2015 UAM

Utility Accommodation Manual

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1 General

1.1 Purpose

The purpose of the Utility Accommodation Manual (*UAM*) is to establish the utility installation or adjustment requirements for utilities within the Florida Department of Transportation's (FDOT) right of way (R/W) and is incorporated by reference into FDOT's *Rule 14-46.001 F.A.C.* for utilities.

1.2 Terms and Acronyms

The following definitions of terms and acronyms apply only as used in the UAM:

Auxiliary Lane: The designated widths of roadway pavement marked to separate speed change, turning, passing and climbing maneuvers from through traffic.

Business Day: Any Monday, Tuesday, Wednesday, Thursday, or Friday that does not fall on a State Holiday.

CFR: Code of Federal Regulations.

Casing: A pipe surrounding a carrier pipe and designed to resist potential impacts and carry imposed loads.

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

Contractor: A legal entity (1) properly licensed in the State of Florida by the state, county or city, and (2) contracting with FDOT or a UAO to work or furnish materials.

F.A.C.: Florida Administrative Code

FDEP: The Florida Department of Environmental Protection

FDOT: The Florida Department of Transportation:

FDOT District: One of the seven (7) geographical areas or the Turnpike Enterprise. FDOT District Map and Turnpike information are available at: *http://www.dot.state.fl.us/programmanagement/utilities/*

FDOT Structure: Features owned by FDOT such as, but not limited to, bridges, retaining walls, culverts, pipes, and structural supports for signs, lighting, toll gantries, buildings, and traffic signals.

FERC: Federal Energy Regulatory Commission

F.S.: Florida Statutes.

Highway: A right of way corridor which contains or is to contain a roadway.

LA R/W: Limited Access Right of Way.

Local Maintenance Engineer: The engineer in charge of the local maintenance or operation centers throughout the State.

Manhole: An opening in an underground system, providing access for installations, inspections, repairs, connections and tests.

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

Pull Box: An opening in an underground system, providing access for installations, inspections, repairs, connections and tests.

Right of Way: The land that FDOT has title to, or right of use as a transportation facility, or that FDOT has a right for use as a transportation facility.

R/W: Right of way

Roadway: The portion of a highway, including shoulders, for vehicular use.

TCP: Traffic Control Plans.

Service lines: Lines used by the UAO to carry services from a main line to individual recipients.

Traffic Control Plans: Plans showing the methods of controlling and maintaining a safe flow of traffic through construction or maintenance work areas.

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.

UAO: Utility Agency/Owner. The entity that owns the utility.

UAM: This Utility Accommodation Manual

Utility: All active, deactivated or out-of-service electric transmission lines, telephone lines, telegraph lines, other communication services lines, pole lines, ditches, sewers, water mains, heat mains, gas mains, pipelines, gasoline tanks and pumps owned by the UAO.

Utility Appurtenances: Features or parts that are part of a utility, whether primary or secondary to its function.

1.3 References

References to sections internal to this manual are indicated in bold italics starting with "UAM". For example, these instructions are in *UAM Section 1.3*. References to external documents are indicated by the generally used term for the document highlighted in bold italic text, For example, the "2016 FDOT Design Standards for Design, Construction, and Maintenance Operations on the State Highways System" is referenced as the *FDOT Design Standards*. The published title and date for these external references are listed in *UAM Section 7*. When a *UAM* section is referenced, it is intended that all subsections and all other references contained within the referenced section are included.

1.4 Delegation of Authority

Any authority or responsibility specifically attributed in the *UAM* to any FDOT employee implicitly extends to anyone that employee has explicitly delegated it to. In addition, the State Chief Engineer has authority to exercise any authority or responsibility attributed in the *UAM* to any FDOT employee.

1.5 Laws to be Observed and Other Agency Rules

The UAO shall comply with all State, Federal and Local rules and regulations which includes: any and all Federal, State, and Local laws, bylaws, ordinances, rules, regulations, orders, permits, or decrees including environmental laws, rules, regulations, and permits. When a FDOT rule is more stringent than those of other agencies, the UAO shall comply with the FDOT rule.

1.6 Other FDOT Permits

1.6.1 Overweight and Over-Dimensional Vehicle Permits

The UAO shall obtain permits for overweight and over-dimensional vehicles in accordance with Rule 14-26, F.A.C.

1.6.2 Storm Water and Drainage Permits

For the installation of drainage pipes or structures that convey storm water along or across the FDOT R/W and do not discharge any storm water onto the FDOT R/W or into an FDOT storm water system, the UAO shall obtain a utility permit in accordance with *UAM Section 2* in lieu of a drainage connection permit.

For the installation of drainage pipes or structures that do discharge storm water onto the FDOT R/W or into an FDOT storm water system, the drainage facility owner shall obtain a drainage connection permit in accordance with *Rule 14-86*, *F.A.C.* in lieu of a utility permit.

Obtaining an FDOT drainage connection permit or utility permit does not relieve the owner of their responsibility to comply with the Florida Department of Environmental Protection's (FDEP) National Pollutant Discharge Elimination System (NPDES) permitting requirements pursuant to *Chapter 373, F.S. Part IV* and *Rule 62-25, F.A.C.* or any other authority's permitting requirements.

1.7 UAM Dispute Review

If the UAO desires to resolve a dispute with an FDOT District or the Turnpike Enterprise, the UAO shall request a review by the FDOT State Utilities Engineer.

1.8 Sunshine 811 Notification

The UAO shall notify the Sunshine 811 prior to any excavation or demolition activities in accordance with *Chapter 556*, *F.S.* This shall not relieve the UAO from their obligation to notify FDOT as required by the permit or by the *UAM*. FDOT contact information is provided on the utility permit.

1.9 Acquiring Existing Utilities

When a UAO acquires an existing utility that is within FDOT R/W, the UAO shall provide FDOT with an affidavit that (1) states the ownership transfer, (2) describes the boundaries and (3) acknowledges that the new UAO shall comply with the conditions and requirements of the original permit. A copy of the operative conveyance document shall be attached to the affidavit.

1.10 Utility Liaison

The State Utilities Engineer develops revisions and additions to the *UAM* in accordance with *Chapter 120, F.S.* and through periodic *UAM* reviews with the utility industry and others. The State Utilities Engineer is the chief liaison on utility accommodation. UAM users may submit to the State Utilities Engineer written suggestions to the address or URL below:

State Utilities Engineer Florida Department of Transportation 605 Suwannee Street, Mail Station 75 Tallahassee, FL 32399-0450

The State Utilities Engineer publishes information about issues of interest to the utility industry at: <u>http://www.dot.state.fl.us/programmanagement/utilities/</u>

1.11 Distribution

FDOT provides the **UAM** at no cost from the following website at:

http://www.dot.state.fl.us/programmanagement/utilities/

Hardcopies of the *UAM* may be purchased from:

The Florida Department of Transportation Maps and Publications Sales 605 Suwannee Street, Mail Station 12 Tallahassee, Florida 32399-0450 Phone: (850) 414-4050

2 Utility Permits

2.1 General UAO Responsibilities

- Unless otherwise specified in UAM Section 2.2 or UAM Section 2.3, the UAO shall obtain a utility permit before working within FDOT R/W by using the One-Stop Permitting (OSP) website, however when the UAO does not have access to the permitting website or where the utility work is being done on a portion of the FDOT R/W not included in the OSP system, the UAO shall use the hardcopy utility permit in UAM Section 8. Access to the online One-Stop Permitting website is available at: <u>http://www.dot.state.fl.us/programmanagement/utilities/</u>
- 2) To expedite construction of FDOT projects, FDOT may determine an approved utility work schedule requiring the UAO to meet all requirements of *Rule 14-46.001 F.A.C.* and the *UAM*, and which has a corresponding relocation agreement is equivalent to a utility permit.
- 3) Others may prepare and process permit applications for the UAO, however the UAO shall, in all cases, be the permit applicant before the permit is approved. Once the permit is approved the UAO is the permittee and shall not deviate from the approved permit without approval from the Local Maintenance Engineer. The UAO shall have a complete copy of the approved permit at the jobsite when crews are present.
- 4) City or county utility owners, who do not have contractual control over the builder of their utilities, may elect to have the builder become a joint utility permit applicant with the city or county. In these cases, the utility builder and the city or county shall be severally liable such that the utility builder shall be required to comply with all the permit requirements applicable to the construction of the city or county utilities and the city or county shall be required to comply with permit requirements post construction, including, but not limited to those applicable to operation and maintenance. When an FDOT contractor does utility work under an FDOT agreement, the FDOT contractor shall not be a joint utility permit applicant. The post construction obligations of the city or county shall commence upon completion of final inspection by FDOT. FDOT shall provide the city or county with written notice of such date. The city or county shall be entitled to observe FDOT's final inspection and shall inform FDOT of any apparent failure to comply with the terms of the permit by the utility builder; provided, the final determination of compliance by the utility builder shall be made by FDOT.
- 5) The UAO shall notify the FDOT Representative identified on the permit a minimum of two (2) business days prior to starting work and again immediately upon completion of work. All work, materials, and equipment shall be subject to inspection and approval by FDOT.
- 6) The UAO shall not interfere with the property and rights of a prior permittee.

