Exempt Documents / Security System Plan Distribution Form" (Exhibit "N").

4.5.3 LIAISON – The primary source of **FDOT** communication with the Utility Industry is the Utility Web site at http://www.dot.state.fl.us/rddesign/utilities/files/utilities.htm . Exhibit L is intended to summarily describe a process for providing a window of opportunity for the Utility Industry to access information and input on proposed changes by the **FDOT** that might impact them. It does not detail all processes. It is specifically noted that many, changes, if not most, are the result of changes in National Standards as adopted by Government or Agencies such as the FHWA, AASHTO, DEP, etc. The most effective approach is to become involved in reviewing and inputting on proposed changes by the National Associations and Professional Special Interest Groups. Involvement and attempting to bring about change through the **FDOT** process may be too late. The **FDOT** may be obligated to adopt other agency standards by law without having opportunity to effect further change. In addition, Utilities are encouraged to communicate with other Utilities through local industry groups to assure issues are dealt with on a consensus basis. This will allow the **FDOT** to deal with issues more appropriately and with less impact. The **FDOT** will comply with ***Florida Statute 120.54***, Rulemaking.

Chapter 5
ACCOMMODATIONS STANDARDS

5.1 Basic Requirements

5.1.1 The basic requirements governing location of utility installations are described in the location criteria section of the ***UAM***. The primary concerns in the design and location of utility installation are the preservation of the transportation facility and the safety of the transportation facility users. To facilitate management of the R/W resources and minimize construction conflicts, joint use of utility facilities is encouraged when accommodation can be achieved within or on existing ducts or poles, provided accommodation is compatible. An exception to joint use will be allowed based on the Permittee providing an engineering benefit cost study with a 2:1 ratio.

Roadway designers use design speed as a control for designing individual roadway elements throughout a project for reasons of cost effectiveness and achieving maximum safety. After a design is complete, a uniform posted speed is established for areas along the roadway that is both reasonable and fits within the bounds of all the design elements. It is important that design speed be used to determine clear zone and horizontal clearance requirements in lieu of the posted speed whenever possible. Use of the posted speed to set clearances will not provide the desired safety factor. However, it may not be possible to find the records that document the design speed. In such cases, and only in such cases, it is acceptable to use the posted speed. The source for determining the design speed for all state roadways is the District Design Engineer's Office.

5.1.2 In situations where underground and above ground utilities occupy the same side of the transportation facility, the overhead facility should normally be placed on the outside of the underground facility and as close to the R/W limits as practical, to provide as much clear zone or horizontal clearance as practical. New longitudinal underground utility installations shall be discouraged within three (3) feet of the R/W to allow space for above ground facilities that must comply with clear zone and horizontal clearance criteria. In cases where no other place exists to place an underground facility, placement within three (3) feet of the R/W is acceptable.

Clear Zone criteria have been developed and are found in Table 5.1.2.3. As shown in Figure 5.1.2.3, additional Clear Zone width is provided where non-recoverable terrain is within the Clear Zone value shown in Table 5.1.2.3. Also, Clear Zones may be widened based on crash history. It is critical that a Utility determine as soon as practical what Clear Zone values have been set for all locations along a project.

In cases where more than one UAO proposes an aerial installation on the same side of the **FDOT** R/W, a joint-use arrangement must be pursued by the utility agencies.

Only single pole lines shall be permitted on each side of **FDOT's** R/W. Exceptions may be granted pursuant to Chapter 13 of the ***UAM***.

In those situations where a single UAO proposes to install a pole line on both sides of the R/W, both pole lines must be available for joint use in order to accommodate other above ground UAO facilities.

The Americans with Disabilities Act of 1990 (ADA) established minimum criteria to allow unobstructed access or passage by a disabled person using a wheelchair or other personal transportation device. Generally, the minimum clear pathway width requirement is thirty-six (36) inches. However, a thirty two (32) inch minimum clear width is allowed for a pathway length not exceeding twenty four (24) inches. See ***28 CFR, Part 36***, Appendix A, Fig 1. In the case of curbing adjacent to a sidewalk that constitutes a pathway, the curb shall not be considered part of the thirty two (32) inch dimension. No exceptions for non-compliance with the ADA criteria are given.

Table 5.1.2.1 Horizontal Clearance Requirements For Light Poles (New Construction).

CONVENTIONAL LIGHTING PLACEMENT - Not in the median except in conjunction with barriers that are justified for other reasons.
Rural (Flush Shoulders): **Twenty (20) feet from the travel lane, fourteen (14) feet from auxiliary lane (may be clear zone width when clear zone is less than twenty (20) feet).**
Urban (Curb and Gutter): **From right of way line to four (4) feet back of face of curb (may be two and one half (2.5) feet back of face of curb when all other alternatives are deemed impractical). Placement within sidewalks shall be such that a minimum unobstructed sidewalk width of thirty two (32) inches is provided per ADA requirements. (Sidewalk width is measured exclusive of the curb width.)**
HIGH MAST LIGHTING - Outside of the clear zone unless shielded.

Table 5.1.2.2 Horizontal Clearance Requirements For Non-Frangible Above Ground Fixed Objects (New Construction)

Shall not be located within the limited access right of way. **Shall not be located in the median.**
All roadways with flush shoulders regardless of design speed and roadways with curb or curb and gutter with design speeds greater than forty five (45) mph: **As close as practical to the R/W line* or four (4) feet behind the back of the barriers that have been justified for other reasons.** If the distance from the edge of the traveled-way is less than the clear zone width in Table 5.1.2.3, the Utility must apply for an exception.**
Curb or curb and gutter roadways with design speeds of forty five (45) mph or less: **As close as practical to the R/W line.* If a minimum distance of four (4) feet from the curb face to the fixed object is not practical, the Utility must apply for an exception. Placement within sidewalk shall be such that a minimum unobstructed sidewalk width of thirty-two (32) inches is provided. (Sidewalk width is measured exclusive of curb width.)**
*** "As close as practical to the R/W line" is determined by conditions such as, but not limited to:** • **Aerial encroachment** • **NESC, ADA, or other State or Federal applicable codes/regulations** • **Conflicts with other existing overhead or underground facilities** • **Trees on adjacent private property (where adequate future trimming would require encroachment on private property)** • **Down guying requirements.** **** Less than four (4) feet may be approved by exception.**

Table - 5.1.2.3 Clear Zone Widths for flush shoulders on a straight alignment with slopes 1:4 or flatter. (New Construction rural or urban) Note: Design Speed is shown in the table. However, Posted Speed may be used as the default criteria for areas where the design speed is not published. Design Speed shall be used when available. See Section 5.1.1.

CLEAR ZONE WIDTH (FEET)				
DESIGN SPEED Mph	≥1500 AADT*		<1500 AADT*	
	TRAVEL LANES & MULTI-LANE RAMPS	AUXILIARY LANES & LANE RAMPS	TRAVEL LANES & MULTI-LANE RAMPS	AUXILIARY LANES & SINGLE LANE RAMPS
<45	18	10	16	10
45	24	14	20	14
50	24	14	20	14
55	30	18	24	14
>55	36	24	30	18

*AADT = Mainline twenty (20) years projected annual average daily traffic.

Clear Zones must be adjusted for the effects of shoulder slopes steeper than 1:4. Adjustments due to shoulder slope are contained in Figure 5.1.2.3.

Clear Zone Widths are measured from the edge of the lane.

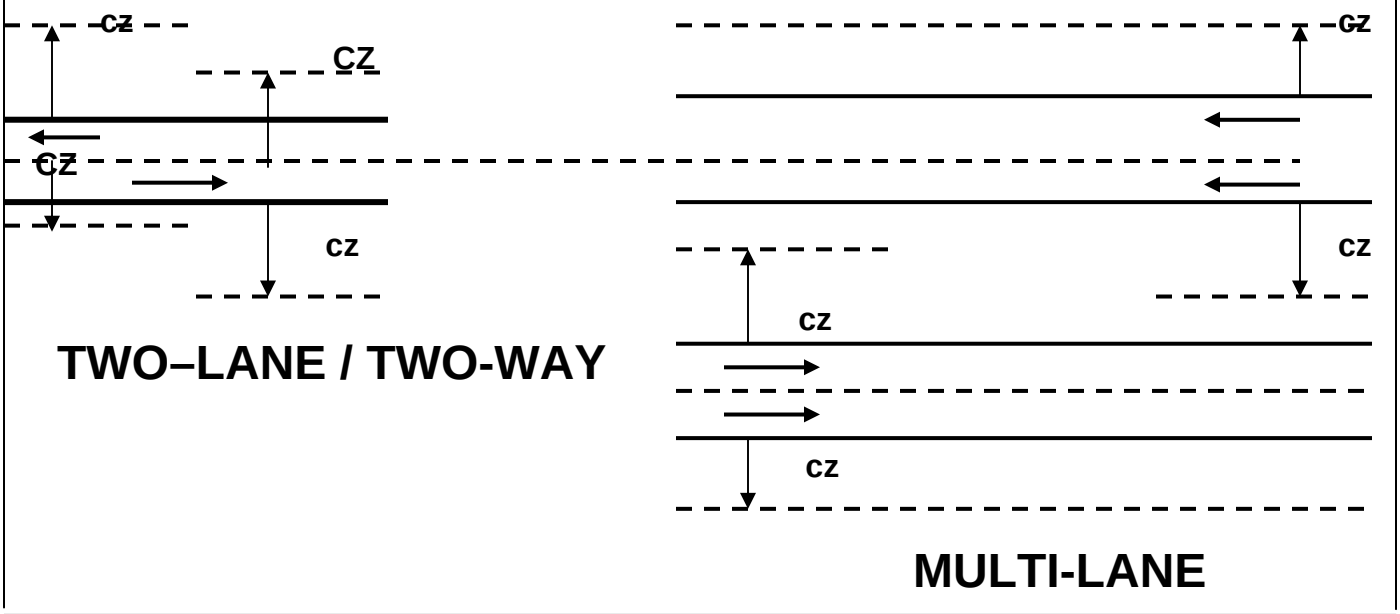


Table 5.1.2.4 Horizontal Clearance to Other Above Ground Fixed Objects

Minimum Horizontal Clearance to other above ground fixed objects:

Rural and Urban Flush Shoulders:
Outside the clear zone.

Urban Curb or Curb and Gutter:
Four (4) feet back from face of curb. May be two and one half (2.5) feet back from face of curb when all other alternatives are deemed impractical.

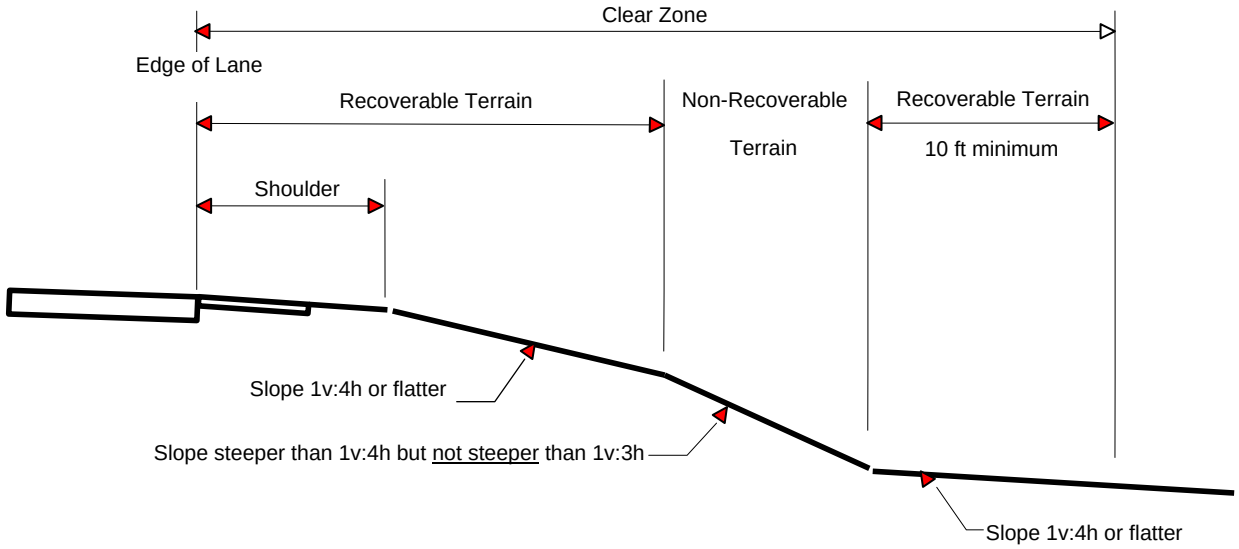


FIGURE 5.1.2.3 - RECOVERY AREA AND CLEAR ZONE WIDTH

NOTE: The above shown slope values are typically found in designs but are not intended to reflect a standard design.

When a non-recoverable slope encroaches the Clear Zone, then additional Clear Zone width is provided beyond the toe of slope equal to the width of the encroachment. A minimum of ten (10) feet of additional Clear Zone width is provided beyond the toe of slope. This additional Clear Zone width may be reduced if it extends beyond the R/W line. Clear Zones may also be widened based on crash history.

5.1.3 Where feasible and practical, luminaires should be attached to utility poles that meet the offset criteria, thereby eliminating unnecessary poles along **FDOT** facilities. A second pole line to support illumination will be allowed where the need for the illumination is properly documented, traffic safety requirements are met, practical alternatives using existing infrastructure do not exist, and compliance with all other ***UAM*** requirements can be achieved.

5.1.4 Scenic enhancement shall be considered on permit applications. The type and size of utility facilities, along with the extent to which they are permitted along or within **FDOT** R/W, can materially alter the scenic quality, appearance and view of the transportation facility and adjacent areas. Therefore, additional controls are applicable in certain areas that have been acquired or set aside for their scenic quality. Such areas include scenic strips, overlooks, rest areas, recreation areas, and the **FDOT** R/W within the limits of public parks and historic sites.

- o New underground utility installations may be permitted within such lands where they do not require extensive removal or alteration of trees or other natural features visible

to the transportation facility user, and where they do not impair the visual quality of the lands being traversed. New aerial installations are to be avoided at such locations where there is a feasible and prudent alternative to the use of such lands by the aerial facility. Exceptions will be considered for criteria listed in the bulleted items in Section 5.1.4:

- Other locations are unusually difficult, or the cost is unreasonable or more undesirable from the standpoint of visual quality.

- Undergrounding is not technically feasible or the cost is unreasonable.

- The proposed installation will employ suitable designs and materials that give adequate attention to the visual qualities of the areas being traversed.

These controls shall also be followed in the location and design of utility installations that are needed for transportation facility purposes, such as continuous highway lighting or to serve weight stations, rest areas, or recreation areas.

5.1.5 All new or relocated longitudinal above ground and underground utility facilities on roadway R/W and operating rail corridors shall be placed outside the toe of the front slope and as close to the edge of the R/W as practical. For non-operating rail corridors, the location of all new or relocated longitudinal above ground and underground utility facilities shall be determined based upon an evaluation of existing and future use of the facility.

5.1.6 Where 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 pounds per square foot at thirty (30) inches minimum depth and other requirements found in the ***UAM*** or those of a railroad operating a rail corridor if more stringent.

Gas and liquid petroleum pipelines shall be designed and constructed to conform with ***49 CFR, Part 192, Transportation of Natural Gas by Pipeline or Part 195, Transportation of Liquids by Pipeline***, as applicable and hereby incorporated by reference. The maximum allowable operating pressure of gas mains must be shown on permit applications.

5.1.7 When an emergency condition warrants immediate action, the UAO should proceed immediately with repairs necessary to safeguard the public.

The local Maintenance Engineer or designee shall be notified as soon as practical, but no later than the next scheduled **FDOT** working day. All repair work to the **FDOT's** facilities must be approved by the local Maintenance Engineer. If the type of work would normally require a permit, the UAO will be required to submit a permit application within one (1) week after the work is completed. In a situation of this type, a TCP is not required with the permit application. This does not eliminate the responsibility to provide a safe MOT setup, when and where practical. In any case, restoration of R/W will be in accordance with all applicable **FDOT** specifications and standards, at the expense of the Permittee.

5.1.8 All underground service connections shall comply with the R/W restoration and minimum depth (except to meet above ground termination) requirements found in the ***UAM***.

5.2 Crossings

5.2.1 Crossings under existing pavement will usually be made without cutting the pavement. Underground crossings made by methods other than open cutting shall conform to the provisions of Sections 10.13 -10.17 of the ***UAM***. The proposed means of placing the pipe shall be stated on the permit. Conditions that are generally unsuitable or undesirable for pipeline crossings should be avoided.

Clearance requirements for both aerial and underground crossings are shown in location criteria.

5.3 Limited Access Crossings

In expanding areas adjacent to a limited access facility, the Permittee shall install utility facilities so as to minimize the need for crossings of the limited access facility. In areas where utility facilities are not available within reasonable distance, of where the utility facility is needed, a crossing by a utility facility may be permitted pursuant to Chapter 12 of the ***UAM***. The construction and maintenance of Utilities should be accomplished without violation of limited access principles.

5.3.1 Underground pipelines crossing between interchanges should be encased between toe of slopes. Casing pipe for flammable gases and fluids will be vented at the R/W line. Welded steel pipe transmitting gas or liquid petroleum may be installed without encasement, provided such pipelines conform with ***49 CFR, Part 192, Transportation of Natural Gas by Pipeline or Part 195, Transportation of Liquids by Pipeline***, as applicable. The pipeline shall be designed to withstand internal design pressures and the superimposed loads of the transportation facility. All construction and maintenance will be outside the limited access fence. When utilities are placed on completed sections, the limited access fence may be replaced with temporary fencing extending into the toe of slope and enclosing the entire work area.

5.3.2 Underground crossings in interchanges, where access to the utility may be gained without violation of limited access principles, shall be installed with sufficient strength to preserve the structural integrity of the paving and structure.

5.3.3 All piping must comply with the appropriate Federal and State regulations in effect at the time of permitted construction.

5.3.4 Since aerial crossings usually may not be accomplished without work inside the limited access facility, such crossings between interchanges should be minimized. Where necessary to construct a crossing between interchanges on an operational facility, a comprehensive plan for this work must be presented as part of the permit application.

No temporary supports will be permitted within the applicable clear zone or horizontal clearance requirements, unless placed behind existing guardrail at or exceeding the minimum offset or incorporated within an approved barrier system.

No work of any type, in connection with permitted construction will commence without a minimum of forty eight (48) hours advance notification to the local **FDOT** Maintenance or Resident Engineer's Office.

5.3.5 Where a permitted facility exists within the proposed R/W of a limited access facility and it can be serviced, maintained, and operated without interference to traffic on through traffic roadways or ramps, it may remain as long as it does not adversely affect the safety, design, construction, operation, maintenance, or stability of such limited access facility. See Chapter 12 of the ***UAM*** for Limited Access R/W provisions.

5.3.6 Expansion of a utility carried by an existing structure across a major valley or river may be permitted, provided the utility can be installed and serviced without interference to the motoring public.

5.3.7 Where a utility follows a crossroad or street that is carried over or under a limited access facility, provision should be made for the utility to cross the limited access facility at the location of the crossroads or streets in such manner that the utility could be serviced without interference to traffic on through-traffic roadways or ramps. Where distinct advantages and appreciable cost savings are affected by locating the utilities outside the R/W of the crossroad or street, they may be so located.

5.3.8 Except for necessary crossings, water canals, and irrigation ditches should be excluded from the limited access R/W. Crossings may be made by underground siphon, or through culverts, or bridges as appropriate to the size of canal, topographic conditions, and transportation safety aspects. In general, locations and structures are to be designed in the same manner, as are facilities for natural transverse drainage. All ingress and egress for servicing or patrolling such facilities shall be from outside the control of access lines.

5.3.9 When existing utilities are relocated or adjusted in conjunction with construction of a limited access facility, provision should be made for known and planned expansion of the utility facilities, and particularly those underground. They should be planned to avoid interference with traffic at some future date when additional or new overhead or underground lines are installed.

5.3.10 Access for servicing a utility along or across a limited access facility should be limited to access via criteria in the bulleted items listed in Section 5.3.10:

- Frontage roads where provided.
- Nearby or adjacent public roads and streets.
- Trails along or near the **FDOT** limited access R/W lines, connecting only to an intersecting roadway or rail corridor, from any one or all of which entry may be

made to the outer portion of the limited access R/W.

5.4 Attachments to Structures

5.4.1 General - Generally if any of the following conditions in the bullets listed in Section 5.4.1 are created by the attachment to a structure, the attachment will not be approved:

- An obvious hazard to the public.
- The integrity of the structure will be affected.
- Inspection and maintenance operations will be unreasonably hindered.
- Aesthetics of structures, that are located in aesthetically sensitive environments, will be adversely affected.

Details of utility attachments including loads, attachment positions, detail dimensions, material type, plans, specifications, and corrosion certification will be submitted by a Professional Structural Engineer, registered in the State of Florida, to the District Structures Design Engineer. These plans and specifications shall be signed and sealed by the engineer, and the information shall be suitable for inclusion in the Florida Bridge Management Inventory System (BMIS) file. Development of construction plans for the accommodation of utilities onto structures to be constructed shall be the responsibility of the Permittee.

Permits for attachments to existing structures shall be reviewed and recommended for approval or denial by the District Structures and Facilities Engineer, and approved by the District Maintenance Engineer or designee.

Comments from the District Structures and Facilities Engineer must be coordinated into the design process. The Permittee shall coordinate the plans development process with the District Maintenance Engineer or designee.

5.4.2 Responsibility - The UAO is totally responsible for the design, safety, inspection, and maintenance of its facilities and supporting hardware attached to **FDOT** bridge structures. If the **FDOT** determines that the utility may be accommodated, the Permittee's engineer has the responsibility to determine that the structure will support the utility in addition to other loads, in a safe manner and will not significantly reduce the live load capacity of the bridge. The **FDOT** is the final authority in all disputes that may develop. The UAO is advised to review the Five Year Work Program to determine if an existing bridge will be replaced, rehabilitated, or widened.

5.4.3 Criteria - Where attachments are permitted, the following criteria must be met as conditions of issuing the permit:

- Designs for utility attachments shall be in compliance with all applicable federal, state and local regulations, rules, and codes.

- No construction or maintenance will be accomplished upon a structure without written approval from the District Maintenance Engineer or designee. In emergencies, repairs may proceed after verbal approval from the District Maintenance Engineer or designee.

- Utilities attached to bridge structures shall maintain a vertical clearance at least equal to that of the structure.

- Attachments onto bridge structures, whose locations are environmentally classified as extremely aggressive, shall have all the metallic portions of the attachment hardware (hangers, bolts, etc.) fabricated from 316 stainless steel or other equal material as determined by the State Corrosion Engineer.

  A determination as to whether or not a bridge structure is located in an extremely aggressive area can be obtained from the District Materials Engineer.

- Utility cables or conductors shall be encased in conduit so that maintenance can be accomplished from the ends of the structure. Conduits for utilities to be installed on bridges located in extremely aggressive areas shall be fabricated from non-metallic materials or other equal materials as determined by the State Corrosion Engineer.

- All electrical cables two (2) kv and above shall be shielded cable with a concentric neutral grounded at both ends of the bridge.

- Metallic pipes or conduits shall be electrically insulated from the structure by redundant insulators. Metallic pipes or conduits shall be supported by insulating pipe rollers or specifically designed sliding or elastomeric bearings. Insulating pipe rollers (rollers constructed from dielectric material) shall be used, unless the loads will permanently strain the roller material beyond the elastic limit.