- 7) It is expressly stipulated that the utility permit is a license for permissive use only and that the placing of utilities within FDOT R/W pursuant to the permit shall not create or vest any property right in the UAO.
- 8) Pursuant to Section 337.403, F.S., 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 UAO or its agent by FDOT, initiate the work necessary to alleviate the interference at its own expense except as provided in Section 337.403, F.S., and except for reimbursement rights as expressly set forth in any other previously executed agreements with FDOT.
- 9) For any excavation, construction, maintenance, or support activities performed by or on behalf of FDOT, within its R/W, the UAO may be required by FDOT to perform the following activities with respect to a UAO's utilities: physically expose or direct exposure of underground utilities, provide any necessary support to utilities and/or cover, de-energize or alter aerial utilities as deemed necessary for protection and safety, and take any action FDOT may require in order to facilitate the work in a safe and efficient manner.
- 10) When the utility work is within an FDOT project, the UAO shall obtain a utility work schedule prior to commencing work within the project limits.
- 11) In the case of non-compliance with FDOT's requirements in effect as of the date the permit is approved, the permit is void and the facility will have to be brought into compliance or removed from the R/W at no cost to FDOT, except for reimbursement rights set forth in previously executed subordination agreements or railroad utility agreements. This provision shall not limit the authority of FDOT pursuant to *Section 337.403, F.S.*
- 12) The privileges granted the UAO by the utility permit are only to the extent of the State's right, title and interest in the land to be entered upon and used by the UAO. The UAO shall indemnify, defend, and save harmless the State of Florida and 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 the UAO the privileges granted by the utility permit. This obligation to indemnify and defend FDOT includes, but is not limited to, any cost or expense to FDOT due to delay caused by the UAO to an FDOT contractor. However, said indemnification as applied to the UAO of city and county utilities is limited to that allowed by law.
- 13) The UAO shall ensure individuals responsible for placement, or maintenance of traffic control schemes and devices in work zones on the FDOT R/W have proper training. While on the jobsite, the UAO's employee responsible for traffic control shall carry either an FDOT maintenance of traffic training certificate, from an FDOT maintenance of traffic training provider, or a certification from the UAO stating the following:

"[Employee's Name] has been properly trained to control traffic in accordance the UAM's traffic control requirements."

- 14) Where practical, the UAO shall expeditiously allow passage of over-dimensional vehicles permitted by FDOT. When the UAO becomes aware of deficiencies in the Traffic Control Plan that affect traffic safety, the UAO shall take appropriate corrective actions. When notified by FDOT that immediate corrective actions are needed, the UAO shall immediately comply with FDOT's instructions.
- 15) The UAO shall comply with requirements for the inspection and copying of records and photographing public records in accordance with *Section 119.07, F.S.*

2.2 Permit Applications for Emergency Work

Advance permit application approvals or notifications are not required for emergency repairs performed in accordance with *UAM Section 3.1*. If the type of work would normally require a permit, the UAO shall submit a completed permit application and as-built plans within five (5) business days after the repairs are completed; however, a TCP does not need to be submitted.

2.3 Work Not Requiring New Permits

2.3.1 Work Types

The UAO may perform work on the UAO's previously permitted utilities without applying for a new permit for only the work types listed below and when the work constraints in *UAM Section 2.3.2* are followed:

- 1) Placement of mid-span poles, replacement of existing poles, removal of existing poles or placement of service poles in compliance with *UAM Section 3.14*.
- 2) Placement of underground service lines in compliance with *UAM Section 3.16.7* provided they are perpendicular to the roadway.

- 3) Temporary utility work approved by the FDOT Resident/Project Engineer during FDOT construction projects in compliance with *UAM Section 2.1(2)*.
- 4) Maintenance, replacement, alterations or additions of aerial components on existing pole lines.
- 5) Maintenance, alterations, but not the replacement, of existing underground utilities.
- 6) Placing and/or removing utilities within existing conduits, provided no additional pull-boxes or other utility appurtenances are installed.
- 7) Installation of antennae for remote metering or switching devices to operate the permitted utility provided no excavation is performed.
- 8) Vegetation control in compliance with *UAM Section 3.18*.
- 9) Potholing for physical exposure of underground utilities in accordance with UAM Section 2.1(9).

2.3.2 Work Constraints

To perform the work in *UAM Section 2.3.1*, the UAO shall comply with all of the following conditions; otherwise, a new permit is required:

- 1) The UAO shall notify the appropriate maintenance engineer of the location, general scope and timeframe of the work. The UAO may immediately commence work after notification when the work is anticipated to take two (2) hours or less to complete. The UAO shall not commence work earlier than two (2) business days after notification when the work is anticipated to take more than two (2) hours.
- 2) The UAO shall restore FDOT R/W to the condition prior to the work within seventy-two (72) hours of completion of the work.
- 3) The UAO shall be responsible under the original permit for any added lines or other utility modifications for which a new permit was not required.
- 4) The UAO shall maintain vehicular and pedestrian traffic using the *FDOT Design Standards* indexes listed below: Index Title
 - 600 General Information for Traffic Control Through Work Zones
 - 601 Two-Lane, Two-Way, Work Outside Shoulder
 - 602 Two-Lane, Two-Way, Work On Shoulder
 - Two-Lane, Two-Way, Work Within the Travel Lane
 - 604 Two-Lane, Two-Way, Work In Intersection
 - 605 Two-Lane, Two-Way, Work Near Intersection
 - 611 Multilane, Work Outside Shoulder
 - 612 Multilane, Work On Shoulder
 - 613 Multilane, Work Within the Travel Lane Median or Outside Lane
 - 615 Multilane, Work In Intersections
 - 616 Multilane, Work Near Intersection Median or Outside Lane
 - 660 Pedestrian Control for Closure of Sidewalk
- 5) The UAO shall not cut any roadway pavement.
- 6) The UAO shall not cut or otherwise damage more than ten (10) linear feet of sidewalk.
- 7) The UAO shall not commence work that conflicts with any FDOT construction project, scheduled local events and activities, other scheduled permitted activities, or FDOT lane closure restrictions.
- 8) The UAO shall not excavate more than eighty (80) cubic feet.
- 9) The UAO shall not work within FDOT limited access R/W or an FDOT rail corridor.
- 10) The UAO shall not add third party utilities.

2.4 Permit Application Package

2.4.1 General Documentation

In addition to the information required for the One-Stop Permitting website and the utility permit in **UAM** *Section 8*, the UAO shall attach and incorporate as part of the utility permit application the following:

- 1) When not using the One-Stop Permitting website, the UAO shall provide a key map showing the proposed installation's location and the approximate distance and direction from the proposed work area to the nearest town, major road intersection, bridge, or railroad crossing.
- 2) Plan view drawings (preferably to scale) showing all of the following:
 - a) The R/W Lines, limited access lines, and the UAO's easement lines with the FDOT R/W.

- b) The proposed utility and proposed utility appurtenances (except for utility appurtenances mounted at least fifteen (15) feet above the ground and less than eight (8) cubic feet).
- c) The horizontal distance from the proposed utility to a well-defined feature of the transportation facility (such as the edge of travel lane).
- d) When work is within an FDOT project, a tie to project stationing, otherwise a tie to roadway mileposts.
- e) The limits of the work area (including staging areas, access points, or other areas to be used).
- f) For trenchless installations, the proposed method of installation, materials, function, type, size of proposed installation, bore diameter, and any areas of excavation such entry points, exit points, slurry pits, relief and or observation holes when used.
- g) Maximum allowable operating pressures of proposed gas mains and the locations of proposed shut-off valves.
- h) Aboveground features such as existing utility poles within the work area.
- i) Underground features such as utilities, drainage pipes, or Intelligent Transportation System (ITS) lines within the proposed work area as can reasonably be obtained by a review of existing records and a topographical survey of above ground features.
- j) Significant physical features such as vegetation, wetlands or bodies of water.
- When installing underground utilities, the UAO shall provide profile view drawings showing all of the following:
- a) The location and elevations of the proposed utility and proposed appurtenances larger than eight (8) cubic feet.
- b) Benchmark information.

3)

- c) Horizontal and vertical location of all existing underground facilities such as utilities, drainage pipes, or ITS lines within the proposed work area as can reasonably be obtained by a review of existing records and a topographical survey of above ground features.
- d) The proposed utility's depth below the top of the pavement or existing unpaved ground.
- e) Top of water table or confining layer when required per *UAM Section 3.16.9.1*.
- f) Cross-sectional view showing one (1) or more typical cross sections to adequately reflect the proposed installation's location.
- 4) Manufacturer's certifications of proposed underground appurtenances manufactured offsite such as manholes, splice boxes or vaults that are greater than eighty (80) cubic feet in accordance with *UAM Section 3.16.3.1*.
- 5) Identification of all drilling fluids to be used and a certification that they are environmentally safe and not harmful or corrosive to the any of the underground facilities along the bore path.
- 6) Identify the source of water for mixing drilling fluids.
- 7) Signed and sealed plans and specifications for proposed attachments to structures including a bridge load rating analysis where attachments affect the bridge's carrying capacity.
- 8) Not more than six (6) photographs documenting work area conditions prior to the utility work as requested by the Local Maintenance Engineer. The Local Maintenance Engineer shall waive the requirement for photographs when unnecessary.
- 9) Justification and drawings showing proper replacement of the roadway for any open trenching, pavement cuts, or water supply line conflicts.
- 10) For aboveground crossings of an operational LA R/W between interchanges, a list of any other anticipated crossings.
- 11) A completed standard railroad application package when within FDOT rail corridors.
- 12) A tree replacement or payment plan in accordance with UAM Section 3.17.2.
- 13) Any required approvals, waivers, or variances necessary for the permit to be approved.
- 14) FERC or FDEP Certification document in accordance with UAM Section 2.5.
- 15) Any known provisions of the UAM or the utility permit that are modified, or made unenforceable by existing easements, subordination agreements, or other legal requirements.
- 16) A traffic control plan in accordance with *UAM Section 2.4.2*.
- 17) Details of how the FDOT right of way will be restored.
- 18) Details for controlling erosion.

2.4.2 Traffic Control Plan (TCP) Submittals

The UAO shall submit a TCP that complies with series 600 indexes of the *FDOT Design Standards*, or a TCP signed and sealed by a qualified, licensed Florida professional engineer with an FDOT Advanced Maintenance of Traffic Certification.

2.4.3 Engineering Documents Exempt from Signing and Sealing

For all engineering documents other than those listed in *UAM Section 2.4.2*, that the UAO has determined to be exempt from the signing and sealing requirements of *Chapter 471, F.S.*, the UAO shall submit these documents under the UAO's letterhead or on plan sheets with the UAO's title block.

2.5 Certification from FERC or FDEP

When the UAO obtains a certification from the Federal Energy Regulatory Commission (FERC) or the Florida Department of Environmental Protection (FDEP) to install or adjust their utilities within the FDOT R/W, the UAO shall attach FDOT's condition for the certification to the utility permit application. FDOT shall issue a utility permit after verifying the utility work is in compliance with the conditions for certification.

2.6 Permit Application Review Process

FDOT shall process all permit applications in accordance with *Section 120.60, F.S.* FDOT shall review the proposed work for all of the following:

- 1) Compliance with the *UAM*,
- 2) Impacts to all of the following:
 - a) Public safety
 - b) The FDOT Five-Year Work Program
 - c) Safety improvement projects
 - d) FDOT maintenance activities
 - e) Scenic enhancement projects
 - f) Landscape projects
 - g) Local events and activities
 - h) Easements and agreements
 - i) Placement of future utilities.
 - j) Over-dimensional vehicle permits
- 3) The Chief Engineer shall review the proposed work for impacts to all plans and programs adopted pursuant to *Chapter 339, F.S.* and all other plans developed by FDOT where the permit application is for the placement of a utility within FDOT R/W, and either:
 - a) The abandonment of the utility is subject to the permission and approval of the Federal Energy Regulatory Commission, or
 - b) The construction or extension of the utility is subject to the authorization of the Federal Energy Regulatory Commission.

2.7 Special Instructions

- 1) FDOT shall indicate on the utility permit all special instructions necessary to address site specific or transaction specific conditions not addressed in *Rule 14-46.001 F.A.C.* or the *UAM*.
- 2) When FDOT requires an FDOT representative to be present at the worksite prior to commencement of work, FDOT shall indicate this requirement on the permit and provide information to contact the FDOT representative.
- 3) FDOT may attach any drawings deemed necessary for restoration of the FDOT R/W to the condition prior to the UAO's work.
- 4) FDOT may attach any specifications deemed necessary for restoration of the FDOT R/W to the condition prior to the UAO's work.

2.8 UAO Notification to Other Facility Owners

The UAO shall deliver written notification to all owners of other facilities within the work areas known to be involved or potentially impacted by the proposed work. The UAO shall inform these owners of the location and scope of the work, and shall also inform these owners they have ten (10) days, from the time of receipt of the notification, to provide the Local Maintenance Engineer specific written objections to the issuance of the utility permit.

2.9 Commencement of Work

The UAO shall not begin work until the required FDOT representative as indicated on the utility permit is on site or other arrangements have been made with FDOT. The UAO may begin work after the required notification when the permit does not indicate an FDOT representative is required. By the UAO's commencement of permitted utility work, the UAO shall be bound by all requirements of the utility permit.

2.10 Final Inspection of Work

Upon completion, the UAO shall provide FDOT all material certifications, test results, bore logs, approved plans changes, or other documentation required as a condition of permit approval.

3 Utility Accommodation

This section contains requirements for accommodating utilities within limited access and non-limited access FDOT R/W. *UAM Section 4* contains additional requirements particular to limited access R/W.

3.1 Emergency Work

For situations of a serious nature, developing suddenly and unexpectedly, and demanding immediate action that will affect public safety, disruption of utility service, or damage to the FDOT R/W the UAO shall proceed immediately with all necessary actions. The UAO shall be responsible for safe and efficient traffic control and shall notify the Local Maintenance Engineer of all necessary actions being taken as soon as practical, but no later than the next scheduled FDOT working day. If the type of work would normally require a permit, the UAO shall submit a permit application in accordance with *UAM Section 2.2*. The UAO shall bear the expense of restoring the R/W to the condition prior to the emergency. When making emergency repairs to attachments to FDOT structures, the UAO shall obtain verbal approval from the FDOT District Maintenance Engineer prior to making the repairs.

3.2 Discovery of Archaeological or Historical Remains

If work operations encounter remains of an archaeological or historic nature, the UAO shall (1) temporarily discontinue all earth disturbing activity in the remains' immediate vicinity and (2) notify the Local Maintenance Engineer. FDOT shall determine the remains' disposition. The UAO shall not resume affected work until authorized by the Local Maintenance Engineer.

3.3 Utilities in Historic Sites and Other Scenic Areas

Scenic areas include scenic strips, overlooks, rest areas, recreation areas and FDOT R/W within the limits of public parks and historic sites. In such areas, the UAO shall not install utilities that do either of the following:

- 1) Require extensive removal or alteration of trees or other natural features visible to the transportation facility user.
- 2) Impair the visual quality of the lands being traversed.

3.4 Pedestrian Pathway Clearances

For new above ground installations within pedestrian pathways, the UAO shall provide minimum clear pathway widths of thirty-six (36) inches where practical. However, pathways may be narrowed to no less than thirty-two (32) inches wide for no more than two (2) feet in length when an obstruction cannot be avoided. For guy wires traversing across a pedestrian pathway, the UAO shall maintain a minimum vertical clearance of seven (7) feet over the pathway.

3.5 Erosion & Sediment Controls

The UAO shall install any required erosion and sediment controls in compliance with local, state and federal requirements before beginning any utility work.

3.6 Relocation of FDOT Signs or Reflectors

To prevent signs and reflectors from conflicting with the UAO's work, the UAO shall be responsible for relocating or replacing all conflicting signs and reflectors as directed by FDOT.

3.7 Preservation of Sight Windows

The UAO shall not install new or replacement utilities that significantly reduce the field of vision within the limits of clear sight as described in *FDOT Design Standard* - Index 546.

3.8 Open Cutting

Unless FDOT determines it is impractical, the UAO shall not cut pavement less than five (5) years old.

When open cutting driveways, the UAO shall do all of the following:

- 1) Notify owners seven (7) days in advance using door-hanger type notices or on-site signs as appropriate and approved by FDOT.
- 2) Maintain users' access to the property.
- 3) Restore the driveways to at least an equivalent condition and types of material to what existed prior to cutting.

3.9 Fuel Tanks

The UAO shall not install any new utility structure or cabinet containing any flammable fuel within the FDOT R/W.

3.10 Longitudinal Placement of Utilities

When underground and aerial utilities occupy the same roadside, the aerial utility should be placed outside the underground utility and in accordance with *UAM Section 3.14*. The underground utility should not be placed within three (3) feet of the R/W line to allow space for future aerial utilities.

3.11 Utilities Near Airports

When placing utilities on FDOT R/W and near airports, the UAO shall not create an Airport hazard as defined by *Section* 333.01(3), F.S.

3.12 Contaminated Soil

Where contaminated soil is encountered within the UAO's work area, the UAO shall immediately cease work and notify FDOT. FDOT shall notify the UAO of any suspension or revocation of the utility permit. Said suspension or revocation shall remain in effect until otherwise notified by FDOT.

3.13 Damage to FDOT

Pursuant to *Section 337.402, F.S.*, 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 UAO shall, at their own expense, restore the road or publicly owned rail corridor to its original condition before such damage. If the UAO fails to make such restoration, FDOT is authorized to do so and charge the cost thereof against the UAO under the provisions of *Section 337.404, F.S.*

Pursuant to *Section 337.401(2), F.S*, the UAO is responsible for damage resulting from the issuance of the permit. FDOT may initiate injunctive proceedings as provided in *Section 120.69, F.S.* to enforce provisions of this subsection or any rule or order issued or entered into pursuant thereto.

3.14 Aboveground Utility Installations, Relocations, Adjustments, Replacement

Utilities are considered aboveground when the utility facility or appurtenance (such as strain poles, guy wires, telephone load pedestals, temporary supports, etc.) is more than four (4) inches above the grade. The UAO shall not install aboveground utilities within the median. The UAO shall not install a pole line in the roadside where an existing pole line is on the opposite roadside unless one (1) of the pole lines is made available for joint use. Alternatives to these requirements may be approved in accordance with *UAM Section 6*.