- All utilities shall be isolated and insulated from the structure to ensure that corrosion cells do not develop because of the attachment of the utility.

- Utility attachments should be designed to pass through the back wall of the abutment, when practical. Pipe may be routed around the abutment when the abutment back wall design prohibits pass through due to dimensional constraints, thickness, material composition, or reinforcement. The Permittee will consult with the District Maintenance Engineer or designee and the District Structures and Facilities Engineer concerning the **FDOT's** requirements at each site.

- All pressure lines shall have shut-off systems so that the pipe segment at the bridge can be isolated.

- All lines carrying hazardous material (flammable, toxic, or corrosive) shall be designed to be in compliance with the ***U.S. Department of Transportation Pipeline Safety Standards, 49 CFR, Part 192 or Part 195***, as applicable, for a class four location. Only steel pipe with welded or flange joints and conforming to API Standards shall be used.

Accommodation of pipes transmitting hazardous materials with line pressures in excess of two hundred fifty (250) psi gage pressure should be reviewed in light of the added safety concerns.

5.4.4 Location - Utilities should be located beneath the cantilever portion of the bridge structure deck overhang. Under no circumstances should any Utility be allowed to attach onto the bridge girders. Locating the utility under the deck overhang is the best location because it minimizes interference with bridge inspection and future girder maintenance.

5.4.5 Materials - All materials and methods to be used for utility conduit, pipe coatings, and concrete repairs shall be approved by the **FDOT's** State Materials Office and in accordance with the site specific requirements of the structure as determined by the District Structures Design Engineer.

5.5 Other Systems

5.5.1 Casings - When casings are used for crossings of flammable gases or fluids, the casing shall extend to the toe of the front slope and shall be vented at or outside of the R/W line. Welded steel pipelines transmitting gas or liquid petroleum may be installed without encasement provided such pipeline conforms with ***49 CFR, Part 192, Transportation of Natural Gas by Pipeline, or Part 195, Transportation of Liquids by Pipeline***, as applicable. The pipeline shall be designed to withstand internal design pressures and the superimposed loads of the transportation facility.

All casing pipe materials and joints shall comply with the greater of either the industry standard requirement for the intended use, or those required to sustain the static and dynamic loads of **FDOT** construction or maintenance activities as well as continued public use without leakage or damage to the roadway facility. All welded joints shall be full depth welds.

Casing shall be required for crossings of underground utilities where the carrier conduit is of insufficient strength due to composition or depth of cover.

Casing shall be required for crossings under existing pavement where the carrier is of composition such that it cannot be jacked and bored.

5.5.2 Temporary Supports - Where it is necessary to place temporary supports for aerial crossings that will interfere with traffic, careful planning of work with regard to the safety of vehicular traffic is mandatory.

No temporary supports will be allowed closer than the minimum clearance as shown in the ***UAM*** or as required by the operating railroad, unless incorporated with approved barrier systems or other approved work zone traffic control devices.

No work of this type will commence without a minimum of forty eight (48) hours advance notification to the local law enforcement agency and local Maintenance Engineer, within

whose jurisdictions such roadway is located prior to commencing work. Such temporary construction shall be completed in the minimum amount of time practical, as approved in the permit.

5.5.3 Where the applicant wishes to connect any surface (storm water) or subsurface drainage to the **FDOT** drainage system, the applicant shall apply for a permit to allow this connection using the procedures contained in ***Rule 14-86, F.A.C.*** This rule contains both water quality and rate requirements.

5.6 Pavement Cutting / Trenching of a Transportation Facility

5.6.1 In any analysis of a request for open cutting or trenching, primary considerations will be given to the safety and convenience of the public. The applicant shall provide written justification for approval of open cutting.

5.6.2 Open cutting of existing pavement and side roads, less than five (5) years old, on **FDOT** R/W generally will only be considered with written justification to include an analysis of factors demonstrating that means other than open cutting would not be feasible. The factors shall include but not be limited to conditions such as: pavement re-construction is scheduled for the facility within the Five Year Work Program, subsurface obstructions, limited space for jacking and boring/directional boring, high water table, or substandard roadway surface.

5.6.3 Open cutting of existing paved driveway connections will be permitted, provided the users are notified by the Permittee seven (7) days in advance, access to the property is maintained for the users, and pavement is restored to the greater of an equivalent condition and type to what exists or in accordance with the ***UAM***. Notification may be accomplished by the use of a door hanger type notice, or on-site signs, as appropriate and approved by the **FDOT**.

5.6.4 Where open cutting has been permitted, replacement of fill, base, and surface will be in accordance with the ***UAM***, the ***FDOT Standard Index No. 307*** *in* ***Appendix B***, and any special provisions of the permit.

5.7 Utility Accommodation in the Vicinity of Mechanically Stabilized Earth Walls or Proprietary Earth Walls (MSE)

New utilities will not be accommodated within the limits of a Mechanically Stabilized Earth or Proprietary Earth Wall, hereafter referred to as an MSE wall, or its support structure unless approved by the State Structures Design Engineer or Designee. Special design constraints may be imposed when a pressurized utility carrier is placed within a confinement area, through, under, or immediately adjacent to an MSE Wall. This is to assure the structural elements take into consideration support limitations that may be created by the presence of utilities and potential damage or failure if a pressurized utility carrier leaks.

MSE walls function by using straps or fabric as structural elements throughout the earth fill to resist lateral wall stresses through friction. This makes it impractical and in some

cases impossible to incorporate utilities among the layered structural elements because special design and construction problems result. Since MSE wall reinforcement relies upon friction between the soil and the structural elements, any reduction in compaction of the soil by the intrusion of utilities, excessive fluids, or gases can result in failure of the total MSE wall structure.

If a liquid or pressure vessel were allowed within or in close proximity to the structure and it ruptured, total failure of the MSE wall structure could occur resulting in injury or death to those occupying the structure, or immediately adjacent to it. If utility accommodation within the limits of an MSE wall structure appears to be the only practical alternative, only non-liquid and non-pressure vessels may be permitted without separate encasement.

All liquid and pressure carriers should be located as far from an MSE Wall as the R/W and construction technology permit. All existing utility facilities that are located below a proposed MSE wall structure must be evaluated for condition and relocation. The practical location of a utility facility must be determined based on MSE wall design and available R/W.

When an MSE wall is used as the approach or abutment support to an existing or proposed bridge, special consideration must be given to accommodating any utility facility attached to the bridge. In the area of transition between the bridge and the approach, there may be considerable differential settlement and induced shear stress that requires special design, material, and joint configuration. It may be required to accommodate the utility facility in a separate false work structure along the face of the MSE wall rather than incorporate it directly into the MSE wall structure. The design must be compatible with the aesthetics features applied to the overall structure.

All additional costs associated with accommodation of a utility facility on any **FDOT** structure, within an MSE wall structure, or in such close proximity so as to incur special design and construction costs, shall be paid for by the Utility unless a compensable interest exists.

Liquid or Gas pressure carrier installations:
All liquid or gas pressure carriers should be installed as far from the MSE wall as practical. When a request is made to place a liquid or gas line within or near MSE walls, special consideration must be given to not only how the utility location may affect obtaining adequate compaction around straps or fabric but also the proximity of the carrier to the friction devices or the wall proper. All new liquid or gas carriers installed within the confinements of an MSE wall, whether longitudinally or crossing must be encased in a separate conduit suitable to withstand the design and working pressures of the main carrier. For all new liquid or gas pressure carriers to be installed immediately adjacent to an MSE wall, whether a separate encasement will be required shall be at the discretion of the **FDOT** engineer. As a rule of thumb, separate encasement is suggested within five (5) feet of a wall and should be considered but is not mandated within the limits defined by a 1:2 (height:offset) slope intercept line from the top of the MSE to the top of the carrier.

Additional Coordination and Engineering Required:
When initial utility contact is made the project scope may not define whether a conventional earthen fill will be used or an MSE wall is required. Issues of this nature require earlier than normal lead-time for utility relocation or special design. Allowing a liquid or gas pressure carrier within MSE wall confinements may appear to be the only practical option. But, the Utility may need to plan on special loading conditions that may require replacement of some portions of the utility facility to accommodate localized stress or movement. These issues must be addressed with the District Design Engineer. As soon as it has been determined that an MSE wall is to be employed, the **FDOT** shall notify the Utility to begin its design considerations. Further coordination with the District Structures Design Engineer or designee may be required. Non-compliance with the above must be evaluated based on site conditions and will require an approved exception per Chapter 13.

Chapter 6
SPECIAL REQUIREMENTS FOR INSTALLATION, RESTORATION OF R/W AND MAINTENANCE OF A UTILITY

6.1 General

Erosion and sediment controls, if required, shall be installed before any work begins, and in accordance with local, state, and federal requirements. See ***Section 337.402, F.S.*** regarding restoration.

6.1.1 ***Chapter 556, F.S.,*** requires the Permittee, prior to any excavation or demolition activities, to notify the One-Call System. (Also called Sunshine State One-Call). This is to be done not less than two (2), nor more than five (5), business days before beginning excavation. Greater periods exist for certain circumstances. The Permittee must consult ***Chapter 556, F.S.,*** for specific requirements. The phone number for Sunshine State One-Call, Inc., is 1-800-432-4770. Note, this is not the same number that must be called for **FDOT** notifications. The Permittee must determine upon permit approval what **FDOT** number to call.

6.1.2 The Permittee should be aware that the utility work may require compliance with other state and local agency codes, standards, and criteria, including the Florida administered NPDES and Drinking Water Permitting Process.

6.1.3 All affected side drains, side ditches, and storm sewers will be identified and referenced as to grade and location prior to construction. Anticipated conflict manholes shall be noted in the Utility Work Schedule and reflected in the State DEP Drinking Water Permit for domestic water supply facilities. Conflict manholes constructed to accommodate domestic water supply facilities in the field, but not noted in the drinking water permit, require after the fact phone notification to the State DEP Area Drinking Water Manager and a written notification within one (1) week.

6.1.4 At each open cut, the backfill material shall be placed and compacted per the ***FDOT Standard Specifications for Road and Bridge Construction, Section 125-8***, and ***Section 121 for Flowable Fill*** in **Appendix A,** when flowable fill is used. This requirement applies to embankment, subgrade, and base. The density determinations can be made by the Permittee, if qualified, or a certified laboratory under the supervision of the Permittee's consultant. A copy of all density test reports shall be furnished to the **FDOT**. See ***Standard Indexes 307 and 505*** for details.

6.1.5 When open cut is allowed, drawings must accompany the permit application showing proper replacement of the roadway and location of the utility. Written documentation is required justifying why the Utility believes a deviation from the **FDOT's** standards is necessary.

6.1.6 Temporary patches will be maintained to provide a smooth, all weather surface at all times. Temporary patches shall be replaced by permanent patches as soon as all other installation work is completed, and the local Maintenance Engineer or designee will be

notified a minimum of forty eight (48) hours prior to application of the permanent patch. The Permittee will be required to maintain the permanent patch for a period of two (2) years from the date of installation.

6.1.7 Shoring will be required to conform with the provisions of ***Sections 553.60 - 553.64***, ***F.S.***, the “Trench Safety Act," to protect existing pavement, structures, and foundations.

6.1.8 Excavated material in excess of the quantity required for backfill in **FDOT's** R/W shall be removed by the Permittee.

Excess excavated material considered unusable by the **FDOT** shall be disposed of at the Permittee's expense, unless otherwise directed by the **FDOT**. This paragraph does not apply to material contaminated with hazardous waste or pollutant.

6.1.9 All correspondence regarding construction procedures will be handled directly with the Permittee and not through the Permittee's consultants, contractors, or subcontractors.

6.1.10 At such locations where **FDOT** signs, reflectors, or other structures will interfere with proposed utility installation, the Permittee will notify the local Maintenance or Resident Engineer a minimum of forty eight (48) hours in advance of starting work. All signs and reflectors that require relocation or replacement as a result of Permittee's work will be relocated or replaced by the Permittee.

6.1.11 All trees and shrubbery (planted or naturally occurring on the R/W) irreparably damaged or destroyed by the UAO during construction shall be replaced by and at the Permittee’s expense with like-sized plants, except for trees or shrubs removed in accordance with the permit for purposes of complying with clear zone or horizontal clearance. Replacement plant size shall be determined by calculating the total diameter at breast height (DBH) of affected trees and/or shrubbery, or the total averaged height of affected trees and/or shrubs. When existing trees or shrubs have a clear trunk up to the DBH (measured four and one half (4.5) feet above grade), the DBH shall be used to measure existing trees or shrubs. If the trunk has vegetation and does not have a clear area below the DBH, the total averaged height method shall be used. Utility companies must measure trees and shrubs before they are cut down to determine DBH. Replacement material is measured in the nursery industry measurement standard of Caliper inches which is measured six (6) inches above grade of nursery stock. The Maintenance Engineer, Resident Engineer, or Landscape Manager shall direct which replacement method is appropriate if the trees or shrubs have been cut down and the ability to measure the DBH is impractical.

The **FDOT** will take all reasonable measures to determine if an existing **FDOT** approved landscape project exists where the UAO intends to conduct construction. If such landscaping does exist, the UAO shall notify the landscape Permittee (typically the local government). The UAO shall, at that time, inform the landscape Permittee and Maintenance Engineer, Resident Engineer, or Landscape Manager of the scope of work to be performed, so that a determination can be made on how much of the existing landscape may be affected by such work.

6.1.12 Sodding, grassing, and mulching operations shall begin within one (1) week after utility is installed, except in cases of front and back slopes which shall be done immediately. Any **FDOT** R/W that has a grass mat will be re-sodded with like sod. The Permittee shall maintain that portion of the R/W affected by the permit installation until vegetation is established.

6.1.13 The Permittee shall immediately cease operations and notify the local Maintenance Engineer or, if on a construction project, the Project Engineer, if substances or material suspected of being hazardous waste, asbestos, oil of any kind or in any form, gasoline, pesticides, ammonia, chlorine, and derivatives thereof, excluding liquefied petroleum gas, are discovered in the portion of the R/W where work is authorized by the permit. The **FDOT** shall notify the Permittee of the suspension or revocation of the permit until contamination assessment and remediation under ***Rule Chapters 62-770*** and ***62-730 F.A.C.,*** has progressed to a state that all environmental regulatory agencies having jurisdiction have approved the site of the contamination for resumption of construction and utility work. See ***Rule Chapters 62-770*** and ***62-730, F.A.C.***, for further details.

At that time, the **FDOT** will notify the Permittee and provide an opportunity for the Permittee to obtain an amended permit, subject to any conditions imposed by said environmental regulatory agencies. The Permittee shall comply with all conditions of the amended permit.

If the discovery is made on an **FDOT** construction project, the time for the permit will be suspended and shall not resume until such time as the Resident/Project Engineer informs the Permittee.

6.1.14 The use of flowable fill to reduce the time traffic is taken off of an existing facility is acceptable but must have prior approval by the Engineer. (See ***FDOT Standard Index 307)*** Flowable fill shall not be placed directly over loose, high plastic, or muck material (See ***FDOT Standard Index 505***) because settlement can occur due to the increased weight. Flowable fill use is allowed only when properly engineered for pavement crossings, whether straight or diagonal, and shall not be installed for significant depths or lengths. The maximum length shall be fifty (50) feet and maximum depth of six (6) feet unless supported by an engineering document prepared by a qualified licensed Florida professional engineer that specializes in soils engineering. The engineering document shall address the evaluation of local groundwater flow interruption and settlement potential. When flowable fill is used, the type shall be excavatable flowable fill as defined in ***FDOT Standard Specifications for Road and Bridge Construction, Section 121.*** When flowable fill is used for manhole stabilization and ring and cover adjustments, non-excavatable flowable fill shall be used. Flowable fill shall not be used on new **FDOT** construction projects unless approved and shown in the **FDOT** construction plans.

Chapter 7
MAINTENANCE OF VEGETATION

7.1 General

Maintenance of vegetation includes any method intended to alter or regulate the normal growth process of plants. Manual or mechanical methods, or the use of herbicides or plant (tree) growth regulators, may be allowed based upon site specific safety requirements.

Safety, aesthetics, and the preservation of desired vegetation are prime considerations in the maintenance of vegetation. Vegetation maintenance will not detract from the natural beauty of the roadside and shall not provide or appear as an abrupt change in roadside vegetation conditions to the greatest extent practical. Except for tree trimming in Section 7.2, the removal, cutting, or destruction of any vegetation within **FDOT's** R/W is prohibited unless authorized by **FDOT** for invasive, undesirable, or exotic species. A forty eight (48) hour minimum notice shall be given to the respective local Maintenance Engineer prior to the performance of operations.

7.2 Tree Trimming

Under ***Section 337.405, F.S.***, the trimming of trees where required to ensure and maintain the safe operation of utility facilities is allowed by the original permit, provided such trimming is performed in accordance with recognized and approved principles of modern vegetation control methods, with emphasis on tree health. Such trimming shall not unnecessarily damage trees and shrubs that are intended to remain in the work area. The use of mechanical tree trimming machines will be permitted as part of routine maintenance. All waste and debris associated with the trimming shall be removed from **FDOT** R/W, unless otherwise approved in writing where the **FDOT** has arranged for removal by other forces. When trimming does irreparable damage to trees or shrubs or causes the vegetation to die, the Permittee shall replace this vegetation with material as described in Section 6.1.11 of the ***UAM.***

7.3 Removal of Vegetation

Manual or mechanical cutting of vegetation will be permitted on a routine or periodic basis, provided that the limits of work do not extend beyond the limits necessary for the proper maintenance of the utility facility. Grasses shall be mowed or cut to a height of not less than five (5) inches and in such a manner as to promote low growing ground cover species. Mowing equipment shall be so equipped and operated in a manner to preclude the throwing of debris that would create a safety hazard.

In areas dominant in brush, the UAO may remove or cut flush with the ground those trees (less than four (4) inches in diameter or larger, with the approval of the District Maintenance Engineer) interfering or likely to interfere with the safe maintenance and operation of the utility. All undergrowth is to remain natural. Brush cuttings or debris discharged into the routinely maintained limits of the R/W shall be removed by UAO.

Stockpiling of debris for later disposal is allowed outside the mowing limits and clear recovery zone. The distribution of chips outside the mowing limits and clear recovery zone, or beneath existing trees at a uniform thickness will also be allowed with the prior approval of the Maintenance Engineer.

See Section 6.1.11 regarding vegetation removal and restoration.

7.4 Chemical Control of Vegetation

Authorization to control vegetation chemically must be secured in advance, in writing, with a minimum of forty eight (48) hours advance notice given to the respective local Maintenance Engineer prior to the application of the chemicals. All requests shall be submitted in a written proposal that outlines the extent of the intended work, the type of herbicides or plant (tree) growth regulators, including labels and material safety data sheets that are intended for use, and the intended timing and techniques of application. The Resident Maintenance Office must also be furnished documentation that the Permittee's herbicide applicator, whether a utility staff person or contractor, is certified to apply herbicides as part of the permit request.

The use of herbicides and plant (tree) growth regulators for the purpose of chemically maintaining vegetation may be approved by the local Maintenance Engineer on a site or location specific basis. Application for chemical control will be considered on an individual basis and authorization shall not be interpreted as giving permission to extend beyond the specified limits or the provisions of the work.

Regardless of the method used by the Permittee for control of vegetation, liability for damage to adjacent property and the **FDOT's** R/W rests solely and entirely with the Permittee. The Utility must comply with all applicable Federal and State regulations.

No application will be permitted on vegetation greater than six (6) feet in height that will create an undesirable appearance or undesired browning or color change of vegetation. Special height considerations may be given to locations where physical manmade obstructions preclude or prevent the reducing of vegetation to the six (6) feet height. Applications at a height of greater than six (6) feet may be authorized by the Maintenance Engineer in areas with rapid plant growth or in the control of invasive exotic vegetation providing the dead plant material is removed, chipped, or mulched following successful performance of the herbicides. Vegetation that is to be maintained chemically shall be treated while in the first growing season after mowing or before it has reached a height of six (6) feet.

The Permittee or its contractor shall not use any herbicide that is labeled as restricted use or contains the active ingredient sulfonyl urea or any sulfonyl urea family of chemicals.

Neither the Permittee nor its contractor shall apply non-selective or residual herbicides to roadside turf grasses or apply any chemical of any type or rate that causes permanent injury to desirable vegetation or that may result in bare ground. Exceptions will be authorized by the District Maintenance Engineer when the treatment of invasive exotic vegetation is of more importance than preservation of desirable plants.

Individual stem and solid stream treatments that result in spot or narrow band control are permitted pursuant to State law and regulations. For examples of when other agency regulations or laws may apply, see the following:

- ***Rule 5E-2, Pesticides, F.A.C.***
- ***Chapter 487, Florida Statutes***

Where specific plants have been selected and preserved, they shall be protected against damage by the herbicide treatment of adjacent vegetation. Careless or excessive applications will not be tolerated. Special precautions must be taken with all herbicide applications to ensure that they are made in accordance with all environmental considerations and associated regulations.

Personnel shall be trained, experienced, and competent in the particular type of work they are engaged in and licensed according to applicable federal and state law. Only experienced personnel having a thorough understanding of herbicide application and the technical complexities in this field of expertise are to be allowed to apply these chemicals.

A complete copy of the records detailing the dates, location, materials, rates, weather, and other relevant data, as required by federal and state law, shall be maintained by the Permittee and provided to the **FDOT** upon request.

Misuse or unsatisfactory performance results or failure to comply with these provisions constitute sufficient cause for the denial of future use of chemicals for vegetation control.

Chapter 8
MAINTENANCE OF TRAFFIC (MOT)

8.1 Background

Whenever work is done on or near the roadway, drivers are faced with changing and unexpected traffic conditions. These changes may be hazardous for drivers, workers, and pedestrians unless strict protective measures are taken.

Part 6 of the ***MUTCD*** is the national standard for all traffic control devices and methods used during construction, maintenance, and utility activities.

The State of Florida adopted the ***MUTCD*** as the minimum state standard for use on roadways other than the State Highway System such as city and county roadways.

Pursuant to ***334.044(25), F.S.***, the **FDOT** has adopted safety standards in addition to those found in the **MUTCD**.

The State of Florida adopted higher standards for some devices and conditions to be applied on the State Highway System managed by the **FDOT**. In addition to the ***MUTCD, the FDOT Standard Specifications*** in ***Appendix A,*** and the ***FDOT Design Standards*** in ***Appendix C*** shall be used on **FDOT** R/W. ***Index 600, pages 1 - 10***, provides **FDOT** Policy and Standards. Changes are only to be made through **FDOT** approved procedures. ***Indexes 601 - 670*** provide typical application for various situations. Modifications can be made to these Indexes as long as the changes comply with the ***MUTCD*** and ***FDOT*** standards in ***Index 600***, ***pages 1 - 10.***

Index 665 is exclusive to use on Limited Access Facilities and may not be revised by a Utility but would apply if an exception to be located or work on Limited Access is given.

8.2 Traffic Control Plan (TCP)

When a permit for utility installation, adjustment, or maintenance activity is required, a proposed TCP shall be submitted with the permit application for approval.