3.14.1 New Aboveground Utility Installations

The UAO shall install new aboveground utilities outside the aboveground utility offsets in *UAM Section 3.14.4* and as close to the R/W line as practical with regard to the aboveground utility practical considerations in *UAM Section 3.14.5*, however, these requirements do not apply to:

- 1) Mid-span poles addressed in *UAM Section 3.14.2*.
- 2) Existing aboveground utilities within FDOT projects addressed in UAM Section 3.14.3.

3.14.2 Mid-Span Pole Installation Requirements

This section applies to the installation of mid-span poles which are new poles that are installed within the existing spans of the UAO's existing pole line. The UAO shall install mid-span poles within the existing alignment as part of the existing pole line.

Where mid-span poles are placed within the R/W of an intersecting FDOT roadway, the UAO shall install these mid-span poles outside the aboveground utility offsets in *UAM Section 3.14.4*.

3.14.3 Aboveground Utility Relocation, and Adjustment Requirements

FDOT may request the relocation or adjustment of existing aboveground utilities in order to construct projects. When requested, the UAO shall comply with the following:

1) On projects intended to correct specific safety issues and not intended to bring all conditions within the R/W to FDOT's standards, the UAO shall relocate or adjust the existing aboveground utilities that interfere with the correction of the specific safety issue.

- 2) On projects designed to resurface the roadway, the UAO shall relocate the aboveground utilities to as close to the R/W line as practical with regards to the aboveground utility practical considerations in UAM Section 3.14.5 when the aboveground utility meets either of the following conditions:
 - a) The aboveground utility has been hit three (3) or more times in the latest five (5) year period,
 - b) The aboveground utility is located where the edge of travel lane is being moved closer to the aboveground utility than prescribed in *UAM Section 3.14.4*.
- 3) On FDOT projects other than projects described in 1) and 2) above, the UAO shall relocate or adjust the existing aboveground utilities to meet all the following conditions:
 - a) Where practical, behind existing barriers (such as guardrail, or concrete barriers), and not within the barrier's deflection area.
 - b) Not within the median.
 - c) Outside the aboveground utility offsets in UAM Section 3.14.4 and
 - d) As close to the R/W line as practical with regard to the aboveground utility practical considerations in *UAM Section 3.14.5.*

3.14.4 Aboveground Utility Offsets

Aboveground utility offsets are dependent upon the roadside being restricted or non-restricted. Restricted roadsides are roadsides along predominantly curbed urban roadways with design speeds of forty-five (45) mph or less and narrower than the offsets in *UAM Table 3.14.4*. Non-Restricted Roadsides are all other roadsides. The aboveground utility offset for restricted roadsides is four (4) feet from the face of curb. Where sections of curbs are missing, it is five and one-half (5.5) feet from the edge of the lane. The aboveground utility offset within a non-restricted roadside is the distance obtained from *UAM Table 3.14.4*. This offset is measured, perpendicular to the edge of lane, away from the roadway, and along slopes no steeper than 1vertical:4horizontal.

Table 3.14.4 Aboveground Utility Offsets for Non-Restric	ted R	oadsid	des (fe	et)		
	Design Speed (mph)					
	<u><45</u>	<u>45</u>	<u>50</u>	<u>55</u>	<u>>55</u>	
Travel Lanes or Multiple-Lane Ramps with Traffic Volumes \geq 1500 AADT	18	24	24	30	36	
Travel Lanes or Multiple-Lane Ramps with Traffic Volumes < 1500 AADT	16	20	20	24	30	
Auxiliary Lanes or Single Lane Ramps with Traffic Volumes \geq 1500 AADT	10	14	14	18	24	
Auxiliary Lanes or Single Lane Ramps with Traffic Volumes < 1500 AADT	10	14	14	14	18	

To determine the appropriate aboveground utility offset, select the distance from *UAM Table 3.14.4* based on the lane type, traffic volume, and design speed. When FDOT cannot provide the design speed or traffic volume, the posted speed or a traffic volume > 1500 AADT shall be used respectively. When applying these distances in the field, slopes steeper than 1vertical:4horizontal are sometimes present within a portion of the aboveground utility offset. In those cases, the remaining portion of the aboveground utility offset, or ten (10) feet whichever is greater, is extended beyond the toe of the steeper than 1vertical:4horizontal slopes. In cases where the required offset extends beyond the available FDOT R/W, the offset requirement shall be reduced to reach the R/W line, but not extended beyond the R/W line.

3.14.5 Aboveground Utility Practical Considerations

When determining whether any aboveground utility is as close to the R/W line as practical, FDOT shall consider factors such as:

- 1) Aboveground encroachments onto private property.
- 2) National Electrical Safety Code (*NESC*),
- 3) *UAM Section 3.4*, or other State or Federal codes/regulations.
- 4) Conflicts with other existing overhead or underground facilities.
- 5) Trees on adjacent private property (where adequate future trimming would require encroachment on private property).
- 6) Guy wire requirements.
- 7) Alignment of existing pole line.
- 8) Trees within the FDOT R/W (where there is room to install the utility outside the required distance in *UAM Section 3.14.4*).

3.14.6 Pole Replacement and Service Pole Installation.

The UAO may remove and replace poles consistent in compliance with the requirements of the replaced pole was originally permitted under. The UAO shall install service poles outside the aboveground utility offsets in *UAM Section 3.14.4* and as close to the R/W line as practical.

3.14.7 Vertical Clearances

The UAO shall maintain sixteen (16) feet minimum vertical clearance. However, when the aboveground utility is above any roadway, the UAO shall maintain eighteen (18) feet minimum vertical clearance. For vertical clearances for limited access R/W see *UAM Section 4.2*.

3.15 Lift Pumps or Power Generating Stations

The UAO shall not install any new utility lift pumps, or power generating stations used to power a permitted utility appurtenance within FDOT R/W.

3.16 Underground and At-Grade Utility Installations

A utility is considered underground when it is below the ground. A utility is considered at-grade when it is not below the ground and not more than four (4) inches above grade.

3.16.1 Excavation Near Pavement

Unless FDOT determines it is impractical, the UAO shall not excavate closer than eight (8) feet from the edge of roadway pavement.

3.16.2 Electronic Detection of Underground Utilities

The UAO shall make all new or replaced underground utilities within the R/W electronically detectable using techniques available to the industry.

3.16.3 Design Requirements

The UAO shall only install underground utilities and at-grade utility appurtenances that meet or exceed all of the following:

- 1) The industry standard requirement for the intended use.
- 2) Static and dynamic loads of construction projects within the *FDOT Five-Year Work Program*.
- 3) When within thirty (30) feet of the edge of pavement of a flush shoulder roadway or between the curbs of a curbed roadway, new and relocated underground and/or at-grade utilities shall support a design truck in accordance with the AASHTO LRFD Bridge Design Specifications as incorporated in *Rule 14-15.002*.
- 4) New and relocated underground and/or at-grade utilities outside the above areas shall support FDOT maintenance equipment.

3.16.4 Depth Requirements for Open Trench or Trenchless Methods

The UAO shall install underground utilities to minimize adverse effects on pavement, base, other transportation facilities, or other permitted underground utilities (whether longitudinal or crossing). The UAO shall install these underground utilities with at least the following coverage as measured to the top of the utility:

- 1) Below the top of the roadway pavement: thirty-six (36) inches.
- 2) Below existing unpaved ground and pavement other than roadway pavement: thirty (30) inches (including designed ditch grade as verified from existing pipe inverts).

Horizontal directional drilling requirements in UAM Section 3.16.9.1 may require greater depths.

3.16.5 Longitudinal Placement

When installing underground and/or at-grade utilities longitudinally, the UAO shall place their underground and/or atgrade utilities to not interfere with the operation and maintenance of the existing highway or any expansion of the highway within the *FDOT Five-Year Work Program*.

3.16.6 Casing Requirements

The UAO shall provide casing for underground utilities (whether longitudinal or crossing) within toes of the front slopes when any the following conditions exist:

- 1) The underground utility does not meet the requirements in UAM Section 3.16.3 or UAM Section 3.16.4.
- 2) The underground utility contains flammable gases or fluids and does not meet the requirements of *49 CFR*, *Part 192*, or *49 CFR*, *Part 195*.

When venting is necessary, the UAO shall vent the casing at or outside the R/W line.

3.16.7 Service Connection Points

To accommodate FDOT work, or provide new services, the UAO shall place underground and/or at-grade utility service connection points at or beyond the R/W line to prevent the UAO's customers from having to enter FDOT R/W to make a connection. The UAO may provide underground and/or at-grade utility service connections points to other facilities owned by permitted service providers, FDOT, or other governmental agencies within the FDOT R/W.

3.16.8 Underground Utility Access

When pulling multiple conduits to construct new duct systems, the UAO shall only place access points, such as manholes or pull boxes, over the duct and shall minimize obstruction of the R/W use by others. The UAO shall install its multiple access points on a duct system at least fifty (50) feet apart to minimize overall R/W infrastructure impact. FDOT shall not require sharing of manholes between power and non-power users.

The UAO shall place manholes, splice boxes and valve boxes outside the travel lanes, auxiliary lanes and bike lanes, to the greatest extent practical. When installing manholes, pull boxes, splice boxes, valve boxes, or vaults that are greater than eighty (80) cubic feet, the UAO shall supply a manufacturer's certification that they meet or exceed the design loads specified in the *UAM Section 3.16.3*.