The TCP should be designed and submitted based on actual field conditions. However, when site conditions change significantly and warrant a change to the approved TCP that was submitted with the permit application, the Permittee is required to notify the **FDOT**. A new TCP that reflects actual conditions shall be designed in accordance with the standards set forth in the ***MUTCD***, the ***FDOT Design Standards*** and the ***FDOT Standard Specifications for Road and Bridge Construction.***

Almost all MOT can be accomplished using the typical applications in ***Indexes 601 - 670***. Some set-ups may require combining indexes or being adjusted to meet field conditions. These are not engineering decisions and therefore do not require signing and sealing by a qualified licensed Florida Professional Engineer. However, if the standards must be significantly compromised**,** an alternate TCP is required and must be prepared, signed and sealed by a qualified, licensed Florida Professional Engineer.

All changes to standards contained in ***Standard Index 600, pages 1 - 10***, that are submitted as part of a TCP require **FDOT** approval and may require the signature of a qualified licensed Florida Professional Engineer. This standard index contains criteria adopted specific to the State Highway System and may be different from what is contained in the ***MUTCD***. For example, ***Index 600*** includes but is not limited to: signing size, specific signing language and reflectivity requirements; increased width, length, height, and reflectivity requirements for barricades and cones; pavement drop off requirements, etc.

Standard Indexes 601 - 670 were developed with the intent of applying ***MUTCD*** and **FDOT** guidelines for setting up traffic control devices for many common construction and maintenance scenarios while maintaining the specific criteria contained in ***Standard Index 600, pages 1 - 10***. Actual field conditions or utility work scenarios may not be identical to those represented in ***Standard Indexes 601 - 670***. The Utility may combine one or more, or use a portion of these specific standard indexes as appropriate without the signature of a qualified licensed Florida Professional Engineer. This is allowed as long as the safety provisions of the ***MUTCD*** are maintained and the standard indexes are not taken out of context. This allows for job specific set up revisions based on site conditions. This does not allow changes to devices or items specific to ***Standard Index 600.***

If the Utility elects to use portions of the ***FDOT's Standard Indexes*** as its TCP, the permit must include specific reference to the appropriate indexes and sections to be used.

For a TCP, utility companies may use drawings in their own manuals, and procedures which reflect the conditions and criteria in the Standard Indexes, provided they include a statement such as "in accordance with ***FDOT Standard Index (es)."*** These drawings do not require signing and sealing.

8.3 Specifications and Job Control

The Standard Specifications for Road and Bridge Construction, 2004 Edition, ***Subarticle 102-3.2***, Worksite Traffic Supervisor is deleted and replaced with the following: The Permittee shall provide an individual who is responsible for initiating, installing, and maintaining all traffic control devices as described in Section 102 and in the permit. This individual, when covered by an annual certification pursuant to Section 8.4, shall have in his/her possession suitable identification issued or approved by the UAO showing his or her relationship to the certifying UAO. If the UAO elects to have its employees, agents and/or subcontractors trained in accordance with the **FDOT's** Maintenance of Traffic Training Procedure in Appendix D in lieu of submitting an annual certification, as described in the ***UAM,*** Section 8.4, this individual shall have in his/her possession a valid (no more than four years old) wallet card verifying the successful completion of the appropriate training.

Provide trained flaggers to direct traffic where one-way operation in a single lane is in effect and in other situations as required.

8.4 Training

The Permittee is responsible for ensuring that individuals responsible for utility work zone traffic control planning, design, implementation, inspection, and/or for supervising the selection, placement, or maintenance of traffic control schemes and devices in work zones on the State Highway System R/W have proper training as to the MOT requirements prescribed in Appendix A and C of the ***UAM***. The utility shall annually submit a written certification that all its employees, together with a list of agents and subcontractors, responsible for these utility work zone activities have been trained as to the MOT requirements prescribed in Appendix A and C of the ***UAM***. UAO employees, agents and/or subcontractors responsible for these work zone activities that are not covered by such certification shall satisfactorily complete the training requirements in accordance with Appendix D.

When changes are made to Appendix A or Appendix C, the Utility shall certify that the individuals responsible for utility work zone traffic control have been properly trained in such changes affecting work zone traffic control.

8.5 Rail Flagging

All permitted utility work performed on an operating rail corridor shall comply with the flagging requirements of the operating railroad.

8.6 Non-Compliance

Upon notification by the **FDOT** of deficiencies in the TCP or other matters involving traffic safety, the Permittee shall immediately make improvements as directed by the **FDOT**. Should the **FDOT** deem conditions to be such that imminent danger is present, all work shall cease immediately and shall not resume until the conditions are corrected.

8.7 Requirements for Flashing Lights

Construction and maintenance vehicles used on the State R/W shall be equipped with a minimum of one (1) Class 2 amber or white warning light that meets the ***Society of Automotive Engineers Recommended Practice SAE J845 dated March 1992*** or ***SAE J1318 dated*** **April1986** and incorporated herein by reference, that is unobstructed by ancillary vehicle equipment such as ladders, racks, or booms. If ancillary equipment obstructs the light, more than one light may be required. The lights shall be operating when a utility vehicle is operated in a utility work area, when a potential hazard exists, or when operating the vehicle at less than the average speed for the facility while performing maintenance activities or making frequent stops.

Chapter 9
LOCATION CRITERIA FOR UTILITIES ON NON-LIMITED ACCESS FACILITIES

9.1 Resurfacing, Restoration, & Rehabilitation (RRR) Construction Projects

General - Section 9.1 of the ***UAM*** is to be applied only on RRR construction projects. Use the applicable standards in other sections for maintenance operations or construction projects other than RRR.

The following guidelines were developed in cooperation with the Utility Industry and apply to existing conditions. It is recognized that no set of guidelines can realistically expect all existing utilities to be relocated to comply with new design criteria. RRR criteria may be used only on RRR projects. Once the decision has been made to relocate on a RRR project, new construction criteria are encouraged when and where it can be accomplished in a cost effective manner considering all public and private interests.

Section 9.1 of the ***UAM*** provides conditions and locations about which currently permitted utility facilities which do not comply with current standards may be allowed to remain in place. This does not eliminate the need for documenting or acquiring an exception where appropriate. They do not expand or allow poles to be located in areas previously prohibited, such as limited access, medians, gore areas, etc. This section applies to curb and gutter and flush shoulder and to any above ground fixed object (utility, lighting, sign, or signal poles inclusive of controller cabinets) sufficient to cause serious damage upon impact by an errant vehicle.

The intent is to establish criterion for placement of above ground facilities that may indirectly effect the location of underground facilities. For example, to achieve optimal above ground safety benefits, it may be necessary to place poles in an area which precludes the installation or requires relocation of an existing subsurface facility. The forced relocation of one above ground fixed object which causes the relocation of another facility will be done only when the benefit / cost analysis justifies the action to provide the public with appropriate safety benefits. The facility owner shall use whatever method practical to accomplish the safety objective.

9.1.1 Construction Project Facility Criteria: (RRR) - Existing above ground fixed objects which meet RRR criteria will be allowed to remain in place and no documentation is required.

Existing above ground fixed objects which do not meet RRR criteria and have not been hit more than two (2) times in any three (3) consecutive years of the last five (5) years (**FDOT** crash history is the only documentation required to justify an exception), and are not in a control zone, will be allowed to remain in place.

Existing above ground fixed objects will be allowed to remain in place when the purchase of R/W by the Utility would be required or when the following conditions, listed

in the bullets in Section 9.1.1 are simultaneously met:

- When the pavement or curb limits have not changed,
- When and where the utility facility will not interfere with other **FDOT** improvements,
- The utility facility is not located in a control zone or condition as defined in Section 9.2 and shown in Exhibit I,
- When any one or more of the conditions exist described in the bullets listed immediately below:
    - When the benefit to cost ratio of relocation is less than 2,
    - The above ground fixed object cannot be moved sufficient to meet the required horizontal clearance without violating other **FDOT** criteria or utility codes,
    - Relocating the fixed object will not provide a minimum of four (4) feet of additional horizontal clearance (this does not apply where there is an ADA non-compliance issue),
    - Relocation forces an above ground fixed object such as a utility or lighting pole to be located behind, into, or above existing trees having the growth potential to interrupt electrical service or be considered a high maintenance condition within the life of the improvements to the RRR project. Note for purposes of this criterion, trees are defined as exceeding four (4) inches or greater in diameter, six (6) inches above the ground and be located such that the intended utility service can not be provided. It is intended for this to be applied to a more or less continuous line of trees and not incidental tree locations. A few trees randomly located along a project do not justify failure to relocate. Local ordinances regarding tree trimming or removal will be considered in the evaluation of what can be done,
    - Relocation forces the Utility into areas without access or where room is not available for maintenance equipment to be operated (e.g., behind canals or roadside ditches with continual standing water), or
    - When insufficient usable R/W exist.

9.1.2 Clearances (RRR):

- **Horizontal Clearance: (RRR)** - For RRR projects, new construction horizontal clearance criteria set forth in Chapter 5 of the ***UAM*** shall be used where practical when relocation of an above ground fixed object is required. On urban RRR projects with curb or curb and gutter in restricted R/W areas, the clearance may be reduced to one and one half (1.5) feet from the face of the curb or six (6) feet from the edge of the traveled-way to the nearest edge of the above ground fixed

object. When the minimum one and one half (1.5) feet from the face of the curb or six (6) feet from the edge of the traveled-way is met, no exception is required unless the above ground fixed object would be located in a control zone. See ***Section 9.2*** of the ***UAM*** on control zone limitations.

- **Clear Zone: (RRR)** - Clear zone requirements for RRR projects with flush shoulders are outlined in Table 9.1.2.2. These clear zone requirements also apply to curbed facilities in non-restricted R/W areas. Any above ground fixed object located within the clear zone should be removed, properly shielded allowing for barrier displacement, or made crash worthy, or an exception obtained for noncompliance with **FDOT** criteria. Shielding or making an object crash worthy may still require an exception because these measures may also be considered hazards. Clear zone as used by the **FDOT** does not apply when curb or curb and gutter is adjacent to the traveled-way in restricted R/W areas. For these locations, horizontal clearance criteria are used to establish the minimum offset to an above ground fixed object. Clear zones must be adjusted for the effects of shoulder slopes. Adjustments due to shoulder slope are the same as with new construction and are described in Figure 5.1.2.3.

Table 9.1.2.2 - RRR Clear Zone (feet) - Flush Shoulders and Curbed Sections in Non-restricted R/W Areas

Note: Design Speed is shown in the Table. However, Posted Speed may be used as default criteria for areas where the Design Speed is not published. Design Speed shall be used when available. See Section 5.1.1

DESIGN SPEED (mph)	TRAVEL LANES & MULTI-LANE RAMPS	AUXILIARY LANES & SINGLE LANE RAMPS
< 45	6	6
45* *	14	8
> 45	18	8

GENERAL NOTES:

1. When relocation is required to meet minimum clear zone requirements, consideration should be given to providing new construction widths.
2. Clear zone widths are for side slopes 1:4 and flatter. For steeper slopes, provide additional clear zone per Figure 5.1.2.3.
3. Clear zone width is measured from the edge of the traveled-way.

** May be reduced to < forty five (45) mph widths if conditions more nearly approach those for low speed (forty (40) mph or less).

9.2 Control Zones or Conditions for RRR:

Control zones are areas in which it can be statistically shown that accidents are more likely to involve departure from the roadway with greater frequency of contact with above ground fixed objects. They extend outward from the pavement to the limits of new construction criteria and are further described as follows:

9.2.1 An above ground fixed object having been hit more than two (2) times within three (3) consecutive years in the last five (5) years, unless it can be determined that the problem can be remedied through the project scope,

9.2.2 Within the return radii of an intersecting street and the new construction horizontal clearance distance,

9.2.3 For “T” intersections (on the non-intersection side) within the area defined by a line through the center of the return radii and return point of tangent extended across the street to the R/W limits,

9.2.4 For a distance of one hundred (100) feet measured downstream from the point of intersection of a right turn deceleration lane and where full lane width is achieved within the new construction horizontal clearance distance (It is assumed the edge of pavement is not constructed on a reverse curve. If it is constructed on a reverse curve, the measurement is to be taken from the point of intersection of the trailing curve),

9.2.5 For a distance of one hundred (100) feet measured downstream from the point of intersection of a full lane termination with a skewed merge section within the new construction horizontal clearance distance (It is assumed the edge of pavement is not constructed on a reverse curve. If it is constructed on a reverse curve, the measurement is to be taken from the point of intersection of the leading curve).

9.2.6 For a distance of three (3) feet from a driveway flare within the new construction horizontal clearance distance at the intersection of a dedicated intersecting service facility such as an alley way or easement.

9.2.7 For a distance of three (3) feet from a driveway flare within the new construction horizontal clearance distance at the entrance turnout for use other than a private residence.

9.2.8 The area on the outside of a curve when the operating speed exceeds thirty-five (35) mph or downstream of a kink in the alignment for a distance of one hundred (100) feet. In each case the area falls within the new construction horizontal clearance distance unless protected by a barrier. For curves, if the radius exceeds three thousand (3,000) feet, no control zone exists, and control zone requirements do not apply. For kinks in the alignment, if the kink is less than five (5) degrees, no control zone exists specifically for the kink and therefore control zone requirements for kinks do not apply.

9.3 Transportation Facilities Other Than Limited Access or RRR

9.3.1 Utility/Light Poles **-** All new utility/light pole installations shall comply with the ***UAM*** horizontal clearance and clear zone criteria. On construction projects where the Permittee cannot meet these requirements, the designer shall determine what additional safety requirements are needed. If the pole placement is not related to a construction project, the requirement for compliance with the ***UAM*** horizontal clearance and clear zone criteria is still effective. (An exception may be requested from the District Design Engineer).

9.3.2 Parallel (Underground) **-** Parallel underground installations require a minimum vertical clearance of thirty six (36) inches below the top of pavement and thirty (30) inches below the existing unpaved ground, including ditch grade. Where provided by law, other governmental agencies, rail facilities, and state, local, and federal codes may require a greater clearance. In rural areas, installation normally will not be between edge of pavement and outer edge of slope. Installations will be as near the R/W line as practical, taking into account existing overhead facilities and the desire to locate future pole facilities as far from the pavement as practical. Underground facilities should not be located in areas near the R/W normally used by pole facilities, when practical.

Minimum depth requirement may vary if the utility is buried under the sidewalk or bike path and not adjoining the roadway facility. Utility placement shall accommodate future pavement widening. This normally would occur within twelve (12) feet of the existing pavement. Installations must meet the minimum requirements of the ***NESC*** and ***CFR 49, Part 192*** which are incorporated by reference.

9.3.3 Crossing (Aerial) **-** Aerial crossings are permitted and will have a minimum of eighteen (18) feet vertical clearance over the roadway. Where provided by law, other governmental agencies, rail facilities, and state, local and federal codes may require a greater clearance. The greater clearance required prevails as the rule.

9.3.4 Crossing (Underground) - Underground crossings require a minimum vertical clearance of thirty six (36) inches below top of pavement and thirty (30) inches below unpaved ground line, including ditch grade. Where provided by law other governmental agencies, rail facilities, and State, Local and Federal codes may require a greater clearance.

9.4 FDOT Railroad Corridors

Rail corridors will be treated as a Limited Access Facility.

9.4.1 **Operating Railroad Corridors -** All utility location criteria shall be in accordance with the criteria set forth by the **FDOT** Permit and Standard Railroad Application Package for operating railroad corridor use and/or occupancy, which may be obtained from the District Rail Coordinator or the District Corridor Rail Manager, where one exists.

9.4.2 **Non-Operating Railroad Corridors -** All utility location criteria shall be in accordance with the applicable criteria set forth in the ***UAM*** for the planned transportation facility use reflected in the applicable corridor management plan.

9.5 Airport/Airport Properties

All utility location criteria shall be in accordance with the criteria set forth by the airport jurisdiction, or as provided in ***Chapter 333, F.S.***

9.6 Restricted & Non-Restricted R/W Area

These designations have resulted from the need to recognize that standard criteria cannot be reasonably applied where existing infrastructure makes it impractical, or not economically feasible to comply with all minimum horizontal clearance or clear zone requirements. Non-compliance will require obtaining an exception from the **FDOT** or the facilities must be brought into compliance. The exception must address the specific item(s) in non-compliance and is only required for those areas in which the **FDOT** has a planned project or there is an established crash history requiring resolution.

On RRR projects with a curb or curb and gutter section, some areas along the project may not have sufficient border width to permit utilities to locate or relocate above ground fixed objects to the desired or minimum horizontal clearance or clear zone

requirements. These areas are termed Restricted R/W Areas. Examples of when this would apply are when insufficient R/W exists, buildings exist with little or no set back from the R/W, or the method of construction or design does not permit the base of the above ground fixed object to be located as desired.

In contrast, Non-Restricted R/W Areas represent those areas along a project (regardless of project type or typical section) where sufficient border width does exist and would accommodate utilities to locate above ground fixed objects in compliance with minimum horizontal clearance or clear zone requirements. In order to provide for the safest project conditions, Utilities are encouraged to establish their clear zone and horizontal clearance requirements during or prior to the **FDOT** project scoping in accordance with the **FDOT's** Five Year Work Program, available from the District Office.

Chapter 10
GENERAL REQUIREMENTS

10.1 Devices such as signal strain poles, fire hydrants (where practical), down guys, telephone load pedestals, and other items whose construction and size would cause extensive damage to a vehicle if struck are to be located according to the same horizontal clearance standards applied to utility poles. Guy wire anchors are considered to be fixed objects when they extend more than four (4) inches in height above the ground surface.

10.2 For the purpose of the ***UAM***, frangible base poles will be accepted if in accordance with the ***AASHTO Design Specification Section 7, Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 1994, as revised by Interim Specifications – Bridges 1986 –1989, 1991, 1993, 1994 and 1998***.

10.3 On projects where the utility or other obstruction is in conflict with the sidewalk and, in the case of utility poles, would create a conflict with requirements of the National Electrical Safety Code, the minimum criteria may be found in Chapter 5 for new construction and Chapter 9 for RRR construction. The Permittee shall ensure that a minimum thirty two (32) inch width is maintained on sidewalks in accordance with ***Sections 553.501-553.513***, ***F.S., "The Florida Americans With Disabilities Accessibility Implementation Act"***. In each case where a deviation is proposed, an exception must be requested.

10.4 Where practical, excavation will not be allowed within eight (8) feet of the edge of the pavement.

10.5 Clearances for above ground lines that are parallel to the R/W will be sixteen (16) feet minimum except where side roads connect to the State transportation system, in which case eighteen (18) feet minimum is required.

10.6 This criteria shall not be applied to a minor segment of an existing utility installation in such manner as to result in misalignment of the installation or adjustment of the entire installation.

10.7 Manholes and valve boxes shall be outside the travel way and bike lanes, to the greatest extent practical. The manhole ring, cover, and pad must support the traffic for the area where it is being constructed and shall be set flush with the finished grade.

10.8 Out of Service or Deactivated Underground Utility Facilities

Out of service or deactivated underground utility facilities will be allowed to remain in place upon execution and evaluation of a permit, except when the **FDOT** determines the utility's presence creates the conditions described in 10.8.1 through 10.8.3.

As a condition of the issuance of a permit for such facility, the Permittee shall maintain and furnish the **FDOT** upon request, survey records of the facility's location and type of

material. Such underground facilities shall be shown on utility work / relocation plans required by the **FDOT**.

Deactivated underground gas line limits shall be shown on the utility plans. The limits to remain shall also be stated in the utility work schedule. For deactivation of lines see ***49 C.F.R., Part 192.727***, and the rules of the Public Service Commission.

10.8.1 Compromises safety at any time for any facility user, or during construction and maintenance operations,

10.8.2 Prevents another utility facility from locating in the area when other alternative locations are not available,

10.8.3 Creates a maintenance condition that would be disruptive to the transportation facility's use or add cost to **FDOT** improvements which are not paid for by the Utility.

10.9 Utility Appurtenances

10.9.1 Should be aesthetically acceptable and in compliance with industry standards.

10.9.2 Shall be placed so as to create minimum interference with the functional and maintenance operation of the transportation facility.

10.9.3 Must not conflict with other existing facilities.

10.9.4 Shall be located as close to the R/W limits as practical.

10.9.5 New underground utility facilities less than thirty (30) feet from the edge of pavement, excluding those considered not in traffic areas of curb and gutter sections, shall be designed to carry traffic. Those located in non-traffic areas of curb and gutter sections and those located greater than thirty (30) feet from the edge of pavement shall be designed to support the **FDOT's** maintenance equipment. The minimum wheel load underground appurtenances should be designed for is HS 20 military load. HS 20 is a three axle truck loading condition where one axle load of 24,000 pounds or two axle loads of 16,000 pounds each, spaced four (4) feet apart may be used, whichever produces the greater stress, in lieu of a single axle 32,000 pound load. This does not guarantee to the Permittee that these appurtenances will not be subject to greater loads.

Any new single utility facility above or below ground, other than power or telephone poles and their appurtenances, larger than eighty (80) cubic feet in size must be submitted to the District Maintenance Engineer or designee for approval.

10.9.6 When and where multiple conduits are pulled to construct new duct systems, access points such as manholes or hand pulls shall be limited

to placement over the ducts in line, and shall minimize obstruction of the R/W use by others. Multiple access points on a duct system may not be any closer than fifty (50) feet to minimize impact to the overall R/W infrastructure. This requirement is not intended to cause sharing of manholes between power and non-power users.

10.9.7 No concrete foundation for whatever purpose shall be allowed to be constructed more than four (4) inches above the existing grade.

10.9.8 All new or replacement installations of all types that would obstruct any portion of the sight window as described in ***FDOT Standard Index 546*** in ***Appendix B***, by a width of more than fifteen (15) inches, should be evaluated to minimize sight window obstruction. Non-compliance does not require submittal of an exception.

10.10 If any utility relocation is necessary to provide entrance or service within the transportation facility from adjacent property, the relocation expense should be borne by the Permittee who initiates the requirement for relocation and shall not reduce compensable rights, if any, granted by any prior permit. (This does not apply to public designated R/W, e.g., county roads, city streets, state parks.)

If a dispute arises, the relocation expense should be considered a matter between the property owner and the prior Permittee. In the case of an unresolved dispute, the final location will be determined by the **FDOT**.

10.11 All new or replaced underground facilities within the R/W shall be made electronically detectable using techniques available in the Industry. Where as-builts are required in accordance with the ***UAM*** or ***FDOT Standard Specifications 555, 556, or 557*** *in* ***Appendix A***, an as-built plan of the utility facility location including a depth tabulation (when profile plots or elevations are not provided) shall be furnished at the time of the certification of completion of the project for which a permit was given.

10.12 The contractor qualifications for removal, encapsulation, or enclosure of materials containing asbestos shall be in accordance with ***Chapter 469, F.S.***

10.13 Conventional methods of trenching or "plowing" in utility facilities are acceptable on **FDOT** R/W so long as such methods will not adversely affect pavement, base, other transportation facilities, or other permitted facilities in accordance with ***Section 557 – Vibratory Plowing, FDOT Standard Specifications*** *in* ***Appendix A*****.**

10.14 The preferred methods for crossings under pavement or other facilities are jack/bore and directional boring. Jack and bore and directional boring operations shall comply with ***FDOT Standard Specifications Section 555 for Directional Bore*** and ***Section 556 for Jack and Bore*** *in* ***Appendix A.*** The Permittee shall be responsible for the appropriateness and success of the methods and standards used.

10.15 Open cutting of existing pavement should only be used when directional bore and jack/bore are not feasible. Open cutting operations shall be in accordance with

Standard Index No. 307, Utility Cut *in* ***Appendix B.*** (Other Indexes, such as ***Indexes No. 500, Removal of Organic and Plastic Material, No. 501 Geosynthetic Reinforced Soils, No. 505, Embankment Utilization,*** and ***No 506 Miscellaneous Earthwork Details***, *in* ***Appendix B***, may apply).

10.16 Underground crossing operations may begin without the **FDOT** Engineer present on site if it can be determined otherwise that proper preparations have been made. If it is required that an **FDOT** Engineer be on site at any time, the permit shall stipulate the circumstances.

10.17 The Permittee shall be responsible for damages to the State Transportation System caused by its work, and shall make immediate repairs necessary to return the transportation facility to its condition prior to any utility work.

10.18 All pipe materials and joints shall comply with the greater of either the industry standard requirement for the intended use when defined, or those required by the **FDOT** to facilitate static and dynamic loading (including construction) to avoid damage to the roadway facility. All welded joints shall be full depth welds.

10.19 All utility facilities previously placed out of service and left in place, that are returned to service other than for a temporary emergency or construction expediency, will require a new permit. The new permit shall at a minimum state the type and size of the facility, general location, and identify the limits of reactivation. No cross sections, profiles, or additional engineering support information supplied in the original permit on the existing facility will be required.

If the utility facility to be placed out of service and left in place contains voids, such as a pipe conduit and the facility's structural integrity is questionable, the **FDOT** shall require it to be filled with excavatable flowable fill as defined in ***FDOT Standard Specifications for Road and Bridge Construction, Section 121***. If the **FDOT** has no concerns regarding structural integrity of the facility, it may be left open. If the **FDOT** elects to have the facility filled, at the option of the Utility in lieu of filling it, as-built plans must be provided to the **FDOT** that show mutually agreeable information to document the location of the facility for possible future reactivation and include a certification from the Utility and prepared by a qualified licensed Florida Professional Engineer that states the facility is structurally sound and leaving it in place will not damage the roadway for the design life of the **FDOT** facility. The design life of the **FDOT** facility can be obtained from the District Design Engineer's Office.

10.20 A separate permit is required for the placement of any antennae on the exterior of any utility appurtenance within the **FDOT** R/W. This provision does not apply to the installation of antennae for remote communication or switching devices to operate or maintain a utility facility.

10.21 No new utility structure or cabinet whether located above or below ground, that contains any liquid petroleum fuel for back-up power sources, may be installed within the **FDOT** R/W. Existing fuel sources (not facilities) must be evaluated for relocation when the transportation facility is reconstructed. These provisions do not apply to utility facilities that exist or have prior property rights unless expressly prohibited in a subordination agreement.

10.22 The construction or installation of any new utility lift, pump, or power generating station is not permitted within the R/W in excess of eighty (80) cubic feet. These provisions do not apply to existing utility facilities or those that have prior property rights unless expressly prohibited in a subordination agreement.

Chapter 11
UTILITY SURVEY

11.1 General

In order to minimize the cost and impact upon the **FDOT** and the Utility, established procedures for determining the level of accuracy of a utility survey have been developed. These are termed "level of locates" and are contained in this section.

The **FDOT** designer will attempt to accommodate all existing utilities and new utilities to be constructed concurrently with a project. The selection of typical section features, horizontal alignment, and location of storm drain lines are areas that can sometimes be varied without violating safety standards and design criteria. Design features that reduce or avoid utility conflicts may involve increased cost; however, those costs may be offset by savings in construction time, claims, delays, and supplemental agreements. It is therefore essential to all parties to understand the accuracy required in locating existing utilities in the field and identify who is responsible for gathering the data.

11.2 Responsibility

The Utility is required to and responsible for obtaining a utility permit and developing any associated project work schedule for the installation and maintenance of utility facilities within the R/W of any State Highway System. These documents require the Utility to locate as necessary any of its utilities by exposing and or furnishing survey elevations as necessary to accommodate **FDOT** construction. The **FDOT** regards the determination of the location of existing utilities on **FDOT** R/W as a cooperative effort between the **FDOT** and the Utility. The degree of effort on the part of the **FDOT** and the utility owner will vary with the type of project, the utility, and availability of existing location information. This coordination must begin as soon as the **FDOT** announces its ***Five Year Work Program***.

At a minimum, identifying the location and providing properly formatted support documentation of existing major utilities is required on new construction, reconstruction, and add lane projects. Major existing utilities are those principal underground and aerial utilities that potentially conflict with construction activities and scheduling. It is the responsibility of the utility owner to identify and provide locates for major utilities within the **FDOT** right of way. Gravity service connections and laterals are not normally considered major utilities. When required, in special circumstances of identified design conflicts, obtaining locate information for gravity service connections and laterals within the **FDOT** R/W is the responsibility of the Utility.

While it is legally the responsibility of the Utility to physically locate all of its utilities and provide that information to the **FDOT**, for construction projects the **FDOT** design engineer, with the assistance of the DUE and construction personnel should be consulted to determine the locations and quality levels of locate where utility information is known to be needed. The **FDOT** may at its option initiate an actual survey using its own forces or under a design / surveying contract to accomplish the

locates as a matter of expediency. The Utility shall coordinate with the **FDOT** to assure the most up to date utility information is available to the **FDOT** for actual field verification. Once a project is under construction, additional locates may be necessary. The Utility must coordinate with the **FDOT** to determine if the **FDOT** will assume any responsibility for locates during construction. For locates required by the **FDOT** maintenance (non-construction project related) or "Sunshine State One Call", it is the complete responsibility of the Utility.

Quality Levels of locates are defined in Section 11.3. It is the responsibility of the utility owner to provide up through a Quality Level “B” locate on request. In some instances the utility owner can provide Quality Level “A” locate information. If Quality Level “A” locate information is necessary and cannot be provided by the utility owner, the measurement and documentation for Quality Level “A” locate will be obtained by the **FDOT**, consultants, or others by established agreement.

Existing major underground utilities suspected of being located within three (3) feet of proposed construction operations that would threaten the utility should be considered for Quality Level “A” locate information. The decision to allow utilities to remain within three (3) feet of new construction operations will be made by the District Design Engineer in consultation with the DUE and appropriate construction personnel.

The Utility is required to respond to and furnish information regarding the location of its facilities in a reasonable format determined by the **FDOT** and in a timely manner. Unless otherwise stated, at a minimum this shall be interpreted to mean the Utility will plot the location of its facilities on **FDOT** supplied roadway plans in accordance with the **FDOT** Color Code for location and disposition of facilities and return them to the specified engineer. When the Utility already has and uses compatible software, and when the **FDOT** furnishes the base CADD document to work from, the Utility shall furnish CADD markups in the appropriate color code.

The **FDOT** Color Code to be applied to construction and design plans that shall represent the disposition of utilities is as follows:

Red – Existing utility facilities to be removed or relocated horizontally to some other location, or existing facilities to be Placed Out Of Service (Deactivated) but left in place.
Green – Existing utility facilities to remain in place with no adjustment.
Brown – Existing utility facilities that are to be adjusted vertically but to remain in the same horizontal alignment or completely new facilities to be installed.

NOTE: In addition to the color code, the limits of the facilities to be removed, relocated, adjusted, or placed out of service (deactivated) shall be delineated. If the work is associated with an **FDOT** construction project, utility delineation will be shown by station.

For all other permitted work, the limits shall be delineated by distance from a well established point such as the center of an intersection, center of a RR, etc.

When underground utilities are granted access to limited access R/W by the exception process, certified as-builts must be provided as a condition of the permit. All exceptions requesting use of any limited access R/W will require a certified as-built survey and plan signed and sealed by a registered land surveyor in accordance with ***Chapter 472, F.S., Land Surveying and Mapping***. When as-built plans are required, they shall be submitted to the DUE no later than thirty (30) days following the completion of the permitted installation.

Whenever the Utility already has and uses compatible CADD software, and as-built plans are required, they shall be provided in an electronic format. The plans shall describe the facility in detail and in accordance with Chapter 3 of the ***UAM***. Underground facilities shall indicate their location in the horizontal and vertical plane in accordance with ***The North American Vertical Datum of 1988 (NAVD)***. For aerial facilities, elevation data is not required.

11.3 Locates

The following identifies the key elements within the quality level of utility locates in ascending order about which Subsurface Utility Engineering is applied:

Quality Level “D” - Existing Records
Quality Level “C” - Surface Visible Feature Survey
Quality Level “B” - Designating
Quality Level “A” - Locating

A detailed description of the scope of work to be included to achieve the various Quality Levels follows:

Quality Level “D” locates are information obtained solely from a review of utility records for facilities that may be affected by the project. The comprehensiveness and accuracy of such information is highly limited. Even when existing information for a utility in a particular area is accurate, there are often other underground systems that are not shown on any records. Quality Level “D” may be appropriate for use early in the development of a project to determine the presence of utilities. Applicable records may include previous construction plans in the area, conduit maps, direct-buried cable records, distribution maps, transmission maps, service record cards, “as-builts” and record drawings, field notes, county, city, UAO or other geographic information system databases, circuit diagrams, or oral histories. The records should be reviewed for indications of additional available records, duplicate information and credibility of such duplicate information, and need for clarification by UAO’s. The end product of a Quality Level “D” would be a utility composite drawing or equivalent. The engineer should also make professional judgments regarding the validity and location of topographic features on records versus current topographic features (when available) and conflicting reference of utilities. The engineer should indicate the quality levels, utility type and /or ownership, date of depiction, accuracy of depicted appurtenances, end points of any utility data, active, placed out of service, size, condition, number of jointly buried cables, and encasement.

Quality Level “C” locates are information obtained to augment Quality Level “D” information. This involves topographic surveying of visible, above ground utility features such as poles, hydrants, valve boxes, circuit breakers, etc. If previously surveyed, check survey accuracy and completeness for applicability with the existing project. Correlate applicable utility records to the surveyed features, taking into account the geometries and indications on the records of these surface features. Determine when records and features do not agree and resolve discrepancies. Additional resolution may result from consultation with UAOs. Quality Level “C” may be appropriately used early in the development of a project and will provide better data than Quality Level “D” information alone. Designers cannot be sure their design is appropriate nor can construction proceed without caution when using information for underground utilities based only on Quality Level “D” and “C” locates.

Quality Level “B” locates are information obtained to augment Quality Level “C” information. Quality Level “B” locates are information obtained through the use of designating technologies (e.g., geophysical prospecting technologies). This is an application using scanning technologies, most of which have very specific capabilities and limitations that vary with site conditions. Applying a variety of techniques is essential to the process of preparing a comprehensive horizontal map of utilities and other underground structures on the site. Designating technologies are capable of providing reasonable horizontal information but provide limited vertical information. Mark the indications of utilities on the ground surface for subsequent survey. Care should be taken to differentiate markings placed on the ground for design purposes from those placed on the ground for damage prevention purposes. Survey all markings that indicate the presence of a subsurface utility. This survey should be to the accuracy and precision dictated by the project’s survey control. Depict all designated utilities. Correlate the designated utilities’ depictions with utility records and/or surveyed appurtenances to identify utilities that may exist but were not able to be designated. Resolve differences between designated utilities and surveyed appurtenances. Recommend to the project owner additional measures to resolve differences if they still exist.

Quality Level “A” locates provide the highest level of accuracy of utility locations in three dimensions. This Quality Level may apply manual, mechanical, or nondestructive (e.g., vacuum excavation) methods to physically expose utilities for measurement and data recording. Quality Levels “B”, “C”, and “D” locates are incorporated in Quality Level “A” locates. The designer should obtain Quality Level “A” locates at highway/utility conflict points where verified information is necessary. Select an appropriate method of gathering data that will achieve the accuracies and precision required by the project. These accuracies are currently typically set to one half (0.5) inch vertical and to applicable horizontal survey and mapping accuracy as defined by the project owner. Excavate test holes exposing the utility to be measured in such a manner that protects the integrity of the utility to be measured. Comply with applicable utility damage prevention laws, permits, and specifications and coordinate with Utility and other inspectors, as required. Determine (a) the horizontal and vertical location of the top and/or bottom of the utility referenced to the project survey datum; (b) the elevation of the existing grade over the utility at a test hole referenced to the project survey datum; (c) the outside diameter of the utility and configuration of non-encased,

multi-conduit systems; (d) the utility structure material composition, when reasonably ascertainable; (e) the benchmarks and/or project survey data used to determine elevations; (f) the paving thickness and type, where applicable; (g) the general soil type and site conditions; and (h) such other pertinent information as is reasonably ascertainable from each test hole site. Resolve differences between depicted Quality Level “A” data and other quality levels.

11.4 Subsurface Utility Engineering (SUE)

SUE is more than an established engineering technology that can provide horizontal and vertical locations of underground utilities to produce an accurate picture of underground infrastructure. Each **FDOT** District has contracts for SUE. The Utility should determine if the location of its facilities will be obtained under the **FDOT** design, construction, and maintenance activities.

Chapter 12

ACCOMMODATION OF UTILITIES ON LIMITED ACCESS R/W

12.1 Limited Access Policy

12.1.1 The **FDOT's** Limited Access Policy is established cognizant of ***23 U.S.C., Parts 109 & 111***, and federal aid regulations governing use and points of access to any limited access R/W on the Federal Aid Highway System. This policy applies to all limited access R/W use on the State Transportation System except for utility facilities required for operating and providing service to facilities on limited access R/W.

12.1.2 The Limited Access Policy prohibits new utilities from locating longitudinally within limited access R/W.

12.1.3 All utility accommodations other than existing or new longitudinal encroachments approved by exception to the Limited Access Policy on limited access R/W shall comply with standards and criteria set forth in this Chapter.

12.1.4 The Limited Access Policy prohibits utility attachments to bridge structures on limited access R/W.

12.1.5 Rails, Trails, and Bikeways **-** These type facilities will be treated in the same manner as limited access facilities for purposes of accessibility. However, for criteria purposes, new construction standards will be applied and adjusted as appropriate.

12.1.6 For survey and as-built requirements see Section 11.2 of the ***UAM***.

12.1.7 Any new longitudinal installations on limited access R/W are permitted only by exception and must be approved by the State Highway Engineer or designee.

12.2 Permitted Utility Activities on Limited Access Facilities Posted Speed > 50 MPH

12.2.1 **Utility/Light Poles** - All new utility/light pole installation locations shall be in accordance with the ***UAM*** new construction criteria.

12.2.2 **Crossing (Aerial)** - Aerial crossings require twenty four (24) feet minimum vertical clearance over limited access facilities. Other governmental agencies, rail facilities, and state, local, and federal codes may require a greater clearance. The greater clearance required prevails. No poles or structures will be permitted within R/W of the main travel way.

12.2.3 **Crossing (Underground)** - Underground crossings require a minimum vertical clearance of forty eight (48) inches below the pavement surface of the limited access facility. For other connecting or crossing highways located within the limited access or controlled access zone, thirty six (36) inches below the pavement surface, or thirty (30) inches below unpaved ground, including ditch grade, is required. Other governmental

agencies, rail facilities, and state, local, and federal codes may require a greater clearance. After the pavement has been constructed, no open cuts will be allowed. Where a high-pressure gas or volatile fuel line is located under an **FDOT** bridge, attachments shall comply with Section 5.4 of the ***UAM***.

Refer to Chapter 10 of the ***UAM*** regarding alternative methods of underground installation.

12.3 TELECOMUNICATIONS FACILITIES ON LIMITED ACCESS R/W

The Department will consider proposals to install facilities on its limited access highway rights-of-way.

The Department's actions in this area will be consistent with the provisions of the State's present and future traffic and transportation management communications requirements, contingent upon departmental safety and engineering determinations.

CRITERIA FOR PLACEMENT OF TELECOMMUNICATION FACILITIES ON LIMITED ACCESS RIGHTS-OF-WAY

The placement of wireless (communication towers) or wireline facilities on limited access rights-of-way (R/W) will be in accordance with the criteria below. This criteria applies to the physical construction of the towers, fiber placement, buildings, related appurtenances, routine service visits, and maintenance activities.

1. GENERAL CRITERIA FOR WIRELESS AND WIRELINE TELECOMMUNICATION FACILITIES

A. General Access

Integrity of access points and location of the R/W fence will be maintained. Access through the R/W fence for towers located off the R/W will not be allowed. Facilities located along the mainline will be enclosed by a fence tied into the existing R/W fence so as to not break the continuity of the R/W fence. Access to these areas will be through a locked gate.

B. Access for Construction of Facilities

1. Towers - access for construction will be the same as that allowed in the Criteria for Placement (refer to ***Section 2***); no mainline access will be allowed without the permission of the Department and the Federal Highway Administration (FHWA).

2. Underground wireline/conduit and manholes/pullboxes - access for placement will be allowed from the mainline.

3. Buildings and above ground appurtenances - access for installing buildings and other above ground features will be the same as that allowed in the Criteria for Placement (refer to ***Sections 2 or 3***).

C. Access to Facilities for Maintenance

Access to completed facilities for routine service visits and maintenance activities will be by the same method as that allowed in the Criteria for Placement (refer to ***Sections 2 and 3***). Access to completed facilities from the mainline for expansion, routine servicing, or maintenance is allowed. However, maintenance of traffic (MOT) shall be in accordance with the Department's ***Roadway and Traffic Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System, Standard Index 612*** *in* ***Appendix C*** (see work area insert for work not to exceed 60 minutes).

D. Construction Work Zone Maintenance of Traffic (MOT)

Industry providers, vendors, and their subcontractors will follow the same methods for MOT as that used by the **FDOT's** construction and maintenance personnel.

E. Clear Zone Preservation

In all cases, locating towers, buildings, and other types of above ground appurtenances will be located 50 feet from the edge of traveled way, when possible. No above ground appurtenances will be permitted within the clear zone. A minimum distance of 50 feet from the edge of traveled way should be the standard where possible. Above ground appurtenances will not be placed in locations that require new barriers to maintain a safe clear zone.

F. Power, Phone or Other Utilities to Serve Equipment Buildings or Related Facilities

Power to the equipment building/related facilities may be brought to a drop pole on **FDOT** R/W adjacent to the fence and then be run underground to the equipment building or related facility. All utility runs will not be allowed longitudinally inside the R/W.

2. CRITERIA FOR WIRELESS TELECOMMUNICATION PLACEMENT Towers, Buildings, and Other Above Ground Appurtenances

Towers, shelter buildings and other above ground appurtenances will be located as far as possible from the edge of traveled way, immediately adjacent to the tower, and immediately adjacent to the R/W fence; in no case shall any above ground appurtenances be built within the clear zone. The preferred locations listed below, in order of preference, will be considered for placement:

1. Along the mainline, as close as possible to the R/W fence, with access from outside the R/W for construction. Access for maintenance activities may be either outside or from the mainline. If access is from the mainline the Department's ***STANDARD INDEX 612*** will be followed for MOT, see ***Paragraph 1. C.***

2. Within weigh stations, with access from the parking lot or ramps.
3. Within interchange areas, with access from outside the limited access R/W and connecting ramps, e.g., access is from frontage roads or crossroads.
4. Within interchange areas, with access from the right side of the ramp. This does not include loop ramps (see ***No. 6***).
5. Within interchange ramp infield areas, with access from left side of the ramp.
6. Within interchange areas, inside loop ramps, with access from the right side of the ramp.
7. Within aesthetic areas such as rest areas or welcome centers, with access from the parking lot or ramps.

3. CRITERIA FOR WIRELINE TELECOMMUNICATION PLACEMENT

A. Buried Fiber Optics Cable

The cable/conduit will be placed within a maximum 10 foot utility strip located immediately adjacent to the existing R/W line, only on one side in one direction of the roadway R/W. For aerial spanning of crossroads, utility poles/guide wires are allowed provided the poles/wires can be placed near the R/W limits/R/W fence, parallel to the mainline and outside the clear zone.

B. Equipment Buildings/Other Above Ground Appurtenances

Shelter buildings and other appurtenances will be located as close as practical to the utility strip but in no case within the clear zone. The preferred placement locations are listed below, in order of preference:

1. Along the mainline, as close as practical to the R/W fence, with access from outside the R/W for construction and from the mainline for maintenance. Department's ***Standard Index 612*** will be followed for MOT, see ***Paragraph 1. C.***
2. Within weigh stations, with access from the parking lot or ramps.
3. Within Interchange areas, with access from outside the limited access R/W and connecting ramps, e.g., access is from frontage roads or crossroads.
4. Within interchange areas, with access from the right side of the ramp. This does not include loop ramps (see ***No. 6***).
5. Within interchange ramp infield areas, with access from left side of the ramp.
6. Within interchange areas, inside loop ramps, with access from the right side of the ramp.
7. Within aesthetic areas such as rest areas or welcome centers, with access from the parking lot or ramps.

C. Underground Devices - Manholes, Pullboxes, etc

Underground devices requiring any type of routine service or site visit will not be allowed within the clear zone. In no case will underground devices be located within paved areas, including shoulders. The preferred placement locations are listed below, in order of preference:

1. Near R/W limits/fence.
2. Between fence and ditch back-slope.
3. Ditch back-slope.
4. Front-slope - between ditch and outside edge of shoulder.

Chapter 13
EXCEPTIONS

13.1 Exceptions: (Applicable To All Types of Work)

General

Conditions may arise or exist in the field that make it impractical or cost prohibitive to comply with a particular design criteria or standard. Where compliance with a Policy, roadway design criteria or standard is impractical, an "Exception" must be obtained. Exceptions may be requested from criteria or standards. Exceptions are not to be interpreted as compromising safety or quality.

The **FDOT's** roadway design criteria and standards usually fall within the desirable ranges established by AASHTO and where they deviate they have been accepted by FHWA and govern the design process. When it becomes necessary to deviate from the **FDOT's** criteria, early documentation and approval is required. When **FDOT's** criteria are met, no Exception is required.

The **FDOT** has established a formal process for the documentation and approval of deviations from criteria and standards used within the **FDOT** R/W. This is to ensure cost effective and sound engineering principles are applied.

The Exception process is not solely to be applied to **FDOT** roadway projects. Any time a Utility cannot comply with **FDOT** policy, criteria, or standards contained within the ***UAM***, an Exception is required before the request will be permitted. This applies to any new installation by a utility through the District Maintenance Office except as expressly excluded elsewhere in the ***UAM***. One example (not all inclusive) of an exclusion is replacement of an existing pole where there is no accident history.

In instances where the **FDOT** enters into an agreement for joint use of pole facility for lighting or the location of the poles are established by lighting requirements contrary to clear zone or horizontal clearance requirements, the preparation of the required Exception shall be the responsibility of the **FDOT** and not the Utility.

In those cases where specific guidelines are not defined and the criteria cannot be complied with, the Utility must relocate or apply for an Exception through the District Design Engineer.

It is the responsibility of the Utility to initiate a request for an Exception when compliance with **FDOT** criteria, standard, or policy cannot be achieved. It is also the responsibility of the Utility who is requesting an Exception to develop the documentation and submit it to the District Design Engineer for processing and approval. If the utility design or relocation is being prepared by forces other than the Utility, the submittal must be signed and sealed by a qualified licensed Florida professional engineer. All Exception requests shall comply with the documentation and study requirements contained in Section 13.5 of the ***UAM***. This shall also include any services required to substantiate the request with the following

exceptions:

- To the extent it is not prohibited by law, the **FDOT** will furnish to the Utility, upon request, a copy of any safety study accomplished for a project under consideration for improvement,

- To the extent it is not prohibited by law, the **FDOT** will furnish to the Utility, upon request, a copy of any information related to its Five Year Work Program.