3.16.9 Trenchless Installations

For all trenchless installations the UAO shall use horizontal directional drilling, jack and bore or micro-tunneling methods where feasible. Alternate methods may be approved in accordance with *UAM Section 6*.

Regardless of the method used the UAO shall do all the following:

- 1) Control the pumping rate, pressures, viscosity and density to provide removal of soil cuttings and to balance groundwater and earth pressures.
- 2) Contain drilling fluids in slurry pits, entry or exit points until they are recycled or removed from the site or vacuumed during drilling operations.
- 3) Clean the work site of all excess slurry or spoils within forty-eight (48) hours of completing installation of the utility.
- 4) Provide remediation plan, for approval by FDOT, showing how damage to the roadway or a failed operation will be remedied.
- 5) Maintain the depth of the utility equal to or greater than those in *UAM Section 3.16.4*, additionally when using horizontal directional drilling under roadway pavement maintain the depths in *UAM Section 3.16.9.1*.
- 6) Submit a bore log to FDOT within seven (7) days of the completion of each successful or failed bore path. The bore log shall include all of the following:
 - a) Utility permit number. If the utility work was done during an FDOT construction project include the financial project identification (FPID) number.
 - b) Name of person collecting data, including title, position and company name.
 - c) A tie to a permanent structure or a station when within an FDOT construction project.
 - d) The detection method used, bore diameter, utility diameter, drilling fluid composition, composition of any other materials used to fill the annular void between the bore and the utility diameter, or utilities placed out of service.
 - e) A plan view of the bore path showing elevations and offset dimensions to an accuracy of within one (1) inch of the physically exposed beginning and end points of the bore and other exposed points along the path and the top elevation, diameter and material type of all underground facilities physically observed during the operation or site investigation, and indicate if the bore failed.

3.16.9.1 Horizontal Directional Drilling (HDD)

When performing an HDD operation, the UAO shall restrict the bored diameter to the maximum diameter allowed for the diameter of the utility being installed. The utility diameter is the casing diameter when casing is used. For utility diameters less than eight (8) inches, the maximum bored diameter is equal to the utility diameter plus four (4) inches. For utility diameters of eight (8) inches to twenty-four (24) inches, the maximum bored diameter is equal to one and one half (1.5) times the utility diameter. For utility diameters greater than twenty-four (24) inches, the maximum bored diameter is equal to the utility diameter plus one (1) foot. Where a utility has restrained joints the maximum bored diameter shall be the manufacturer's recommended diameter. Additionally, the UAO should maintain a clearance, from any existing vitrified clay sanitary pipe line or existing gas lines, of at least three and one half (3.5) times the bored diameter.

When boring under roadway pavement, the UAO shall maintain a bore depth equal to ten (10) times the bored diameter or greater as measured from the top of pavement to the top of the bore. The UAO may reduce this depth by determining the water table anticipated at time of installation or a confining layer. The confining layer is a two (2) feet thick layer of earth that resists thirty (30) blows per foot of a *Standard Penetration Test*. If either of these is determined, the bore depth may be reduced to two (2) feet from the top of the confining layer to the top of the bore, or two (2) feet from the top of the water table to the top of the bore. Additionally, the UAO should maintain a clearance, from any existing vitrified clay sanitary pipe line or existing gas lines, of at least three and one half (3.5) times the bored diameter.

The UAO shall also do all of the following:

- 1) Determine orientation and tracking of the drill bit.
- 2) Utilize relief holes as necessary to relieve excess pressure down hole.
- 3) Prevent heaving during pull back.
- 4) Keep the drill pipe in the bore hole until the final product is pulled into place.
- 5) Install the product into a bore hole within the same day that the pre-bore is completed.
- 6) Limit the exposure of the product to three (3) feet and fourteen (14) consecutive days.

3.16.9.2 Jack and Bore (J&B) or Micro-Tunneling

When performing J&B or micro-tunneling operations, the UAO shall do all of the following:

- 1) Control steering in both the vertical and horizontal direction to a tolerance of plus or minus one (1) inch from proposed alignment.
- 2) Provide entry and exit seals at shaft walls to prevent inflows of groundwater, soil, slurry and lubricants and cover unattended open conduits.
- 3) Include the amount of spoil removed in the bore report.

3.16.10 Out-of-Service and Deactivated Underground Utilities

The UAO may place underground utilities out-of-service without removing them from the FDOT R/W. The UAO shall be responsible for and shall maintain ownership of these underground utilities commensurate with these utilities being inservice. However, the UAO shall not leave an out-of-service or deactivated underground utility in place that does any of the following:

- 1) Compromises the safety of any transportation facility user during construction or maintenance operations.
- 2) Prevents other utilities from being placed in the area when alternatives are unavailable.
- 3) Creates a maintenance condition that would be disruptive to the transportation facility.
- 4) Adds costs to FDOT improvements which are not paid for by the UAO.
- 5) Is in non-compliance with underground gas line deactivation. See *49 CFR*, *Part 192.727* and the rules of the Public Service Commission.

3.17 Restoration

3.17.1 Restoration of Pavement

When restoring pavement, the UAO shall do all of the following:

- 1) Maintain temporary patches providing a smooth, all weather surface at all times until all other installation work is complete.
- 2) Notify the Local Maintenance Engineer at least two (2) business days prior to application of the permanent patches.
- 3) Install permanent patches as soon as all other installation work is completed.
- 4) Maintain the permanent patches for a period of two (2) years from the date of installation.

To reduce the time traffic is taken off of an existing facility, FDOT may approve the use of flowable fill.

3.17.2 Replacement or Payment For Trees

The UAO shall replace trees removed or irreparably damaged by the UAO. In lieu of replacing trees, the UAO may elect to pay FDOT for the value of the trees as determined below. The UAO is not obligated to replace or pay for trees with offsets less than the offsets established for aboveground utilities described in *UAM Section 3.14.4*. The UAO is not

obligated to replace or pay for trees that are listed as a Category I invasive species in the *Invasive Species List*. The UAO shall attach to a permit application a plan view showing the boundary where trees are to be removed.

3.17.2.1 Tree Replacement

For a tree replacement, the UAO shall do all of the following:

- 1) Provide a plan view showing the boundary where trees are to be removed.
- Provide the mitigation value, as determined by a tree appraiser with the qualifications described in *UAM Section* 3.17.2.3 of all trees to be removed in accordance with "Determining the Mitigation Value of Roadside Vegetation" as incorporated in *Rule* 14-10.057, F.A.C.
- 3) Show in the permit application the replanting locations approved by the Local Maintenance Engineer.
- 4) Replant an equal value of trees in accordance with Florida #1 as described in the *Grades and Standards for Nursery Plants* and the approved permit.
- 5) Maintain the replanted trees for a period of one (1) year to Florida #1 as described in the *Grades and Standards for Nursery Plants*.

3.17.2.2 Payment for Trees

For payment, the UAO shall do all of the following:

- 1) Provide a plan view showing the boundary where trees are to be removed.
- Provide the mitigation value, as determined by a tree appraiser with the qualifications described in *UAM Section* 3.17.2.3 of all trees to be removed in accordance with "Determining the Mitigation Value of Roadside Vegetation" as incorporated in *Rule 14-10.057*, *F.A.C.*
- 3) Pay FDOT the mitigation value ten (10) days prior to the required two (2) day notification in UAM Section 2.1(5).

3.17.2.3 Tree Appraiser Qualifications

Those determining the mitigation value shall have one of the following:

- 1) Approval from both FDOT and the UAO as an individual qualified to perform the mitigation value.
- 2) Registration as a Landscape Architect pursuant to Chapter 481, Part II, F.S.
- 3) Certification from the International Society of Arboriculture (ISA) as a Certified Arborist with advanced training in roadside vegetation or equivalent credentials from another nationally recognized arboricultural organization.

3.17.3 Restoration of Turf

Immediately after the utility work is completed, the UAO shall begin sodding, or seeding and mulching operations on the front or back slopes. The UAO shall begin sodding, or seeding and mulching on all other areas within one (1) week after the utility work is completed. The UAO shall restore the R/W to the condition existing prior to the utility work. The UAO shall maintain that portion of the R/W affected by the utility work until vegetation is established.

3.18 Vegetation Control

3.18.1 General

Vegetation control includes any method intended to alter or regulate normal plant growth. The UAO may cut vegetation manually or mechanically on a routine or periodic basis provided the work does not exceed limits necessary for proper utility maintenance. To the greatest extent practical, the UAO shall use vegetation maintenance that does not detract from the natural beauty of the roadside or cause an abrupt change in roadside vegetation conditions. Where vegetation interferes with safe utility maintenance and operation, the UAO shall do all the following:

- 1) Trim trees in accordance with *UAM Section 3.18.2*.
- 2) Remove brush cuttings or debris discharged into routinely maintained area.
- 3) Stockpile debris outside the mowing limits and clear zone for later disposal.
- 4) Leave in place all undergrowth.