To expedite the approval of Exceptions it is important that the correct approval process be used. The specific documentation and approval requirements for an Exception must be met. The Utility must clearly document the action taken and approval given. Non-**FDOT** Construction Project related Exception requests shall be processed by the District Maintenance Office. **FDOT** Construction Project related Exception requests shall be processed through the District Design Engineer's Office. To aid in the decision processes, identification and processing of Exceptions, flowcharts, and considerations have been provided as Exhibit B through I.

In the event an Exception request has been denied by an **FDOT** District Office and the Utility believes the denial to be unreasonable, a redress process has been developed. Prior to pursuing this process, the Utility must have supplied the appropriate support documentation in a timely manner and in accordance with the ***UAM***. If this has been accomplished, the Utility, in its sole discretion, may provide the request for an Exception directly to the Office of the State Roadway Design Engineer for a determination. Such determination will be processed by the State Roadway Design Engineer within ten (10) **FDOT** working days.

13.2 Types of Exceptions:

Exceptions are required when any one of the following criteria or policies described in Sections 13.2.1 through 13.2.6 that are not complied with or by policy requires an Exception prior to access or use:

13.2.1 Vertical Clearance
13.2.2 Horizontal Clearance
13.2.3 Limited Access R/W Use (L/A R/W, Rails, Trails, Bikeways)
13.2.4 Control Zone Use
13.2.5 Clear Zone
13.2.6 MSE Walls

Note: Exception type 13.2.3 is referred to as a Policy Exception. All others are referred to as Criteria or Standards Exceptions. A Policy Exception for access may be approved in the District without Central Office involvement. However, if the Policy Exception contains non-compliance with any of the Criteria or Standards Type Exceptions, review, concurrence and approval as appropriate must be sought from the Central Office. If more

than one type of Exception is required, all will be processed as a single package with the appropriate boxes checked on Exhibit A, Utility Exception Form.

Exhibit A is provided as an example document for requesting an Exception. This Form must be completed and included as part of the file documentation regardless of whether it is to be submitted to the Central Office or not. The purpose is to have a concise submittal form and a means to readily perform Quality Assurance activities for evaluating any need for future criteria, standards and policy changes. To assist in determining criteria, the tables found in Chapter 5 and the Exhibits Section of the ***UAM*** are provided with excerpts that relate to utilities as copied from the ***"AASHTO Publication, A Policy On Geometric Design Of Highways And Streets," 2004 Fifth Edition***.

13.3 Concurrence and Approval of Exceptions

Exceptions on projects having full federal oversight and involvement require a recommendation by the District Design Engineer and the Utility for approval by the FHWA Division Administrator. On non-full Federal oversight projects, Exceptions are recommended by the Utility or the responsible qualified licensed Florida professional engineer for approval by the District Design Engineer. A public or private utility may submit to the District Design Engineer a completed Exception package for work designed by the Utility's own forces. However, if the design is by others, the package must be submitted, signed, and sealed by a qualified licensed Florida professional engineer registered in the State of Florida.

Exceptions for locating on Limited Access Facilities such as Non-Operating Railroad Facilities, Trails, and Bikeways, must be approved by the District Secretary or designee and do not require concurrence from the State Roadway Design Engineer. Exceptions for locating on all other Limited Access Facilities including Operating Railroad Facilities must be approved by the State Highway Engineer or designee.

Any exception for design speed on the FIHS system shall require concurrence from the State Highway Engineer or designee.

Exceptions for MSE or PE Walls, or impacting the geometry, vertical clearance, or layout of structures, or superstructure cross-slope, require concurrence from the State Structures Engineer.

All other Exceptions require concurrence from the State Roadway Design Engineer.

Any reduction in vertical clearance over an interstate roadway to less than sixteen and one half (16.5) feet requires an **FDOT** Exception.

Any exception that reduces vertical clearance over an interstate roadway to less than sixteen (16) feet requires FHWA coordination with Military Traffic Management Command (MTMC) and approval before the District Design Engineer can approve the exception.

13.4 Coordination of Exceptions

In order to allow time to research alternatives and begin the analysis and documentation of activities, it is critical that Exceptions be identified as early in the process as practical. This is preferably done during the PD&E phase for major projects and during the scope development phase for minor projects.

When the need for an exception has been determined, the District Design Engineer or responsible qualified licensed Florida professional engineer must coordinate with the appropriate persons identified above to obtain conceptual concurrence and any required documentation requested. This coordination may be expedited by reviewing the exception with the District's **FDOT** Area Design Engineer.

For exceptions requiring full Federal oversight, the District Design Engineer must also coordinate with FHWA to obtain conceptual concurrence and any required documentation requested by FHWA. This is usually done by also reviewing the exception with the District's FHWA Area Engineer. It is good practice to review the exception with both area engineers at the same time. This will help expedite the approval and concurrence process.

Exception approval should be obtained no later than the initial engineering phase. The later in the design phase an Exception is sought, the less likely it can be accommodated without having adverse affects on the project.

13.5 Justification and Documentation of Exceptions

The objective of the Utility is to demonstrate to the **FDOT** that the cost of relocating is greater than the benefit. This is a benefit/cost assessment. A benefit/cost assessment is not always required if other determining factors are such that a decision can be made without this effort. When a benefit/cost assessment is necessary, the ***AASHTO Roadside Design Guide*** shall be used for flush pavement roadway sections. Either the ***Roadside Design Guide*** or empirical methods (at the Utility's option) must be used for curbed roadway sections. An assessment should include any added benefits of meeting the criteria. All exception requests shall include documentation sufficient to justify the request and independently evaluate the safety impacts.

To meet state and federal requirements, any Exception request must include documentation addressing all of the issues described in Sections 13.5.1 through 13.5.4:

13.5.1 Description
13.5.2 Safety Impacts
13.5.3 Benefit / Cost Assessment
13.5.4 Conclusion and Recommendation

The above information is to be attached in full and summarized if possible, on Form Exhibit A and submitted to the District as appropriate.

See "EXHIBITS B through I" for general guidelines on exception considerations and flowcharts for exceptions and utility location decisions.

See “Exhibit B” for General Exception Considerations
See “Exhibit C” for Exception Considerations for the Designer
See “Exhibit D” for Exception Considerations for the Utility
See “Exhibit E” for Exception Scenarios on RRR Type Projects
See “Exhibit F” for Utility Exception Flowchart
See “Exhibit G” for Generalized Location Decision Flowchart
See “Exhibit H” for Project Type Location and Relocation Decision Flowcharts
See “Exhibit I” for Control Zones
See “Exhibit L” for Utility Liaison Process
See “Exhibit M“ for Determining Minimum HDD Depth

13.6 Concurrence Review of Exceptions

After conceptual approval of the Exception (per Section 13.4) has been obtained from the District Design Engineer, District Maintenance Engineer, State Highway Engineer or designee, State Roadway Design Engineer, FHWA, and the Structures Office, as appropriate and as required above, and the documentation justifying the exception is signed and forwarded in accordance with the sample request letter Exhibit A to the State Roadway Design Engineer, the exception will be reviewed for completeness and adherence to the requirements.

If the exception complies with all requirements, the concurrence will be signed by the appropriate persons. When necessary, the exception will be forwarded to FHWA for approval.

After all approval or concurrence signatures are obtained, the exception will be returned to the District Maintenance or Design Engineer, or responsible qualified licensed Florida professional engineer. A copy will be retained by the State Roadway Design Engineer.

EXHIBITS

FORM 710-010-61
UTILITIES
01/99

TO:[(a)] _____

DATE: _____

SUBJECT: UTILITY EXCEPTION

Financial Project ID: _____ **State Road Number:** _____

Fed Aid No: _____

Project Description: _____

Check Applicable Construction Type: ( ) New ( ) RRR ( ) Resurfacing Only

Check which exception element/s is affected:

( ) Vertical Clearance ( ) Horizontal Clearance ( ) Limited Access R/W Use ( ) Control Zone Use

Describe the specific nature of the exception [(b)] below:

_____

_____

_____

_____

_____

_____

Recommended (Utility)[(c)]: _____
Name, Title, Company

Approval / Recommended (FDOT)[(d)]: _____
District Design Engineer or Designee

Approval[(e), (g)]: _____ _____
State Highway Engineer or Designee **FHWA Division Administrator**

Approval / Concurrence[(f) (h)]: _____ _____
State Structures Design Engineer or Designee **State Roadway Design Engineer or Designee**

(a) Exceptions on projects having full Federal oversight and involvement are addressed to the FHWA Division Administrator but sent to the District Design Engineer. All other exceptions are addressed and sent to the District Design Engineer.

(b) Include a brief statement concerning the project and elements of concern. Indicate the reason/s the exception is being requested in accordance with Chapter 13 of the UAM. Attach all supporting documentation to this exhibit.

(c) Exceptions are recommended by the Utility when designed by Utility forces, otherwise a responsible professional engineer must recommend the exception for the Utility.

(d) Exceptions are approved by the District Design Engineer or Designee except on projects having full Federal oversight and involvement or projects that involve design speed or limited access R/W use. Projects having full federal oversight require a recommendation by the District Design Engineer or Designee in addition to the Utility.

(e) Exceptions on projects having full Federal oversight and involvement are approved by the FHWA Division Administrator. All other exceptions are approved by the District Design Engineer or Designee, except for design speed or for limited access R/W use (see note (g)).

(f) All exceptions require the concurrence of the State Roadway Design Engineer or Designee. Exceptions impacting the geometry, vertical clearance, layout of structures, or superstructure cross-slope require concurrence from the State Structures Design Engineer or Designee.

(g) Exceptions for limited access R/W use require approval by the State Highway Engineer or Designee in addition to any approvals required by the FHWA.

(h) Exceptions for Utility accommodation within the vicinity of MSE walls require approval of the State Structures Design Engineer or Designee.

GENERAL EXCEPTION CONSIDERATIONS:

The following considerations are for guidance and do not reflect every scenario. They are for the purposes of establishing consistency in application and decision making. The **FDOT** engineer and the Utility should look beyond what is provided herein as the specific site conditions warrant with a view to providing or improving safety where practical. Both the Utility and the **FDOT** are encouraged to discuss and mutually agree upon the basis of decisions which exceed those contained herein.

In the design and permitting process, many considerations are appropriate to evaluate the reasonableness of approving an exception. Designers and Utilities should be familiar with all exhibits describing decision processes and control zones to improve safety and establish uniformity of application. Exhibits are provided for general and specific cases and types of construction. Caution is advised since some conditions are acceptable for existing infrastructure but would not be approved for new construction. Some typical concerns that must be addressed to properly understand the pros and cons of making a decision include criteria, safety, function, and benefit to cost ratio. These are generalizations. Every site under consideration has a unique environment and set of conditions to evaluate. It is impossible to address all scenarios that may exist. For this reason it is not appropriate to say under certain conditions an exception will always be given. Similarly it cannot be said under certain circumstances an exception will always be denied. With that in mind, both the Utility and the designer must look at the precepts contained herein and apply them accordingly.

The Utility is a statutorily authorized partner in the use of the R/W that the **FDOT** manages. The Utility shares the responsibility to maintain a safe user environment. The actions of either party can affect safety negatively or positively. Each party must begin its evaluations by first establishing what is the safest thing to do. If that proves too costly, alter the proposal until an acceptable balance is reached between benefit and cost. A description of exhibits for exceptions follows: Exhibit C describes what must be considered by the roadway engineer before denying or approving a utility exception. Exhibit D describes what a Utility must consider in justifying and requesting an exception. Exhibit E provides guidance by identifying scenarios in which an exception would normally be given to a Utility except in site-specific cases where extreme conditions exist or where control is beyond the authority of the **FDOT**. Exhibit F is provided to ensure issues are addressed in the proper order in making a decision about approval or denial of an exception. Exhibit G provides guidance on determining the appropriate location of any utility facility within the R/W. Exhibit H is a series of three (3) project type location and relocation decision flowcharts. Exhibit I shows areas called control zones that require exceptions before an above ground fixed object may be placed in them.

EXCEPTION CONSIDERATIONS FOR THE DESIGNER:

Some pertinent questions which are required to be considered before the roadway designer or utility engineer recommends relocation of an existing utility facility and in granting an exception are:

CRITERIA:

(1) What is the applicable **FDOT** criteria, new construction or RRR?
(2) Is the **FDOT** standard criteria appropriate for the site condition?
(3) Does the standard criteria provide for the optimum safety, function and benefit/cost ratio?
(4) Is the ultimate project typical section being developed or an interim fix, and if so which controls, and has the Utility been told which? (The Utility should not be required to relocate or address the same issue again in the near future.)
(5) Existing permitted facilities are to be evaluated against the criteria in place when they were installed and considered for relocation on RRR projects only when determined to be in a control zone as defined in this RRR section.

SAFETY:

(1) Has a safety study been prepared covering the most recent five (5) years identifying crash history and any roadway element deficiencies?
(2) Is there a significant number of recorded crashes for the corridor?
(3) Even if unrecorded, is there visible evidence of crashes (scraped poles, bent signs, etc.) or are they highly predictable?
(4) Are historical crashes related to any specific roadway element such as alignment (curve or kink), signing (lack of, confusing, blocked view), roadway intersection, lane add or drop, major driveway entrance or exit, roadway surface condition, and posted speed or sight distance?
(5) Are there other features along the corridor in question that do not meet horizontal clearance criteria such as signal or light poles, landscaping, controllers, or other similar features?
(6) Can an above ground fixed object (e.g., pole) be relocated in compliance with horizontal clearance criteria within the R/W and not impact other utilities or roadway features?
(7) Can minimum horizontal clearance criteria be exceeded (e.g., new construction criteria) without significant utility impact?
(8) Are there roadway typical section features such as on street parking (not to be removed) or bike lanes that provide additional pole separation from the through lane?
(9) If a geometric revision will eliminate the problem, is it practical and cost effective to include it in the project?
(10) Will the proposed pole relocation prevent compliance with ADA horizontal clearances?
(11) Will pedestrian traffic benefits be reduced by utility relocation?

(12) Will the desired relocation violate any national utility code, State law or local ordinance?
(13) Are there existing clearance conflicts, or can future overhead clearance conflicts be foreseen such as canopy overhangs or construction problems?
(14) Are pole(s) located in an area where an exception is acceptable and allowed to remain or are they located in a designated control zone in which case they should be removed as appropriate?

FUNCTION:
(1) Is there sufficient R/W to relocate within the R/W without violating codes or criteria whether **FDOT** or Utility (state, federal or local)?
(2) Will the utility relocation require more than one move?
(3) Can the number of poles to be relocated be limited to one?
(4) Will relocating a pole(s) longitudinally solve the problem as opposed to changing the horizontal offset?
(5) Will the relocation force the Utility to be inaccessible (behind a ditch or canal) or placed in an area of high maintenance (fast growing trees or underground and susceptible to increased lighting damage)?

BENEFIT/COST:
(1) What is the estimated cost to the utility company to relocate?
(2) Does the utility company have future plans in place to relocate or replace the pole(s)?
(3) Are there underground utility conflicts that will result from relocating a pole(s) to a new location and if so, can the underground utility be physically or cost effectively relocated?
(4) What is a reasonable benefit (anticipated reduction in societal costs)/cost (utility relocation costs) ratio for this particular corridor for a utility to be relocated? (e.g., Does the relocation cost exceed damage estimates by a factor of 2, using the Roadside Design Guide Program?)
(5) Will the available distance a pole(s) can be moved provide a reasonable benefit? (e.g., normally four (4) feet or more, or behind a fixed barrier, this does not apply where there is an ADA non-compliance issue).
(6) Consider the following scenario. There is room to relocate the pole(s) without conflicts and there is no physical reason the Utility cannot move. There is no substantial crash evidence (written or visible), therefore, the benefit to cost ratio is not high. Is there a basis other than clearance criteria to require the Utility to move?

Any one of the following conditions are examples of when an exception may be appropriate, assuming the utility facility is not located in a control zone:

(A) When the desired relocation area would force a Utility to violate other state or federal codes whether electrical, gas, environmental, or ADA requirements. In instances where a significant crash history exists, an exception probably is not warranted.

(B) When the **FDOT's** criteria was not formulated to address the specific site conditions being observed on a project.
(C) When the facility is or would be in violation of criteria but the intent can best be served using other values.
(D) When the **FDOT** project scope is an interim fix rather than the ultimate section.
(E) When compliance cannot be accomplished within the desired project time frame.
(F) When the required offset measured from the curb is not met if the offset from the travel lane is mitigated by a clearly marked (striped) bike lane or on street parking. (Care should be taken to ensure these mitigating elements are permanent features. If these elements are to be removed, the above ground fixed object must be evaluated for relocation and scheduled accordingly. It is important to identify proposed locations and not allow other utilities to use this area.)
(G) When there is an established hardship or the tangible benefit of relocation is not supported by benefit to cost ratios.
(H) When significant safety improvements would not be attained by forcing a relocation offset of less than four (4) feet. (This does not apply where there is an ADA non-compliance issue).
(I) When the utility facility is not located in a control zone and crash data or field analysis does not indicate the presence of a significant hazard.
(J) When adjustment or relocation of the facility would conflict with other acceptably located facilities.
(K) When insufficient R/W to comply.
(L) Other reasons will be considered on a case-by-case basis.

Scenarios for which Exceptions would typically be approved, when the existing utility facility is located within a control zone:

- When there is no crash history and the location meets the horizontal requirements based on the posted speed;
- When there is an established hardship;
- When there is no practical alternative (e.g., the utility facility cannot be moved more than four (4) feet); or
- Other reasons will be considered on a case-by-case basis.

EXCEPTION CONSIDERATIONS FOR THE UTILITY:

Justification Process and Documentation of Utility Exceptions

The objective of the Utility should be to demonstrate to **FDOT** that the cost of relocating is greater than the benefit. This is a benefit / cost assessment. This includes any added benefits of meeting the criteria. All exception requests shall include documentation sufficient to justify the request and independently evaluate the operational and safety impacts. It will be advantageous to the Utility to review and gives attention to the considerations of the design engineer. In this way both parties are not only addressing the minimums but also considering all issues together.

The assessment documentation is not required to contain, and rarely entails, a full blown analysis. Most of the issues that must be addressed can be done in one-line statements. In many cases the conclusions are obvious. For example, if there were no alternative locations, a simple statement to the effect "moving back four (4) feet would require a violation of ADA or National Electric Codes", or "moving back four (4) feet requires acquisition of an easement or r/w or removal of a building". It is also acceptable to provide costs based on tax assessor front foot values and adding overhead costs without extensive details. All statements must be logical and within reason. Of significance is that each of the listed considerations be addressed and documented because the limiting condition for which an exception is being sought may not exist ten (10) years later when a claim is brought forth.

To meet state and federal requirements, any exception request must include documentation addressing the following issues:

- **Description**
  - (a) Project description (general project information, typical section, etc.)
  - (b) Description of the exception (specific project conditions related to the exception, critical design element, acceptable AASHTO value, and proposed value for project)

- **Safety Impacts**
  - (a) Crash history and analysis (location, type, severity, and relation to the exception element for the most recent five (5) years of accident data). Note: Upon request of the Utility, the **FDOT** will furnish the accident history for the area and the Utility will analyze it identifying accidents, locations, severity, etc.
  - (b) Impacts associated with proposed criteria (this could be annualized value of expected economic loss associated with crashes or present worth where a detailed analysis is used, or if obvious, a one line statement of cost based on property acquisition and overhead)

- **Benefit / Cost Analysis**

  Calculate a benefit/cost analysis which estimates the cost effectiveness of correcting or mitigating a substandard design feature. The benefit is the expected reduction in societal costs (future accident costs, insurance, workers compensation, etc. The cost is the direct construction and maintenance costs associated with the design and relocation. These costs may be calculated and annualized or made present worth so that a direct comparison of alternate designs can be made. Chapter 2 of the Roadside Design Guide and the FHWA Technical Advisory titled "Motor Vehicle Accident Costs" dated October 31, 1994, provides guidance on performing a benefit / cost analysis. For actual cost data the Utility should seek the latest available data published for this purpose.

Achieving a benefit/cost ratio of less than or equal to 2.0 would mean the **FDOT** would not require relocation except in the most extreme cases or conditions beyond its control. This is a conservative value for the Utility and allows for many unknowns in the equation. The final decision is a management decision that considers all factors important to the successful implementation of the **FDOT's** mission.

The key factors in the analysis are:
(a) Evaluation of crashes by type and cause,
(b) Estimate of crash costs (based on property damage and severity of injuries),
(c) Selection of a crash reduction factor,
(d) Selection of a discount rate,
(e) Estimate of construction and maintenance costs,
(f) Selection of life of the improvements,
(g) Period of time over which the benefits will be realized.

- **Conclusion and Recommendation**

(a) The cumulative effect of other deviations from design criteria,
(b) Safety mitigating measures considered and provided,
(c) Summarize specific course of action. (Include conditional requirements such as projects in the Five Year Work Program that will fix a deficiency).

SCENARIOS FOR APPROVING EXCEPTIONS ON RRR TYPE PROJECTS

FOR PLACEMENT OF ABOVE GROUND FIXED OBJECTS: The probability of approving exceptions to above ground fixed object relocation decreases with increases in crash history and directly observable impact evidence. This exhibit describes scenarios and conditions that must exist for an exception to be approved. It also gives general conditions and probable recommendations for typical situations where extreme or unforeseen conditions do not exist. Where extreme or atypical circumstances exist, the District recommendation may not follow this example.

Scenarios for which exceptions would typically be approved, with and without crash history or impact evidence, follow:

If there is no documented crash history in the most recent five (5) years nor direct observable impact evidence, given the following four conditions exist simultaneously:

1. Curb or flush shoulder alignment does not change horizontally.
2. The object is not located in a Control Zone or LA R/W.
3. The posted speed limit does not exceed forty five (45) mph.
4. Utility location causes no slowing or redirecting of traffic.

An exception would normally be approved if any one of the following conditions exist.

- Insufficient room to relocate in the R/W.
- One Utility would have to relocate in order to put another in its position.
- The object cannot be relocated more than four (4) feet. (This does not apply where there is an ADA non-compliance issue).
- Relocation would cause a conflict with other state or national safety codes.
- A minimum of six (6) feet horizontal offset exists between the traveled way and the above ground fixed object.
- The relocation benefit/cost ratio is less than or equal to two (2).

If there is documented crash history in the most recent five (5) years or direct observable impact evidence, and given the above four numbered conditions exist simultaneously:

An exception would normally be approved if any one of the following conditions exists.

- No practical design alternative.
- The relocation benefit/cost ratio is less than or equal to two (2).