3.18.2 Tree Trimming

The UAO shall trim trees to ensure the safe installation, maintenance, and operation of the UAO's utilities. Where the UAO trims trees, the UAO shall comply with the *ANSI A300 Standard Practices*. Where trimming does irreparable damage to a tree, the UAO shall replace or pay for the tree as described in *UAM Section 3.17.2*. Such trimming shall employ recognized and approved methods of modern vegetation control, with emphasis on tree health. The UAO may use mechanical tree trimming machines for routine maintenance. The UAO shall remove all waste and debris associated with the trimming from the R/W unless FDOT specifies otherwise in writing.

3.18.3 Mowing

Where the UAO mows or cuts grass, the UAO shall mow or cut the grass (a) to a height of not less than five (5) inches and (b) in such a manner as to promote low growing ground cover species. The UAO shall equip and operate mowing equipment in a manner to preclude throwing debris that would create a safety hazard.

3.18.4 Chemical Control of Vegetation

When using chemical vegetation control, the UAO shall comply with all of the following:

- 1) Obtain written authorization from the Local Maintenance Engineer before applying vegetation control chemicals.
- 2) Give the Local Maintenance Engineer at least two (2) business days advance notice.

To obtain written authorization, the UAO shall submit a written proposal for chemical control of vegetation which includes all of the following:

- 1) The extent of the intended work.
- 2) The type of herbicides or plant (tree) growth regulators to be used (and shall include labels and material safety data sheets for the intended use).
- 3) The intended timing and techniques of application.
- 4) Documentation that the UAO's herbicide applicator (whether a utility employee or contractor) is certified to apply herbicides.
- 5) Identify each plant type to be chemically controlled.

The UAO shall apply chemical control of vegetation either a) in the first growing season after mowing, or b) before it has reached a height of six (6) feet. The UAO shall not apply chemical control on vegetation greater than six (6) feet in height if such application will either a) create an undesirable appearance, or b) cause undesired browning or color change. The UAO may request special consideration when manmade obstructions preclude or prevent reducing vegetation to the six (6) feet height. The Local Maintenance Engineer may authorize applications at a height greater than six (6) feet either in areas with rapid plant growth or in the control of invasive exotic vegetation. If FDOT grants such permission, the UAO shall remove, chip or mulch dead plant material following successful performance of the herbicides. The UAO shall not use any herbicide containing the active ingredient sulfonyl urea, or containing any chemical of the sulfonyl urea family, or labeled as restricted use. The UAO shall not apply any non-selective or residual herbicides to roadside turf grasses. The UAO shall not apply any chemical of any type or rate that causes permanent injury to desirable vegetation or could result in bare ground. To control invasive vegetation, the FDOT District Maintenance Engineer may suspend these restrictions. The UAO may use individual stem and solid stream treatments that result in spot or narrow band control. The UAO shall protect specific selected and preserved plants from damage by herbicides. The UAO shall comply with all environmental considerations and associated regulations when applying herbicides. The UAO shall maintain and provide upon request complete records detailing the dates, location, materials, rates, weather, and other data relevant to herbicide application, as required by federal and state law. FDOT may deny any UAO future permission to use chemicals for vegetation control because of misuse, unsatisfactory performance results, or failure to comply with these provisions. The UAO shall allow only persons with all the following qualifications to apply chemicals:

- 1) Training, experience and competence in their work.
- 2) Licenses according to applicable federal and state law.
- 3) Understanding of herbicide application and the technical complexities in this field of expertise.

3.19 Utilities On or Near FDOT Structures

3.19.1 General

The UAO shall not install, operate or maintain any utility on or near an FDOT structure that does any of the following:

- 1) Creates a hazard to the public.
- 2) Affects the FDOT structure's integrity.
- 3) Unreasonably hinders inspection and maintenance operations of the FDOT structure.
- 4) Adversely affects the aesthetics of FDOT structures placed in aesthetically sensitive environments.
- 5) Damages any FDOT structure's reinforcement or stressing ducts or strands.
- 6) Attaches to FDOT bridge girders.
- 7) Resides inside an FDOT box girder.
- 8) Lowers the FDOT structure's vertical clearance.
- 9) Restricts the FDOT structure's ability to expand and contract.

3.19.2 Attaching to FDOT Structures

The UAO shall be responsible for the design, safety, inspection, and maintenance of utilities and supporting hardware it attaches to FDOT structures. The UAO's engineer shall be responsible for performing the analysis for determining if the structure will support the utility in addition to other loads in a safe manner while not significantly reducing the FDOT structure's live load capacity. The UAO shall use materials and methods for utility conduit, pipe coatings and concrete repairs that are a) approved by FDOT's State Materials Office, and b) are in accordance with the FDOT District Structures Design Engineer's site specific requirements.

When attaching utilities to FDOT bridges, the UAO shall comply with all of the following:

- 1) Utilities shall be placed under the cantilever portion of the deck overhang.
- 2) Utility cables or conductors shall be encased in conduit.
- 3) All electrical cables two (2) kilovolts and above shall be shielded cable with a concentric neutral, grounded at both ends of the bridge.
- 4) All pressure lines shall have shut-off systems so that pipe segments at bridges can be isolated.

When FDOT determines that an FDOT bridge is in an extremely aggressive environment, the UAO shall incorporate the following in the design:

- 1) 316 stainless steel for all attachment hardware such as hangers and bolts, or equivalent material as determined by the State Corrosion Engineer.
- 2) Conduits fabricated from non-metallic materials or equivalent material as determined by the State Corrosion Engineer.

The UAO shall make metallic pipes and conduits a) electrically insulated from the structure by redundant insulators, and b) supported by insulating pipe rollers constructed from dielectric material. If loads would permanently strain the roller material beyond the elastic limit, the UAO shall use elastomeric bearings or specifically designed sliding supports. The UAO shall isolate and insulate all utilities from the FDOT bridge to ensure that corrosion cells do not develop because of the attachment of the utility. The UAO shall use only welded or flange joint steel pipe conforming to *API Standard 1104* for carrying hazardous material (flammable, toxic or corrosive). The UAO shall design all pipes carrying hazardous material for class-four locations in compliance with *49 CFR*, *Part 192* and *49 CFR*, *Part 195*.

4 Utility Accommodation on FDOT Limited Access Right of Way

When placing utilities on Limited Access Right of Way (LA R/W), the UAO shall comply with this section in addition to all other sections of the *UAM*.

4.1 Longitudinal Utilities

The UAO may install, operate and maintain lines longitudinally within LA R/W that exclusively serve FDOT. The UAO shall not install any other longitudinal utility lines unless an alternative to this requirement is approved in accordance with *UAM Section 6*.

4.2 Vertical Clearance

The UAO shall provide at least twenty-four (24) feet vertical clearance for utilities above any limited access roadway.

4.3 Crossings

4.3.1 New Crossings

In expanding areas adjacent to LA R/W, the UAO shall design and install utilities to minimize the need for crossing LA R/W. The UAO shall not cross LA R/W when other options are available within reasonable distances.

4.3.2 Existing Utilities and Limited Access Construction

When relocating or adjusting existing utilities in conjunction with construction of a LA R/W, the UAO shall a) provide for known and planned expansion of the utility, and b) plan future installations or new lines to not impede traffic.

4.3.3 Underground Crossings

The UAO shall provide at least forty-eight (48) inches coverage measured from the pavement surface to the top of the underground utility. The UAO shall not open cut pavement. The UAO shall not place high-pressure gas or volatile fuel lines near or under FDOT bridges or MSE walls.

The UAO shall, where practical, perform all construction and maintenance outside the LA R/W fence line. The UAO shall place temporary fencing to enclose work areas within the LA R/W. The UAO shall not extend this fencing closer to the roadway than to the toe of the back slope.

The UAO shall not place utilities at interchanges that cannot be serviced or patrolled in accordance with *UAM Section* **4.6**.

4.4 FDOT Railroad Corridors

All rail corridors are to be treated as LA R/W for utility accommodation purposes. When placing utilities on non-operating railroad corridors, the UAO shall comply with the *UAM* and the applicable corridor management plan.

When placing utilities on operating railroad corridors, the UAO shall also comply with all requirements in the standard railroad application package for the railroad(s) operating in the corridor.

The UAO may obtain the standard railroad application package from the FDOT District Rail Coordinator or the FDOT District Corridor Rail Manager. The UAO shall adhere to minimum horizontal offset or highest vertical clearance dimensions found in the following:

- 1) UAM for all LA R/W
- 2) *Rule 14-57, F.A.C.* for rail corridors.
- 3) FDOT South Florida Rail Policy for the South Florida Rail Corridors.

4.5 Utilities in R/W being Re-designated as LA R/W

The UAO may leave existing permitted utilities within R/W being re-designated as LA R/W that do not unreasonably interfere with the safety, design, construction, operation, maintenance, or stability of the proposed LA R/W. The UAO shall service, maintain, and operate the utility without interfering with traffic on through lanes or ramps.

4.6 Access for Servicing or Patrolling Utilities

Where practicable, the UAO shall access utilities only from nearby frontage roads, public roads, or trails leading outside of the LA R/W. For utilities placed along non-limited access overpasses or underpasses the UAO shall, where practicable, service these utilities from the non-limited access R/W and not impact traffic on the LA R/W.

4.7 Attachments to FDOT Bridges

The UAO, shall not attach utilities to FDOT bridges. Alternatives to this requirement may be approved in accordance with *UAM Section 6*.