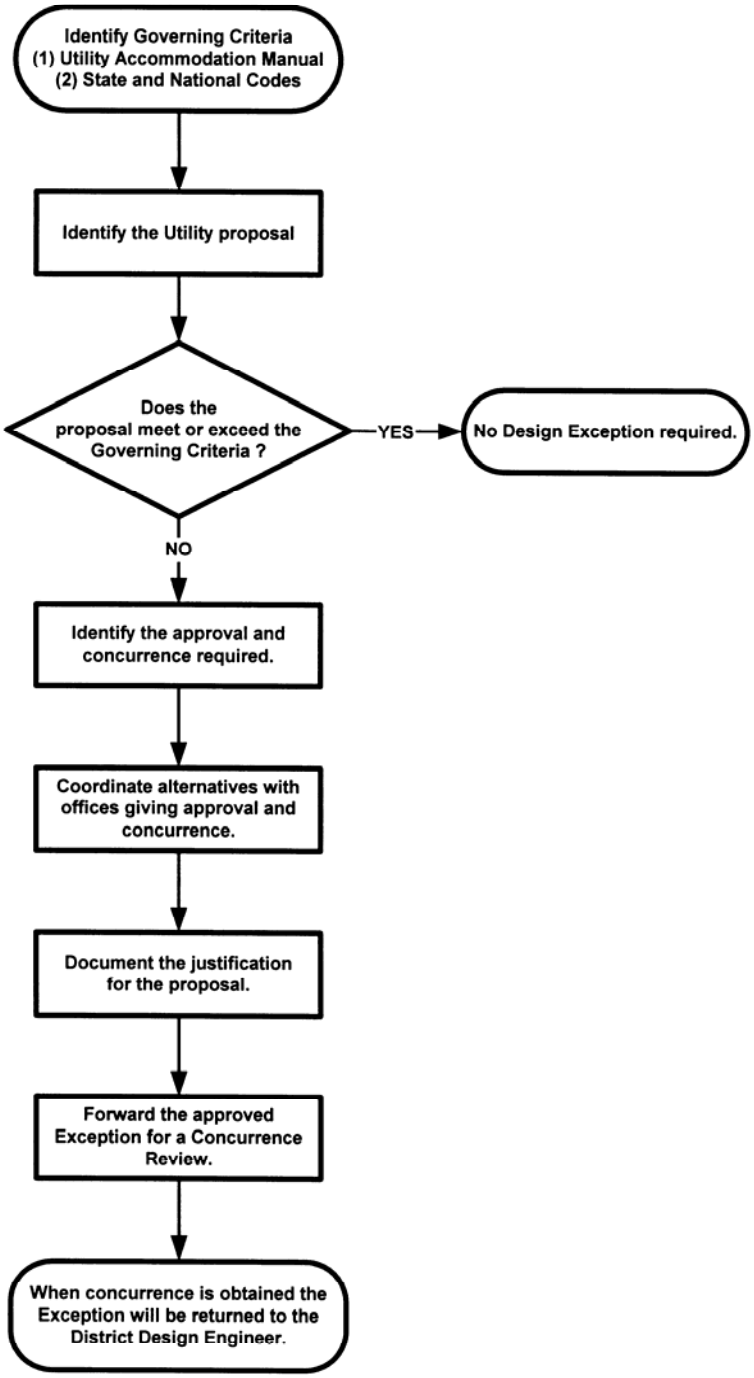
Scenarios for which Exceptions would typically be approved, when the existing utility facility is located within a control zone:

- When there is no crash history and the location meets the horizontal requirements based on the posted speed;
- When there is an established hardship;
- When there is no practical alternative (e.g., the utility facility cannot be moved more than four (4) feet); or

- Other reasons will be considered on a case-by-case basis.

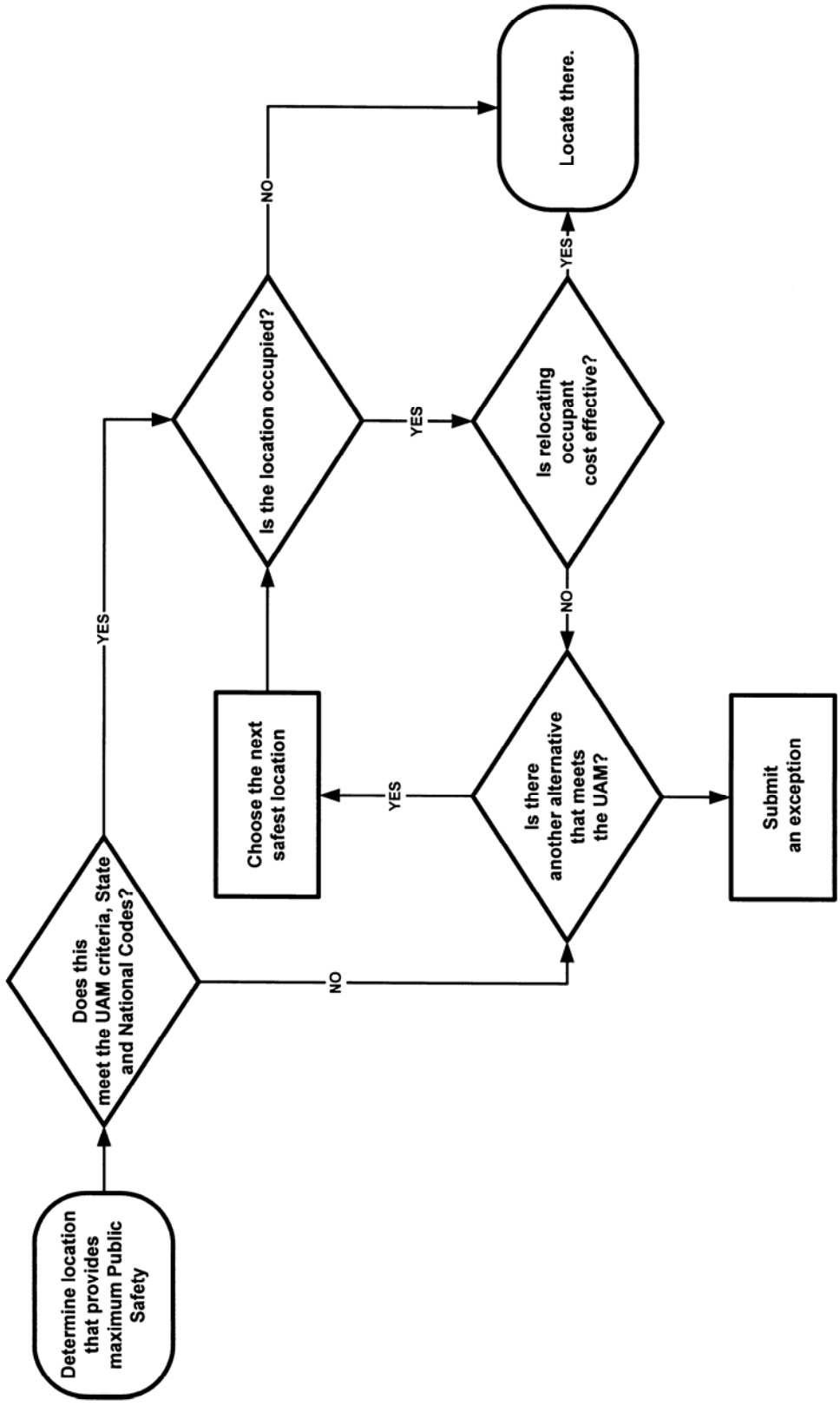
FOR PLACEMENT OF BELOW GROUND OBJECTS, MATERIALS, OR METHODS:
Exceptions are approved only by demonstration of a hardship. The hardship must be demonstrated by showing the **FDOT** policies, standards or criteria are inappropriate and supported by a benefit/ cost ratio of less than or equal to one (1). For purpose of computation, benefit is the expected reduction in societal costs. Cost is dollar value of impacts and implementation for all affected parties.

Utility Exception Flow Chart



Generalized Location Decision Flow Chart

for Locating Utilities within FDOT R/W (Above or Below Ground or as an attachment)



NEW POLE LOCATION - DECISION FLOW CHART

Note: while "Pole" is used in the flow chart, it is also intended to apply to any above ground fixed object.

New Poles must be evaluated against New Construction criteria: "As close as practical to the R/W line."
Anything less than Minimum Horizontal Clearance[3] requires an exception.

[1] If New pole set in conjunction with FDOT Road Project, see first the FDOT Road Project (Major Reconstruction) or RRR - Pole Relocation Decision Flow Chart, as appropriate.

[2] As close to the R/W line as practical determined by conditions such as, but not limited to:
- **Aerial encroachment.**
- **NESC, ADA, or other State or Federal applicable codes/regulations,**
- **conflicts with other existing facilities, both overhead and underground,**
- **trees on adjacent private property (where adequate future trimming would require encroachment on private property),**
- **down guying requirements.**

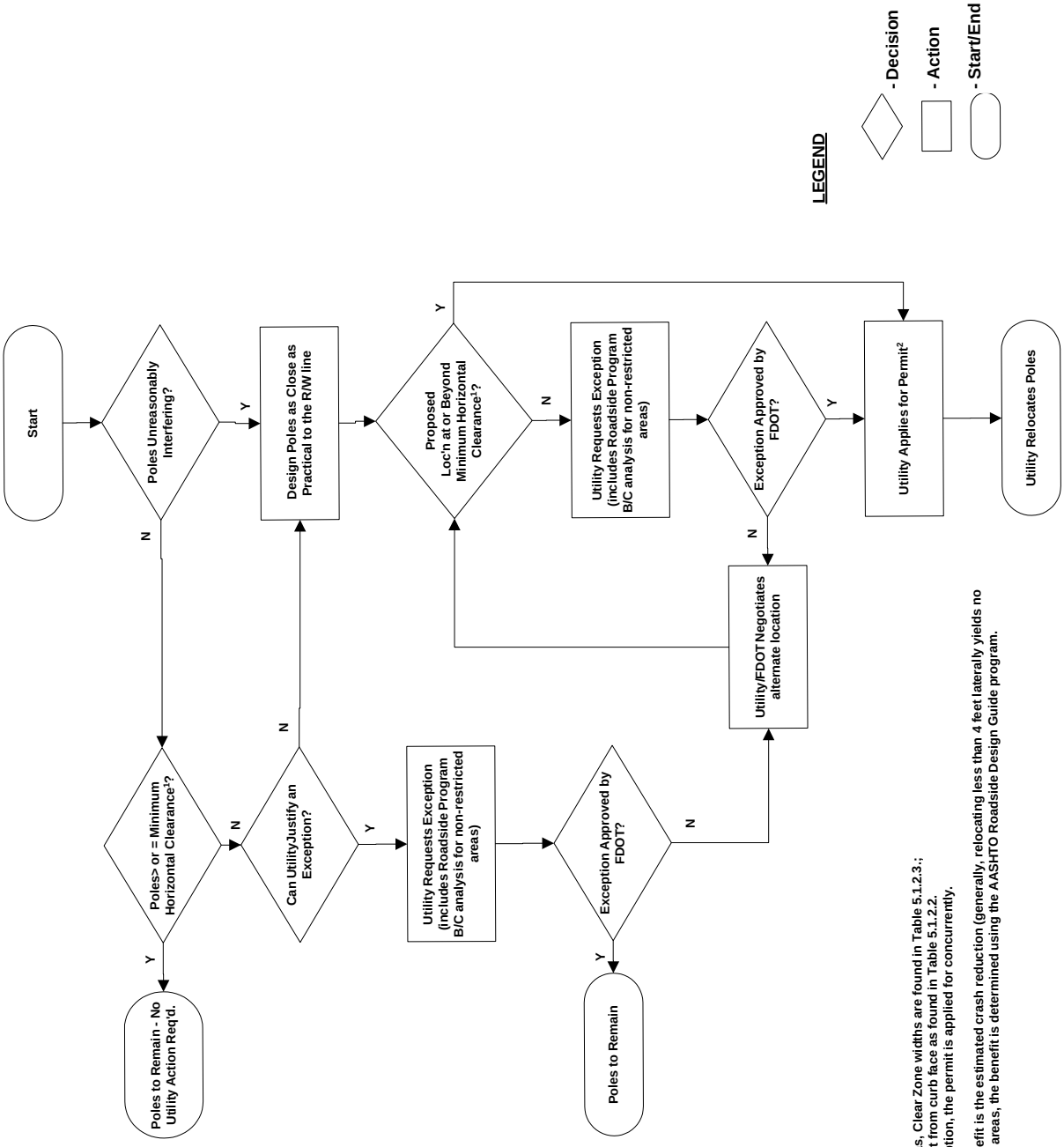
[3] For non-restricted R/W areas, Clear Zone Widths are found in Table 5.1.2.3.
- **For restricted **R/W areas, 4 feet from curb face as found in Table 5.1.2.2.**
- **For new midspan poles, use minimum RRR dimensions**
- **For new light poles use Table 5.1.2.1.**

[4] When applying for an exception, the permit is applied for concurrently.

**** In Restricted areas benefit is estimated crash reduction (generally, relocation less than 4 feet is no reduction). In Non-Restricted areas, benefit is determined using the AASHTO Roadside Design Guide program.**

FDOT ROAD PROJECT (MAJOR RECONSTRUCTION) - POLERELOCATION DECISION FLOW CHART

Note: While "pole" is used in Flow Chart, it is also intended to apply to any above ground fixed object.



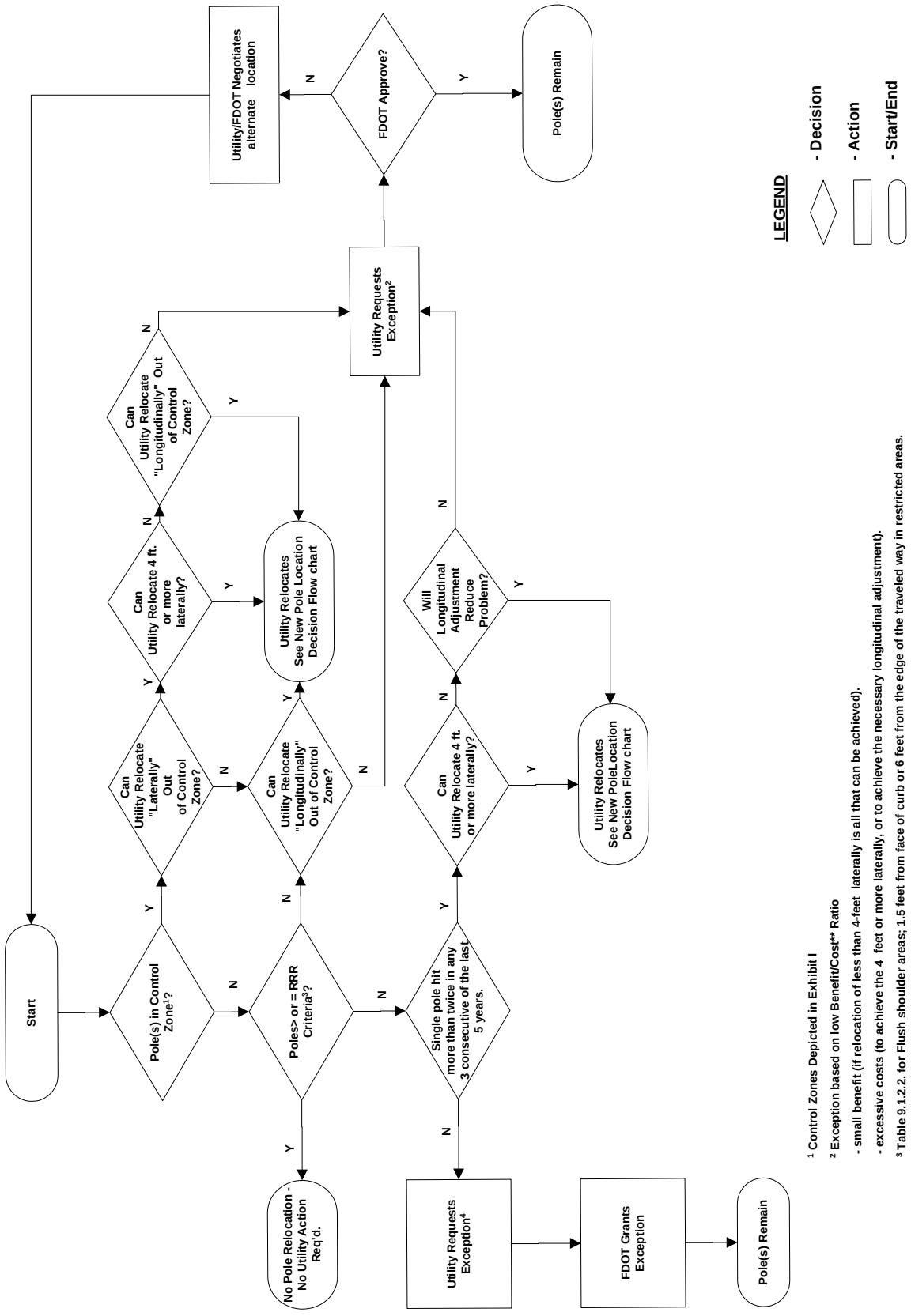
1 For non-restricted R/W areas, Clear Zone widths are found in Table 5.1.2.3.;
- For restricted ** areas 4 feet from curb face as found in Table 5.1.2.2.

2 When applying for an exception, the permit is applied for concurrently.

** In Restricted areas the benefit is the estimated crash reduction (generally, relocating less than 4 feet laterally yields no reduction). In Non-Restricted areas, the benefit is determined using the AASHTO Roadside Design Guide program.

FDOT ROAD PROJECT (RRR) - POLE RELOCATION DECISION FLOW CHART

Note: While "pole" is used in Flow Chart, it is also intended to apply to any above ground fixed object.



[1] Control Zones Depicted in Exhibit I

[2] Exception based on low Benefit/Cost** Ratio
- small benefit (if relocation of less than 4-feet laterally is all that can be achieved).
- excessive costs (to achieve the 4 feet or more laterally, or to achieve the necessary longitudinal adjustment).

[3] Table 9.1.2.2. for Flush shoulder areas; 1.5 feet from face of curb or 6 feet from the edge of the traveled way in restricted areas.

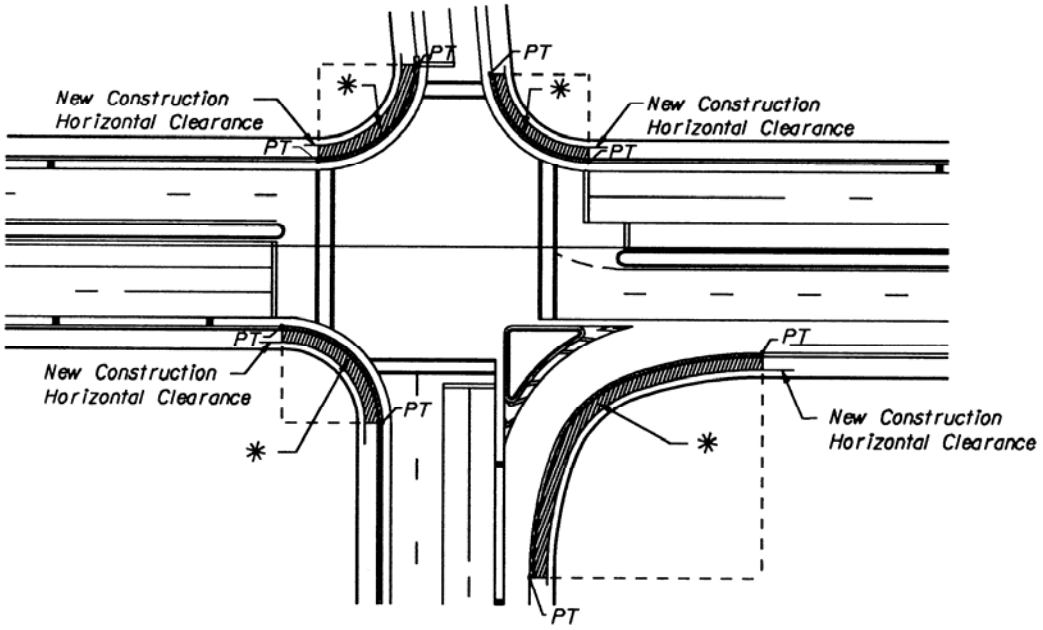
[4] Exception justified on basis that pole(s) not hit more than twice during any 3 consecutive years in the last 5 years.

** In Restricted areas benefit is estimated crash reduction (generally, relocation less than 4 ft. is no reduction). In Non-Restricted areas, benefit is determined using the AASHTO Roadside Design Guide program.

CONTROL ZONES

RESTRICTED LOCATIONS FOR ABOVE GROUND FIXED OBJECTS

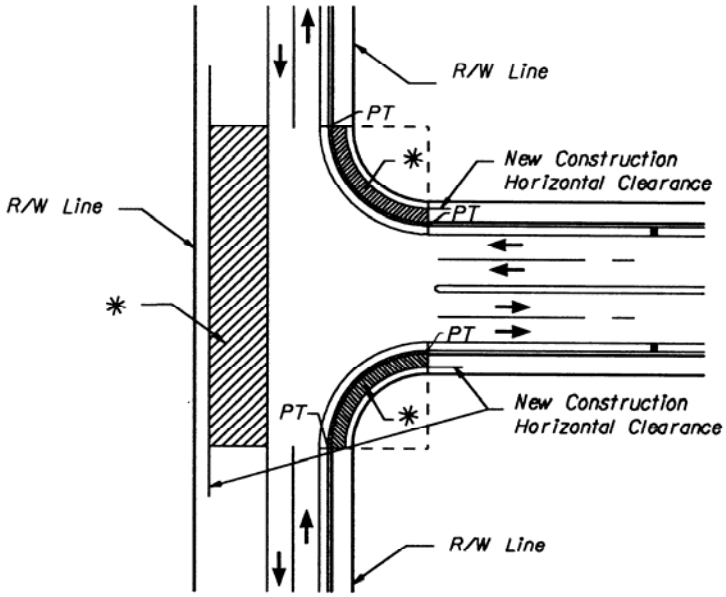
* No above ground fixed objects may be installed in shaded area unless behind barriers allowing for impact offset. No barriers shall be constructed solely for allowing above ground fixed objects to be located in the shaded areas.



Intersecting Streets

"Not To Scale"

* 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.