5 Project Coordination

Project coordination is a cooperative effort between FDOT and the UAO. This section covers the responsibilities of both FDOT and the UAO prior to construction activities of projects.

5.1 FDOT Coordination

FDOT shall make arrangements to ensure all of the following is done:

- 1) Advance planning of highway projects is coordinated with affected UAOs no later than the project being placed in the *FDOT Five-Year Work Program*.
- 2) Project drawings are provided to the UAO for markup in an agreeable format.
- 3) Conflicts with the UAO's utilities are identified to the UAO. This may be provided in a conflict matrix format when available.
- 4) Reasonable lead-time is provided for the UAO to relocate or adjust their utilities.
- 5) Reasonable lead-time is provided for the UAO to physically expose their utilities when the UAO elects to do this work.

5.2 UAO Coordination

The UAO shall do all the following:

- 1) Provide project work schedules to resolve all conflicts between the FDOT project and the UAO's utilities.
- 2) Obtain permits for utility work in compliance with all applicable laws and the UAM.
- 3) Identify to the designer utilities and utility service connections the UAO has determined to be in conflict that were not previously identified.

4) Provide existing and proposed utility locations and elevations on the project drawings or project CADD files with ties to the project's survey points, as can reasonably be obtained by a review of existing records, topographic surveys and detection devices without physically exposing the utility. The UAO shall use the following color code:

Red: Existing utilities that are: (a) To be removed or relocated horizontally or

(b) To be placed out-of-service (deactivated) but left in place.

Green: Existing utilities to remain in place with no adjustment.

Brown: Utilities that are:

(a) Existing and are to be adjusted vertically, but are to remain in the same horizontal alignment, or (b) New utilities to be installed.

- 5) Complete the utility work schedule provided in *UAM Section 8* for all needed utility work activities when requested by FDOT. The UAO shall include in the utility work schedule all of the following:
 - a) In Section B, all special conditions and constraints needed to perform the UAO's work activities and/or other important information.
 - b) In Section C, the type, size, material, status and offset to the centerline of construction, or other FDOT approved baseline, from station to station of the UAO's utilities.
 - c) In Section C, all UAO work activities to facilitate the needed relocations or adjustments, indicating an activity number, the TCP phase, the number of consecutive calendar days needed to complete the utility work activity by showing the breakdown of days prior to FDOT project construction and during FDOT project construction. In addition to UAO's work activities within the project limits, other offsite utility work activities such as procurement of material or property shall be included when these activities affect the time needed to complete the UAO's work activity.
 - d) In the Dependent Activities column in Section C, identify all activities that need to be completed, by the UAO or others, before the listed UAO's work activity can start.
 - e) In Section A, show the sum of the calendar days prior to FDOT project construction and during FDOT project construction from the breakdown provided in Section C.

5.3 UAO Reimbursement

When utility work is to be performed by the UAO for which FDOT bears the cost pursuant to *Section 337.403, F.S.*, the UAO shall complete the utility work estimate provided in *UAM Section 8*. The UAO shall provide the utility work estimate to FDOT prior to or at the time of submitting the utility work schedule.

6 Approval of Design Alternatives

Where compliance with the *UAM Sections 3.14, 3.16.9, 4.1, or 4.7* is not practicable or would create an unreasonable hardship, FDOT may approve an alternative. To request such approval, a signed request must be sent to the State Utilities Engineer, stating the reasons the alternative should be approved. The request shall be granted when the information supplied shows either:

- 1) Compliance with these requirements is not practicable or would create an unreasonable hardship for the UAO, and that the UAO's alternative would not unreasonably interfere with the safety, operation, maintenance, future improvement, or expansion of the transportation facility, or
- 2) The alternate provides a benefit to the safety, operation, maintenance, future improvement, expansion of the transportation facility, or other benefit to FDOT.

The fact that the alternative is less costly will not necessarily be determinative of whether the alternative is approved.

7 References

7.1 Incorporated References

The following references are incorporated into this manual by reference and are requirements of this manual, but are limited to the scope of application specifically referenced on the *UAM* sections listed. Copyrighted material is available for public inspection as described below. All other reference material are posted at: http://www.dot.state.fl.us/programmanagement/utilities/

ANSI A300 Standard Practices. – UAM Section 3.18.2

American National Standards for Tree Care Operations – Tree, Shrub, and Other Woody Plant Management – Standard Practices (Pruning), Publication ANSI A300 (Part 1) – 2008. Posting of this manual for public inspection would violate federal copyright law. A copy is available for public inspection during regular business hours at the Florida Department of Transportation, Program Management Office, 605 Suwannee Street, Tallahassee.

API Standard 1104 - UAM Section 3.19.2

API STD 1104 (API 1104) - Welding of Pipelines and Related Facilities 20th edition, October 2005. Published by the American Petroleum Institute. Posting of this manual for public inspection would violate federal copyright law. A copy is available for public inspection during regular business hours at the Florida Department of Transportation, Program Management Office, 605 Suwannee Street, Tallahassee.

Determining the Mitigation Value of Roadside Vegetation, - UAM Section 3.17.2 Florida Chapter of the International Society of Arboriculture, 2000 .as incorporated in Rule 14-10.057, F.A.C.

FDOT Design Standards - UAM Sections 1.3, 2.3.2, 2.4.2, 3.7

2016 FDOT Design Standards for Construction and Maintenance Operations on the State Highway System Topic 625.010-003.

FDOT South Florida Rail Policy - UAM Section 4.4 SOUTH FLORIDA RAIL CORRIDOR CLEARANCE Policy No. 000-725-003, Effective date 9/20/2007.

Grades and Standards for Nursery Plants- UAM Section 3.17.2

Florida Department of Agriculture and Consumer Services, Division of Plant Industry, Florida Grades and Standards for Nursery Plants 2015.

Standard Penetration Test - UAM Section 3.16.9.1

ASTM D1586 - 11 Standard Test Method for Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils, published by the American Society for Testing and Materials (ASTM), November 1, 2011. Posting of this manual for public inspection would violate federal copyright law. A copy is available for public inspection during regular business hours at the Florida Department of Transportation, Program Management Office, 605 Suwannee Street, Tallahassee.

Invasive Species List – UAM Section 3.17.1

Florida Exotic Pest Plants Council's 2015 List of Invasive Plant Species as web-published www.fleppc.com May 15, 2015.

7.2 Informational References

This manual contains references to Florida Statutes, Federal Codes, national codes and other documents. These are to assist the user with additional information pertinent to the topic being discussed in the body of this manual. These references are for informational purposes only. However, the UAO may be bound by the requirements in these references through other means.

Chapter 120, F.S. - UAM Section 1.10 Florida Statute - 120, ADMINISTRATIVE PROCEDURE ACT.

Chapter 373, F.S. Part IV - UAM Section 1.6.2 Florida Statute - 373 MANAGEMENT AND STORAGE OF SURFACE WATERS *Chapter 471, F.S.* - UAM Section 2.4.3 Florida Statute - 471 - Engineering.

Chapter 556, F.S. - UAM Section 1.8 Florida Statute - 556, UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY.

FDOT Five-Year Work Program - UAM Sections 3.16.4, 3.16.6, 5.1 FDOT Five-Year Work Program, Pursuant to Section 339.135(5), Florida Statues.

NESC - UAM Section 3.14.5 National Electrical Safety Code.

Rule 14-10.057, F.A.C. - UAM Section 3.17.2.1 Florida Administrative Code, Chapter 14-10.057, OUTDOOR ADVERTISING SIGN REGULATION AND HIGHWAY BEAUTIFICATION PROGRAM.

Rule 14-15.002, F.A.C. - UAM Section 3.16.3 Florida Administrative Code, Chapter 14-15.002, Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways.

Rule 14-26, F.A.C. - UAM Section 1.6.1 Florida Administrative Code, Chapter 14-26, SAFETY REGULATIONS AND PERMIT FEES FOR OVERWEIGHT AND OVERDIMENSIONAL VEHICLES.

Rule 14-57, F.A.C. - UAM Section 4.4 Florida Administrative Code, Chapter 14-57, RAILROAD SAFETY AND CLEARANCE STANDARDS, AND PUBLIC RAILROAD-HIGHWAY GRADE CROSSINGS.

Rule 14-86, F.A.C. - UAM Section 1.6.2 Florida Administrative Code, Chapter 14-86, DRAINAGE CONNECTIONS.

Rule 62-25, F.A.C. - UAM Section 1.6.2 Florida Administrative Code, REGULATIONS OF STORMWATER DISCHARGE.

Section 120.60, F.S. - UAM Section 2.6 Florida Statute - 120.60 Licensing.

Section 333.01(3), F.S. - UAM Section 3.11 Florida Statute - 333.01(3) "Airport hazard".

Section 337.11(3)(c) F.S – UAM Section 5.2 Florida Statute - 337.401 Contracting; acquisition, disposal, and use of property.

Section 337.401, F.S., Section 337.402, F.S., Section 337.403, F.S., Section 337.404, F.S. - UAM Sections 2.1, 3.13 Florida Statute - 337.401 Use of right-of-way for utilities subject to regulation; permit; fees. Florida Statute - 337.402 Damage to public road caused by utility. Florida Statute - 337.403 Relocation of utility; expenses. Florida Statute - 337.404 Removal or relocation of utility facilities; notice and order; court review.