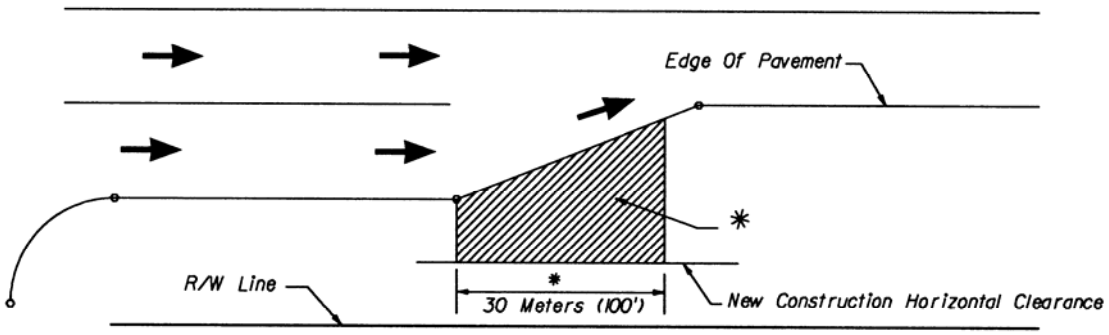
"T" Intersections

"Not To Scale"

CONTROL ZONES

RESTRICTED LOCATIONS FOR ABOVE GROUND FIXED OBJECTS

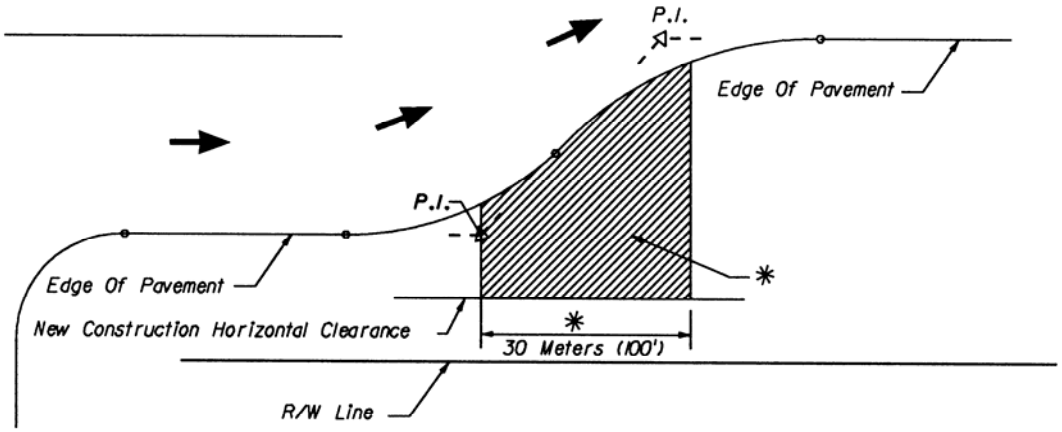
* *No above ground fixed objects may be installed in shaded area unless behind barriers allowing for impact offset. No barriers shall be constructed solely for allowing above ground fixed objects to be located in the shaded areas.*



Lane Termination Using A Skewed Merge Section

"Not To Scale"

* *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.*



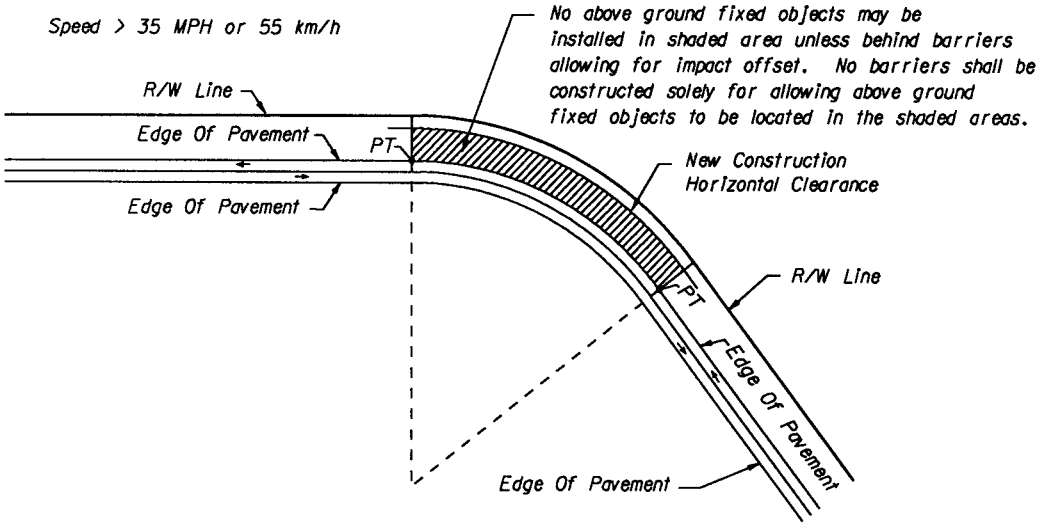
Lane Termination Using A Reverse Curve

"Not To Scale"

CONTROL ZONES

RESTRICTED LOCATIONS FOR ABOVE GROUND FIXED OBJECTS

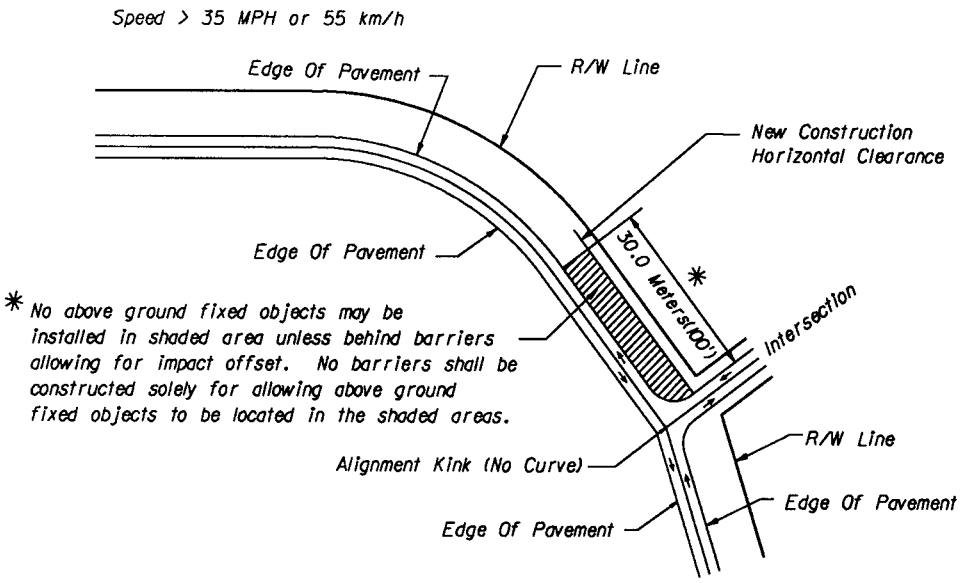
Existing Curb And Gutter Or Rural Typical Section With
No Change In Edge Of Pavement Or Existing Curb Location



Typical Curve

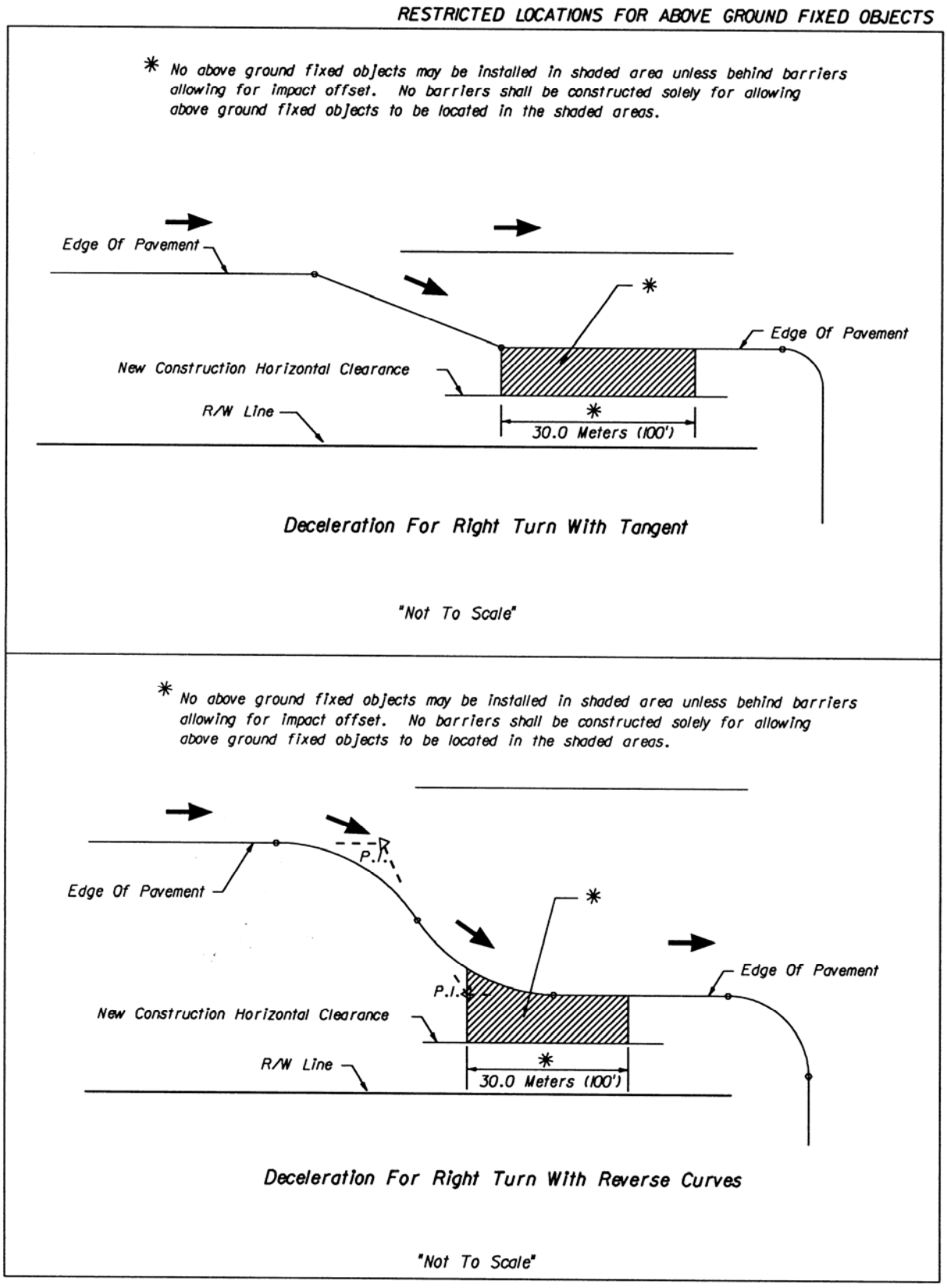
"Not To Scale"

Existing Curb And Gutter Or Rural Typical Section With
No Change In Edge Of Pavement Or Existing Curb Location

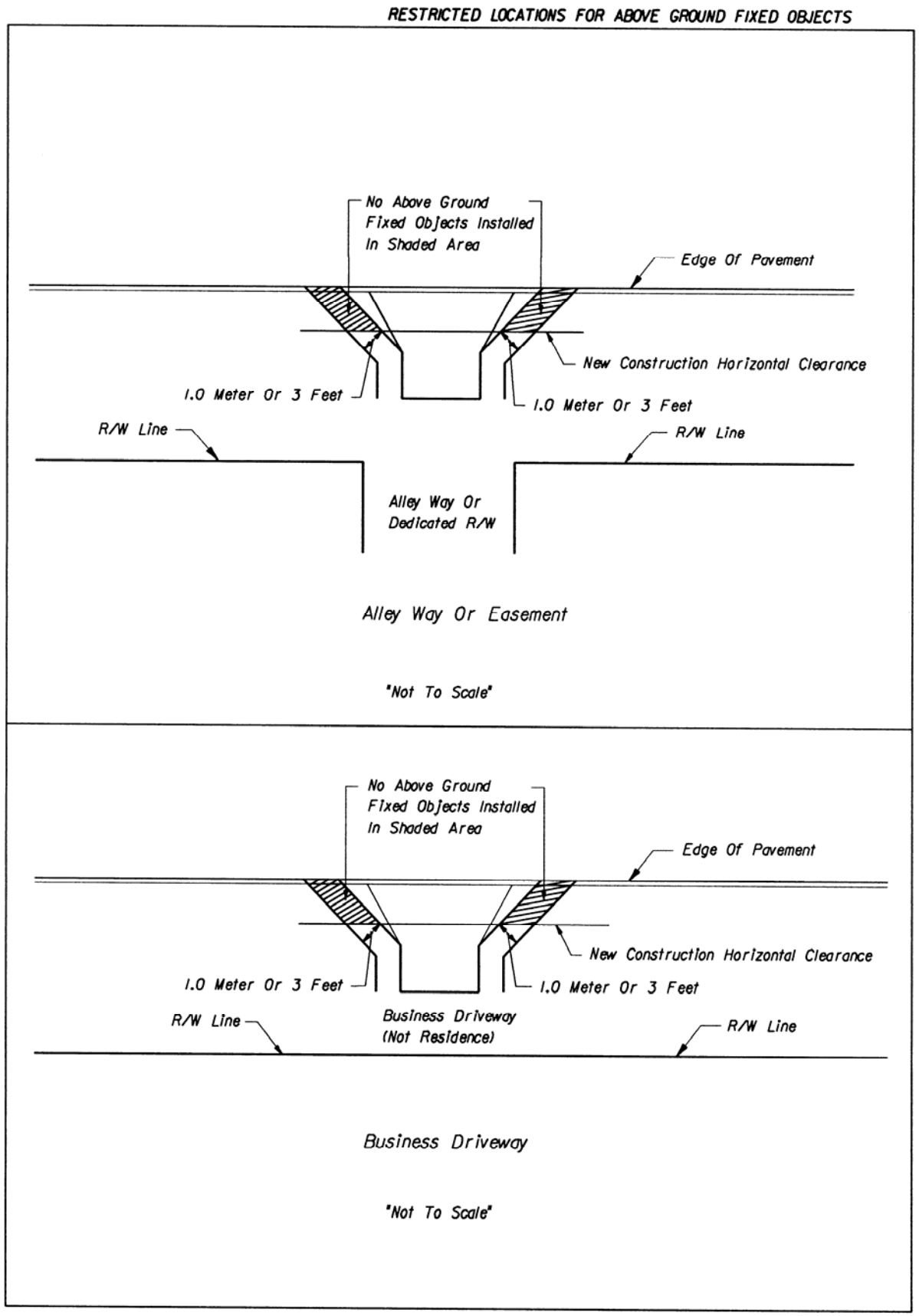


Typical Kink In Alignment

CONTROL ZONES



CONTROL ZONE



FORM 710-010-85
UTILITIES
OGC – 08/04

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

UTILITY PERMIT

PERMIT NO.:	**SECTION NO.:**	**STATE ROAD**		**COUNTY**
FDOT construction is proposed or underway.		☐ **Yes**	☐ **No**	**Financial Project ID**:
Is this work related to an approved Utility Work Schedule?		☐ **Yes**	☐ **No**	**If yes, Document Number**:

PERMITTEE:		
ADDRESS:		**TELEPHONE NUMBER**: ( ) -
CITY/STATE/ZIP:		

The above PERMITTEE requests permission from the State of Florida Department of Transportation, hereinafter called the FDOT, to construct, operate and maintain the following:

FROM:	**TO**:

Submitted for the PERMITTEE by:			
	Name and Title (Typed or Printed Legibly)	**Signature**	**Date**

1. The Permittee declares that prior to filing this application, the location of all existing utilities that it owns or has an interest in, both aerial and underground, are accurately shown on the plans and a letter of notification was mailed on _____ to the following utilities known to be involved or potentially impacted in the area of the proposed installation: _____.
2. The local Maintenance or Resident Engineer, hereafter referred to as the FDOT Engineer, shall be notified a minimum of forty eight (48) hours in advance prior to starting work and again immediately upon completion of work. The FDOT's Engineer is _____, located at _____, Telephone Number _____. The Permittee's employee responsible for MOT is _____, Telephone Number _____. (This name may be provided at the time of the forty eight (48) hour advance notice prior to starting work).
3. All work, materials, and equipment shall be subject to inspection and approval by the FDOT Engineer.
4. All plans and installations shall conform to the requirements of the FDOT's UAM in effect as of the date this permit is approved by FDOT, and shall be made a part of this permit. This provision shall not limit the authority of the FDOT under Paragraph 8 of this Permit.
5. This Permittee shall commence actual construction in good faith within _____ days after issuance of permit, and shall be completed within _____ days after the permitted work has begun. If the beginning date is more than sixty (60) days from the date of permit approval, the Permittee must review the permit with the FDOT Engineer to make sure no changes have occurred to the Transportation Facility that would affect the permitted construction.
6. The construction and maintenance of such utility shall not interfere with the property and rights of a prior Permittee.
7. It is expressly stipulated that this permit is a license for permissive use only and that the placing of utilities upon public property pursuant to this permit shall not operate to create or vest any property right in said holder, except as provided in executed subordination and Railroad Utility Agreements.
8. Pursuant to Section 337.403(1), Florida Statues, any utility placed upon, under, over, or along any public road or publicly owned rail corridor that is found by FDOT to be unreasonably interfering in any way with the convenient, safe, or continuous use, or maintenance, improvement, extension, or expansion, of such public road or publicly owned rail corridor shall, upon thirty (30) days written notice to the utility or its agent by FDOT, be removed or relocated by such utility at its own expense except as provided in paragraphs (a) and (b), and except for reimbursement rights set forth in previously executed subordination and Railroad Utility Agreements, and shall apply to all successors and assigns for the permitted facility.
9. It is agreed that in the event the relocation of said utilities are scheduled to be done simultaneously with the FDOT's construction work, the Permittee will coordinate with the FDOT before proceeding and shall cooperate with the FDOT's contractor to arrange the sequence of work so as not to delay the work of the FDOT's contractor, defend any legal claims of the FDOT's contractor due to delays caused by the Permittee's failure to comply with the approved schedule, and shall comply with all provisions of the law and the FDOT's current UAM. The Permittee shall not be responsible for delay beyond its control.
10. In the case of non-compliance with the FDOT's requirements in effect as of the date this permit is approved, this permit is void and the facility will have to be brought into compliance or removed from the R/W at no cost to the FDOT, except for reimbursement rights set forth in previously executed subordination and Railroad Utility Agreements. This provision shall not limit the authority of the FDOT under Paragraph 8 of this Permit.
11. It is understood and agreed that the rights and privileges herein set out are granted only to the extent of the State's right, title and interest in the land to be entered upon and used by the Permittee, and the Permittee will, at all times, and to the extent permitted by law, assume all risk of and indemnify, defend, and save harmless the State of Florida and the FDOT from and against any and all loss, damage, cost or expense arising in any manner on account of the exercise or attempted exercises by said Permittee of the aforesaid rights and privileges
12. During construction, all safety regulations of the FDOT shall be observed and the Permittee must take measures, including placing and the display of safety devices that may be necessary in order to safely conduct the public through the project area in accordance with the Federal MUTCD, as amended for highways, the requirements of the Standard Application Package for railways, including flagging services and Railroad Protective Insurance or acceptable alternative, when applicable, and the FDOT's Design Standards, Indexes 600-670 and Standard Specifications for Road and Bridge Construction, Section 102, as amended by the UAM. When a Utility deems it necessary to conduct Traffic Control activities and methods significantly different from those addressed in the above references, the Utility must submit an alternative plan signed and sealed by a licensed Florida professional engineer qualified to develop TCP in accordance with the provisions of Chapter 8 of the UAM.
13. Should the Permittee be desirous of keeping its utilities in place and out of service, the Permittee, by execution of this permit acknowledges its present and continuing ownership of its utilities located between _____ and _____ within the FDOT's R/W as set forth above. Whenever the Permittee removes its facilities, it shall be at the Permittee's sole cost and expense. The Permittee, at its sole expense, shall promptly remove said out of service utilities whenever the FDOT determines said removal is in the public interest.
14. In the event contaminated soil is encountered by the Utility or anyone within the permitted construction limits, the Utility shall immediately cease work and notify the FDOT. The FDOT shall coordinate with the appropriate agencies and notify the Permittee of any suspension or revocation of the permit until contamination assessment and remediation, as appropriate under Rule Chapters 62-770 and 62-730 Florida Administrative Code, has progressed to a state that all environmental regulatory agencies having jurisdiction have approved the site of the contamination for resumption of work.
15. For any excavation, construction, maintenance, or support activities performed by or on behalf of the FDOT, within its R/W, the Permittee may be required by the FDOT or its agents to perform the following activities with respect to a Permittee's facilities: physically expose or direct the exposure of

FORM 710-010-85
UTILITIES
OGC – 08/04

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
UTILITY PERMIT

underground facilities, provide any necessary support to facilities and/or cover aerial facilities as deemed necessary.

16. Pursuant to Section 337.401(2), Florida Statutes, the permit shall require the permit holder to be responsible for damage resulting from the issuance of the permit. The FDOT may initiate injunctive proceedings as provided in s.120.69 to enforce provisions of this subsection or any rule or order issued or entered into pursuant thereto.
17. Pursuant to Section 337.402, Florida Statutes, when any public road or publicly owned rail corridor is damaged or impaired in any way because of the installation, inspection, or repair of a utility located on such road or publicly owned rail corridor, the owner of the utility shall, at his or her own expense, restore the road or publicly owned rail corridor to its original condition before such damage. If the owner fails to make such restoration, the authority is authorized to do so and charge the cost thereof against the owner under the provisions of s.337.404.
18. The Permittee shall comply with all provisions of Chapter 556, Florida Statutes, Underground Facilities Damage Prevention and Safety Act.
19. Special FDOT instructions: _____
    It is understood and agreed that commencement by the Permittee is acknowledgment and acceptance of the binding nature of all the above listed permit conditions and special instructions.
20. Receipt of this permit acknowledges responsibility to comply with Section 119.07(3), Florida Statutes, and UAM Chapter 4.5.2, regarding Exempt Documents and Security System Plans Requests.
21. By the below signature, the Permittee hereby represents that no change to the FDOT's standard Utility Permit form, as incorporated by reference into Rule 14-46.001, for this Utility Permit has been made which has not been previously called to the attention of the FDOT (and signified to by checking the appropriate box below) by a separate attached written document showing all changes and the written and dated approval of the FDOT Engineer. Are there attachments reflecting change/s to the standard form? ☐NO ☐ YES If Yes, _____ pages are attached.

PERMITTEE		**SIGNATURE**		**DATE:**	
Name & Title of Authorized Permittee or Agent (Typed or Printed Legibly)					
APPROVED BY:				**ISSUE DATE:**	
District Maintenance Engineer or Designee					

UTILITY PERMIT FINAL INSPECTION CERTIFICATION

DATE:	
DATE WORK STARTED:	
DATE WORK COMPLETED:	
INSPECTED BY:	
(Permittee or Agent)	
CHANGE APPROVED BY:	**DATE:**
District Maintenance Engineer or Designee	

I the undersigned Permittee do hereby CERTIFY that the utility construction approved by the above numbered permit was inspected and installed in accordance with the approved plans made a part of this permit and in accordance with the FDOT's current UAM. All plan changes have been approved by the FDOT's Engineer and are attached to this permit. I also certify that the work area has been left in as good or better condition than when the work was begun.

PERMITTEE:	**SIGNATURE:**	**DATE:**
Name & Title of Authorized Permittee or Agent (Typed or Printed Legibly)		

CC: District Permit Office
Permittee

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
UTILITY WORK SCHEDULE

Financial Project ID:	**Federal Project ID:**
County:	**State Road No.:**
District Document No:	
Utility Agency/Owner (UAO):	

A. Summary of Utility Work And Execution

NON-CONSTRUCTION ITEMS	ESTIMATED *CALENDAR DAYS	CONSTRUCTION ITEMS	ESTIMATED *CALENDAR DAYS
Total Preliminary		**Total Prior to FDOT Project Construction**	
Total Material Procurement		**Total During FDOT Project Construction**	
Total Right-of-Way Acquisition			
Total Other			

***Calendar Days=UAO Work Days X 7/5 and takes into consideration simultaneous activities listed on Part "C" of this Schedule.**

This document has been developed as the method for a Utility Agency/Owner (UAO) to transmit to the Florida Department of Transportation (FDOT), the FDOT's Contractor, and other right-of-way users, the location, relocation, adjustment, installation, and/or protection of their facilities, on this FDOT project. The following data is based on FDOT preliminary construction plans dated _____. Any deviation by the FDOT or its contractor from the plans, as provided, may render this work schedule null and void. Upon notification by FDOT of such change, this utility may require additional days for assessment and negotiation of a new work schedule. This UAO is not responsible for events beyond the control of the UAO that could not reasonably be anticipated by the UAO and which could not be avoided by the UAO with the exercise of due diligence at the time of the occurrence. The UAO agrees to notify the Department in writing prior to starting, stopping, resuming, or completing work.

In accordance with Rule 14-46.001 Utility Accommodation Manual and the Utility Permit, for any excavation, construction, maintenance, or support activities performed by or on the behalf of the FDOT, within its R/W, the Permittee may be required by the FDOT or its agents to perform the following activities with respect to a Permittee's facilities: physically expose or direct the exposure of underground facilities, provide any necessary support to facilities and/or cover aerial facilities as deemed necessary.

UAO Project Representative: _____ Telephone Number: _____

UAO Field Representative: _____ Telephone Number: _____

This document is a printout of an FDOT form maintained in an electronic format and all revisions thereto by the UAO in the form of additions, deletions or substitutions are reflected only in an Appendix entitled "Changes to Form Document" and no change is made in the text of the document itself. Hand notations on affected portions of this document may refer to changes reflected in the above-named Appendix but are for reference purposes only and do not change the terms of the document. By signing this document, the UAO hereby represents that no change has been made to the text of this document except through the terms of the appendix entitled "Changes to Form Document".

You MUST signify by selecting or checking which of the following applies:

☐ No changes to forms document.
☐ Appendix "Changes to Forms Document" is attached. ___ Number of Attachment Pages.

Authorized Utility Agent:	****Engineer of Record (EOR):**	**Acceptance by District Utilities:**
(Signature)	**(Signature)**	**(Signature)**
(Printed Name)	**(Printed Name)**	**(Printed Name)**
(Title)	**(Title)**	**(Title)**
(Date)	**(Date)**	**(Date)**

(When requested by the District, the EOR will attest to compatibility of plans, specifications and Utility Work Schedule)**

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

UTILITY WORK SCHEDULE

Financial Project ID:	**Federal Project ID:**
County:	**State Road No.:**
District Document No:	
Utility Agency/Owner (UAO):	

B.	**Special Conditions / Constraints**

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

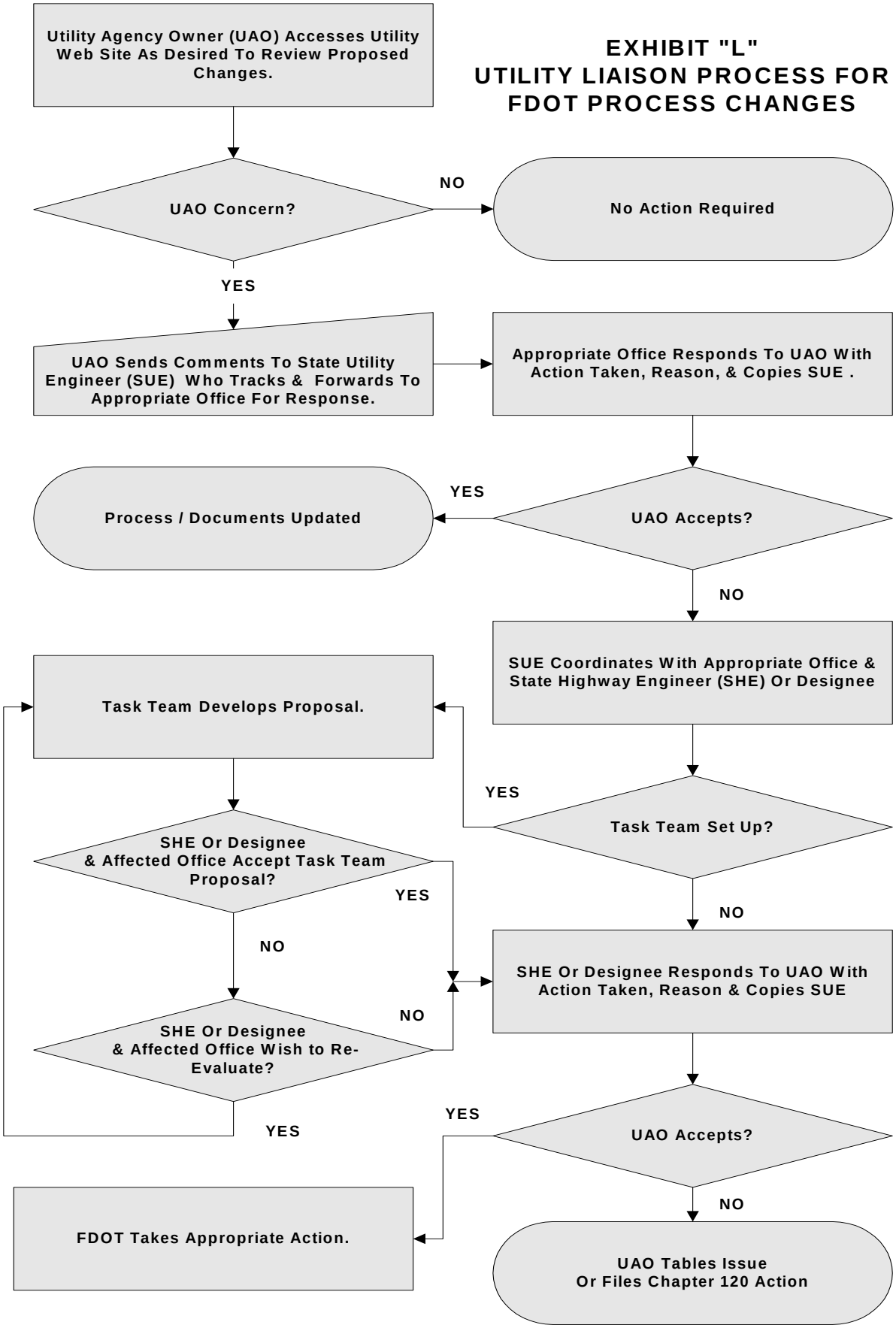
UTILITY WORK SCHEDULE

Financial Project ID:	**Federal Project ID:**
County:	**State Road No.:**
District Document No:	
Utility Agency/Owner (UAO):	

C. Disposition of Facilities (List All Existing & Proposed) on Project:

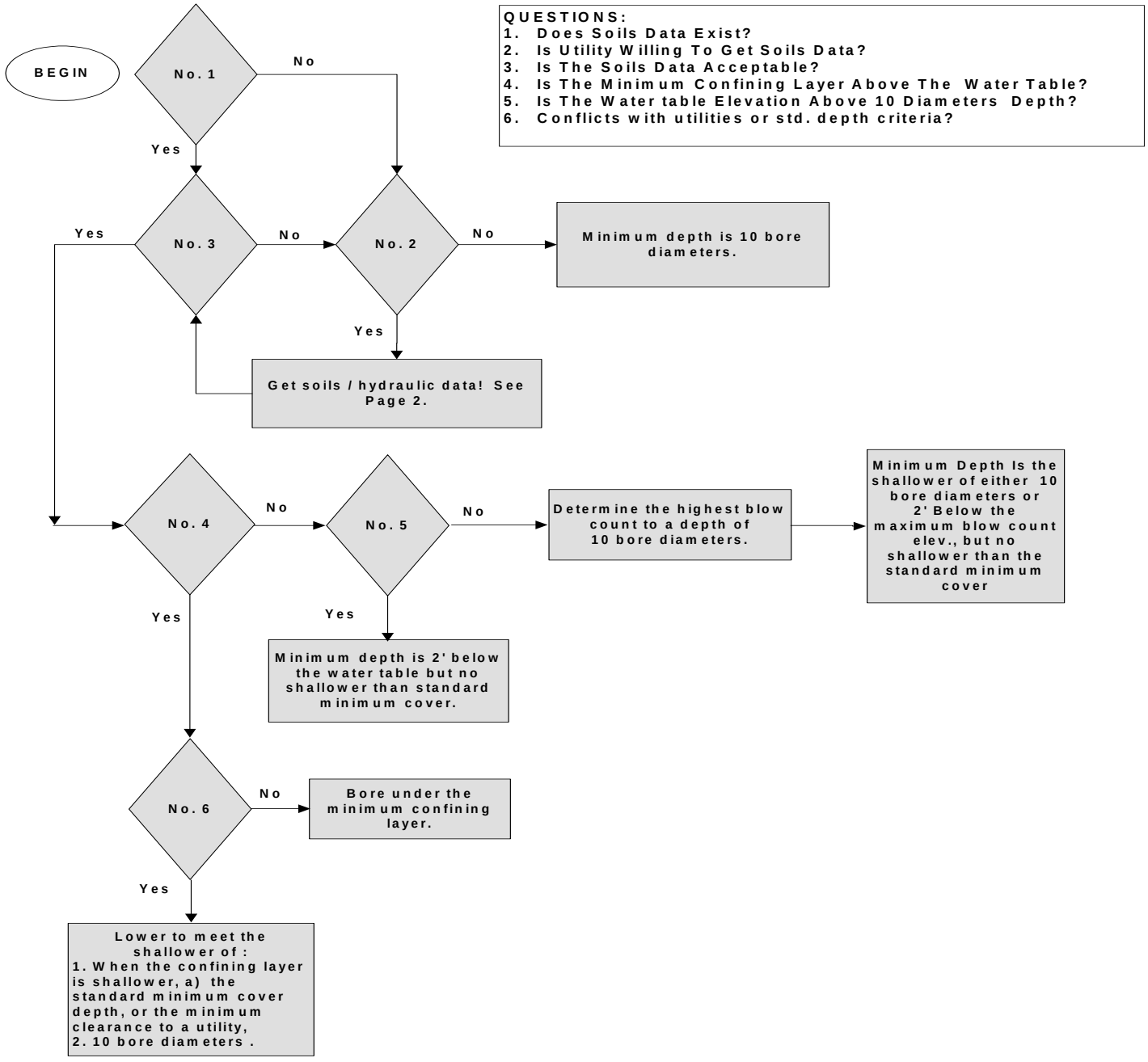
UTILITY FACILITIES BY STATUS/TYPE/SIZE/MATERIAL/OFFSET TO BASELINE FROM STA TO STA	DESCRIPTION OF UTILITY WORK	DEPENDENT ACTIVITIES	M.O.T. PHASE NUMBER	CONSECUTIVE CALENDAR DAYS

EXHIBIT "L"
UTILITY LIAISON PROCESS FOR FDOT PROCESS CHANGES

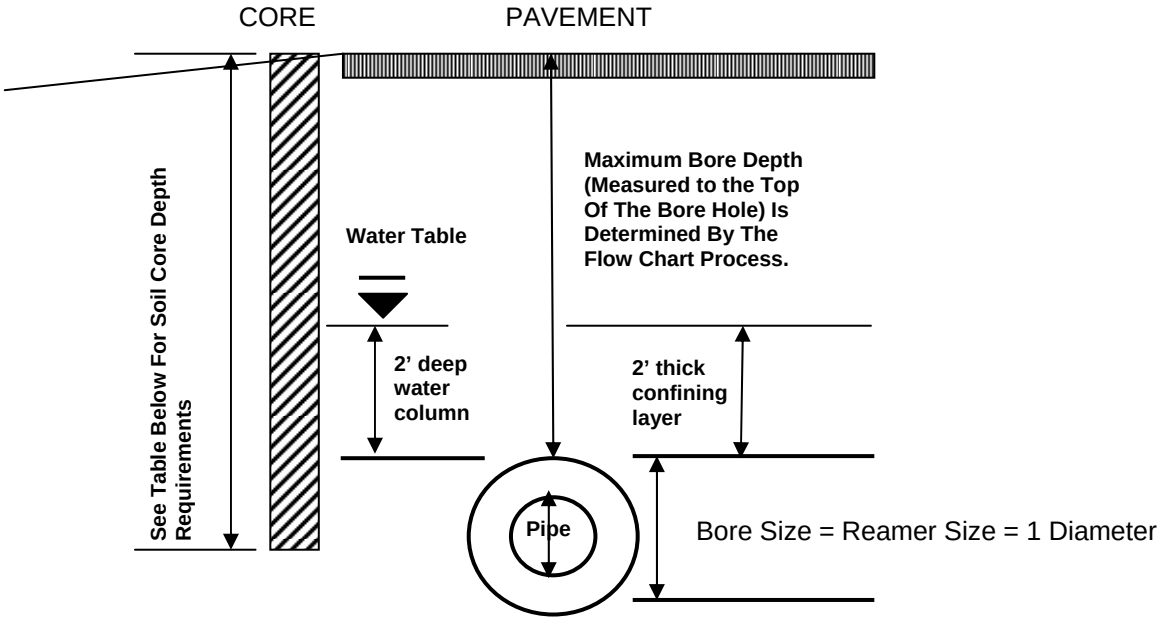


Determining The Minimum Depth For HDD Bores Greater Than 6" (Reamer Size)

Note: The minimum bore depth is never less than the standard minimum cover for utilities as defined in the UAM for the type of roadway the work is being performed on. (I. E., 36" standard, 48" Limited Access).



Determining The Minimum Depth For HDD Bores Greater Than 6" (Reamer Size)



Soils / Water Table Data Requirements & Definitions

Minimum Required Content of Soils Data

- Blow Count Using Std. Penetration Test
- Normal Water Table Depth*
- Soils Classification

* A water Table higher than the Normal Water Table may be used if it exists at the actual time of the bore.

Definition of Minimum Acceptable Water Table

- A 2' water column must exist above the top of the bore. NOTE: This is not the same as a 4" water column being two feet above the top of the bore if it is perched.

Minimum Soil Core Depth Shall Be The Lesser Of:

- Not less than 8 feet
- 2' Below The Normal Water Table
- 10 Bore Diameters If Reached Before Water Table Or Confining Layer Depth.
- 2' Below Confining Layer Depth.

Definition of Acceptable Soil Confining Layer

- Minimum 2' thick layer that sustains 30 blows/ft using standard penetration test

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
EXEMPT DOCUMENTS / SECURITY SYSTEM PLAN
DISTRIBUTION FORM

Exempt Documents being requested or received are included in those exempt from public disclosure as provided by Section 119.07(3), Florida Statutes (Attached). **Security System Plans** being requested are confidential and exempt as provided by Section 119.071, Florida Statutes (Attached). The Exempt Documents relate to work being performed for or required by the Florida Department of Transportation, or work related to the Department's structures. The following information is being provided as a record of this request or receipt, and distribution of the Exempt Documents or Security System Plans.

Completion of this form and a signature is required before information will be released (* Means Required To Obtain Security System Plans):

A. Entity Requesting/Receiving Documents: (Check All That Apply and Provide Full Name of Entity.)

☐ **State Agency*** _____
☐ **Federal Agency*** _____
☐ **Governmental** _____
☐ **Architect** _____
☐ **Engineer:** _____
☐ **Contractor** _____
☐ **Other:** _____

B. Entity address & phone number:

Address: _____
Phone: _____ _____

C. Federal ID of Organization requesting/receiving (If applicable): _____

D. Exempt Documents / Security Systems Plans requested or provided: (Be specific on what is requested or provided, and include description, project numbers, FIN, contract numbers, etc.)
_____

E. Reason for Request/Intended Use: _____

F. RECIPIENT CERTIFICATION: I, personally, and/or as representative of the above entity, fully understand (check the applicable certification block)

☐ the exempt nature of the Exempt Documents I am receiving and agree to maintain the exempt status of this information in accordance with Florida law
☐ the confidential and exempt nature of the Security System Plans I am receiving and Agree to maintain the confidential and exempt status of these Security System Plans in accordance with Florida law.

G. Name of person receiving Exempt Documents / Security Plans: (Printed): _____
Signature: _____ Date: _____

H. Driver license or photo identification number of recipient: _____
(Recipient must provide verification of employment with the above entity and verify identity with photo ID)

I. FDOT Employee Or Other Individual Providing Exempt Documents Or Security Plans:

FDOT Office: _____ Employee Name: _____
Other Individual Name: _____
Name and Office Address of Employer: _____

Exempt Documents / Security Systems Plans provided if different than requested: (Be specific on what is provided, and include description, project numbers, FIN, contract numbers, etc.)
_____

Signature of Person Authorizing Distribution: _____ Date: _____

Provider's Signature (if different than person authorizing distribution): _____

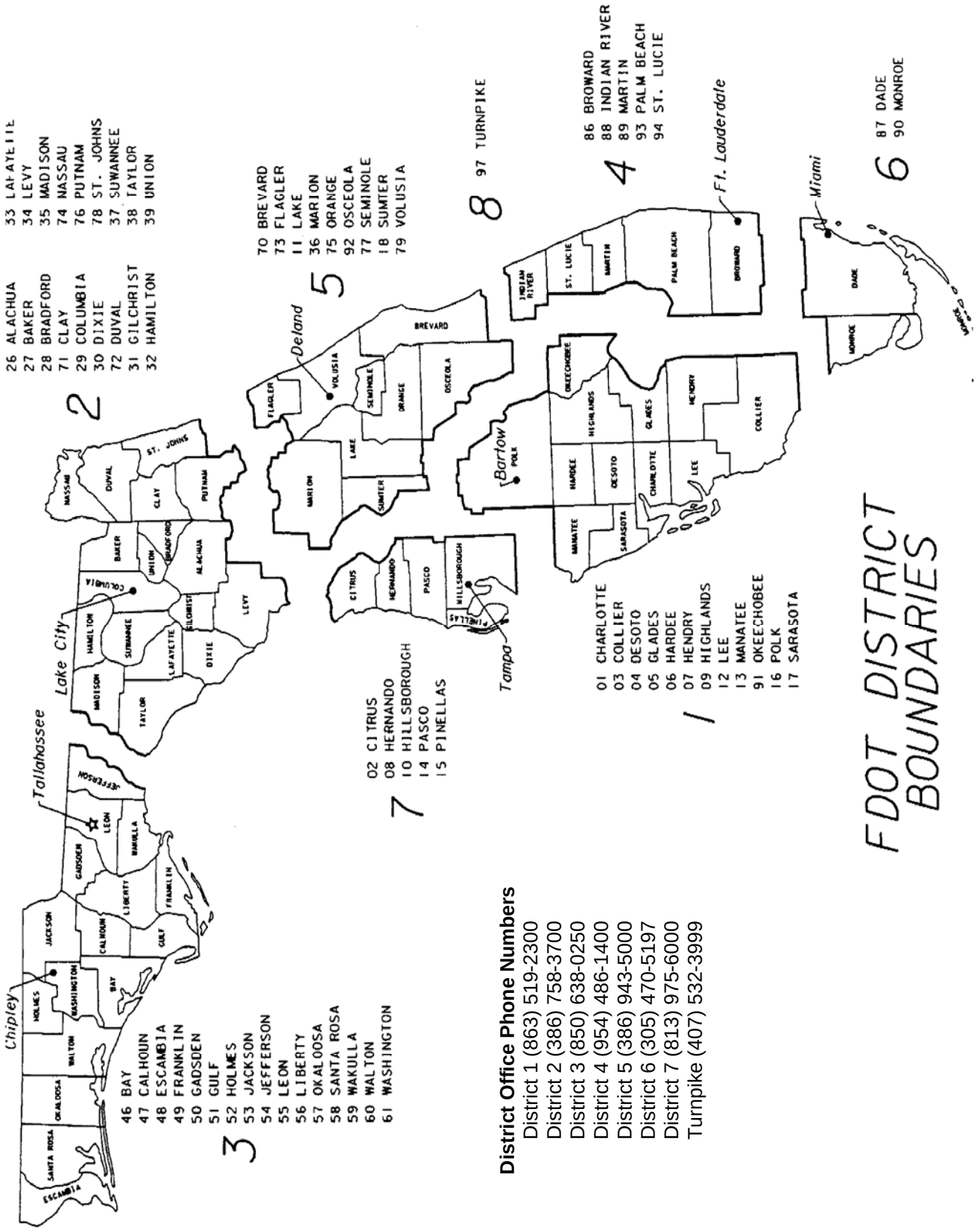
J. Method of delivery: _____ Pick-up by requestor _____ other (specify other method of delivery)
Date Provided: _____

EXEMPT DOCUMENTS - Section 119.07(3), Florida Statutes, provides:
119.07 Inspection, examination, and duplication of records; exemptions.-- (3)(ee) Building plans, blueprints, schematic drawings, and diagrams, including draft, preliminary, and final formats, which depict the internal layout and structural elements of a building, arena, stadium, water treatment facility, or other structure owned or operated by an agency as defined in s.119.011 are exempt from the provisions of subsection (1) and s. 24(a), Art. I of the State Constitution. This exemption applies to building plans, blueprints, schematic drawings, and diagrams, including draft, preliminary, and final formats, which depict the internal layout and structural elements of a building, arena, stadium, water treatment facility, or other structure owned or operated by an agency before, on, or after the effective date of this act. Information made exempt by this paragraph may be disclosed to another governmental entity if disclosure is necessary for the receiving entity to perform its duties and responsibilities; to a licensed architect, engineer, or contractor who is performing work on or related to the building, arena, stadium, water treatment facility, or other structure owned or operated by an agency; or upon a showing of good cause before a court of competent jurisdiction. The entities or persons receiving such information shall maintain the exempt status of the information.

SECURITY SYSTEM PLAN - ***Section 119.071, Florida Statutes, provides:***

> ***119.071 General exemptions from inspection or copying of public records. -- A security system plan or portion thereof for:***
> ***(1) Any property owned by or leased to the state or any of its political subdivisions; or***
> ***(2) Any privately owned or leased property***

which plan or portion thereof is in the possession of any agency, as defined in s. 119.011, is confidential and exempt from the provisions of s. 119.07(1) and s. 24(a), Art. I of the State Constitution. As used in this section, the term a "security system plan" includes all records, information, photographs, audio and visual presentations, schematic diagrams, surveys, recommendations, or consultations or portions thereof relating directly to the physical security of the facility or revealing security systems; threat assessments conducted by any agency as defined in s. 119.011 or any private entity; threat response plans; emergency evacuation plans; sheltering arrangements; or manuals for security personnel, emergency equipment, or security training. This exemption is remedial in nature and it is the intent of the Legislature that this exemption be applied to security system plans received by an agency before, on, or after the effective date of this section. Information made confidential and exempt by this section may be disclosed by the custodial agency to another state or federal agency to prevent, detect, guard against, respond to, investigate, or manage the consequences of any attempted or actual act of terrorism, or to prosecute those persons who are responsible for such attempts or acts, and the confidential and exempt status of such information shall be retained while in the possession of the receiving agency. This section is subject to the Open Government Sunset Review Act of 1995, in accordance with s. 119.15, and shall stand repealed on October 2, 2006, unless reviewed and saved from repeal through reenactment by the Legislature.



District Office Phone Numbers

District 1 (863) 519-2300
District 2 (386) 758-3700
District 3 (850) 638-0250
District 4 (954) 486-1400
District 5 (386) 943-5000
District 6 (305) 470-5197
District 7 (813) 975-6000
Turnpike (407) 532-3999

REFERENCES

"The following references are incorporated into this Rule by reference. The extent to which the below items (specifications, procedures, standards, policies) are made a part of this Rule through incorporation by reference is limited to the scope of application(s) specifically referenced within the text of the UAM, and is subject to any modifications, exceptions, or qualifications set forth in the UAM."

National References:

1. *A Policy on Accommodation of Utilities Within Freeway R/W*, Prepared by the American Association of State Highway and Transportation Officials Standing Committee on Highways, February 1989.
2. US Department of Transportation Federal Highway Administration Program Guide, *Utility Adjustments and Accommodation on Federal-Aid Highway Projects*, Third Edition, July 1995, Prepared by the Federal-Aid and Design Division, Office of Engineering, Federal Highway Administration, Publication No. FHWA-PD-95-029.
3. *Roadside Design Guide*, Published by the American Association of State Highway and Transportation Officials, 2002.
4. AASHTO Design Specification, Section 7, *Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 11994, as revised by Interim Specifications – Bridge 1986-1989, 1991, 1993, 1994 and 1998.*
5. AASHTO Publication "*A Policy on Geometric Design of Highways and Streets*", 2004 Fifth Edition.
6. FHWA Technical Advisory entitled "*Motor Vehicle Accident Costs*", dated October 31, 1994.

State References:

1. *FDOT Standard Specifications for Road and Bridge Construction*, 2004. Effective January 01, 2004.
2. *FDOT Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System*, 2006.