49 CFR, Part 192 - UAM Sections 3.16.7, 3.16.12, 3.19.2 Code of Federal Regulation, Title 49: Transportation part 192, TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINE: MINIMUM FEDERAL SAFETY STANDARDS, Revised October 1, 2007.

49 CFR, Part 195 - UAM Sections 3.16.7, 3.19.2 Code of Federal Regulation, Title 49--Transportation, part 195, TRANSPORTATION OF HAZARDOUS LIQUIDS BY PIPELINE, Revised October 1, 2007.

8 Utility Permit Exhibits

This section contains a blank utility permit, blank utility work schedule and blank utility work estimate. Hardcopies of the utility permit, utility work schedule, and utility work estimate can be obtained from the State Utilities Engineer at:

State Utilities Engineer Florida Department of Transportation 605 Suwannee Street, Mail Station 75 Tallahassee, FL 32399-0450

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11.1

* *

PERMIT NO:_____

STATE ROAD INFORMATION

County:	Section:	State Road No:	Beginning Mile Post:	Ending Mile Post:

APPLICANT INFORMATION

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N	<u>Utility Agency/Owner (UAO)</u>		when the UAO is a City or County)
Name:			
Contact Person:		Contact Person:	
Address:		Address:	
City:		City:	
State:		State:	
Zip:		Zip:	_
Telephone:	() ext	Telephone: ()	ext
Email:		Email:	
	WORK D	ESCRIPTION	
The Applicant(s) re	quests permission from the Florida Department of Tra	nsportation (FDOT) to construct operate	and maintain the utilities as described

Utility work No:			
	Additional sheets are attached and are incorporated into this permit	Yes 🗌	No 🗌
	For FERC or FDEP certification, the FDOT agency report is attached in accordance with UAM Section 2.4.1 (13)	Yes 🗌	No 🗌

TRAFFIC CONTROL (TCP)

The TCP will comply with the following 600 series index(es)						
A TCP has been attached and incorporated into this permit application in compliance with UAM Section 2.4.2.						
MOT Tashnisian's contact information (may be sumplied at the two (2) business day notification to EDOT);						
MOT Technician's contact information (may be supplied at the two (2) business day notification to FDOT): Name: Telephone () Email:						
					-	

COMMENCEMENT OF WORK

The UAO and/or Utility Builder shall commence actual construction in good faith within sixty (60) calendar days after approval of the permit application. If the beginning date is more than sixty (60) calendar days from the date of approval, the UAO and/or Utility Builder must review the permit with the FDOT Approving Engineer listed to make sure no changes have occurred to the transportation facility that would affect the permit's continued approval. The UAO and/or Utility Builder shall make good faith efforts to expedite the work and complete the work within the calendar days indicated.

Anticipated Start Date: ____/ ____/

Calendar days needed to completed: _____

Rule 14-46.001 F.A.C. Page _ of _

Florida Department of Transportation UTILITY PERMIT

PERMIT NO:_____

APPLICANT SIGNATURE

shown in plans and incorporated documents, in compliance with the U instructions incorporated into this permit. The UAO and/or Utility Bu aerial and underground, are accurately shown on the plans of the work	construct, operate, and maintain the work as noted in the above Work Description, JAM, all instructions noted in the FDOT Special Instructions Box, and special ilder declares, the location of all existing utilities that it owns or has an interest in, both c areas. In accordance with UAM Section 2.8, the UAO and/or Utility Builder further the facilities within the work areas and that those listed below are the only facility work.				
Date Notified: Name of other facility owners (attach	additional sheets if necessary)				
Utility Agency/Owner	Utility Builder (when applicable)				
Signature: Date://	Signature: Date://				
Name (printed):					
Title:	Title:				

FDOT PROJECT INFORMATION

Pursuant to UAM Section 2.1(10), the utility work is within FDOT projects listed below and must have a Utility Work Schedule for each project approved prior to commencement of work within the FDOT project limits:

FDOT SPECIAL INSTRUCTIONS

In accordance with UAM Section 2.7, FDOT incorporates the below and attached special instructions into this permit.		
Additional FDOT Special Instructions are attached and incorporated into this permit.	Yes 🗌	No 🗖

PERMIT APPROVAL

By signature below, FDOT gives permission to the UAO and /or Utility Builder to construct, operate, and maintain the utilities indicated in this Utility Permit in compliance with the UAM, all incorporated documents, and special instructions. Any changes to the approved work must be approved by the FDOT's Approving Engineer and attached and incorporated into this permit in accordance with UAM Section 2.10.							
Approving Engineer:				_Date: _	// _		
Name:				-			
Title:				_			
Notification of Utility Work to	be provided to:	Telephone	(_)		or	Email:
	An FDOT Re	presentative is r	equired	to be pres	ent on the w	orksite p	prior to commencement of work. Yes No
Rep. Name:		Telephone	()			Email:

PERMIT NO:_____

CERTIFICATION

I, the undersigned UAO and/or Utility Builder, hereby CERTIFY that the utilities	ware constructed and increased in compliance with the UAM all incorporated
documents, and special instructions. Pursuant to UAM Section 2.10, all changes	
into this permit along with all other material certifications, test results, bore logs,	, approved plans changes, as-built plans or other required documentation.
Lalso CEDTIEV that work began on / / and was completed on	/
I also CERTIFY that work began on/ and was completed on	/ and that the area was left in as good of better condition
than when the work began.	
Utility Agency/Owner	Utility Builder (when applicable)
Stillty Ageney, Swiler	Childy Builder (when upprease)
Signature: Date /	Signature:
Name (printed):	Name (printed):
Title:	Title:
The	11tic

FINAL INSPECTION OF WORK

	The work was inspected and found to be in non-compliance as noted below:
	All issues of non-compliance listed above have been brought into compliance and/or FDOT has no outstanding issues that need to be addressed by the UAO and/or Utility Builder. However, this final inspection does not release the UAO and/or Utility Builder of their continuing responsibilities pursuant to Rule 14-46.001, the UAM, all incorporated documents, and special instructions.
FDO	T Inspector: Date://
	Name:
	Title:

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Rule 14-46.001 F.A.C. Page _ of _

Florida Department of Transportation UTILITY WORK SCHEDULE

Pursuant to Section 337.403 F.S., the UAO and FDOT agree to the UAO's need for relocation or adjustment to its utilities and FDOT's need for a schedule for the UAO to effect the relocation or adjustment. This utility work schedule is based on FDOT plans dated in the project information box below. Any deviation by FDOT or its contractor from these plans, may void this utility work schedule. Upon notification by FDOT of a change to these plans, the UAO may negotiate a new utility work schedule. The UAO agrees to notify FDOT and the contractor in writing prior to starting, stopping, resuming, and completing work in accordance with this utility work schedule. The UAO shall obtain a utility permit and comply with requirements of the 2015 Utility Accommodation Manual (UAM) for all work done under this utility work schedule.

FDOT PROJECT INFORMATION

Financial Project ID:	Federal Project ID:
State Road Number:	County:
FDOT Plans Dated:	District Document No.:

UTILITY AGENCY/OWNER (UAO)

Utility Company:		
UAO Project Rep:	Phone:	E-mail:
UAO Field Rep:	Phone:	E-mail:

UTILITY SIGNATURE

I have reviewed the FDOT plans referenced above and submit this utility work schedule in compliance with UAM Section 5 and agree to be bound by the terms of this utility work schedule.

UAO Rep. ____

Name ______

ENGINEER OF RECORD SIGNATURE

I attest this utility	work schedule in compatible with the FDOT plans refe	erenced above.
EOR _		_Date//
Name_		_
Title_		

_____ Date ____/ ____/

APPROVAL BY DISTRICT UTILITIES

This utility work schedule is compete and acceptable to FD	OT.
FDOT Rep	Date//
Name	
Title	

SECTION A: SUMMARY OF UTILITY WORK

The below days are the total numbers of days shown for all activates in Section C of this utility work schedule. The breakdown of how these days are to be incorporated into the FDOT project and the dependence of these days upon the completion of other activities by the UAO or others is shown in Section C.

Days prior to FDOT project construction:

Days during FDOT project construction:

SECTION B: UAO SPECIAL CONDITIONS/CONSTRAINTS

Rule 14-46.001 F.A.C. Page _ of _

Florida Department of Transportation UTILITY WORK SCHEDULE

Financial Project ID: _			
Utility Company:			
FDOT Plans Dated:	/	/	

SECTION C: UAO'S WORK ACTIVITIES

Act.	Utility Facility (type, size, material,	From Station	To Station	Utility Work Activity	Dependent Activity	ТСР		ar Days
No.	(type, size, material, status)	/Offset	/Offset	Activity Description	Activity	Phase	Prior to Const.	During Const.
								-
								-
-				<u> </u>				-
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	1							

Florida Department of Transportation **UTILITY WORK ESTIMATE**

FDOT PROJECT INFORMATION

Financial Project ID:	Federal Project ID:
State Road Number:	County:
FDOT Plans Dated:	District Document No.:

UTILITY AGENCY/OWNER (UAO)

Utility Company:	Job No. or Work Order No.:	
UAO Project Rep:	Phone:	E-mail:
UAO Field Rep:	Phone:	E-mail:

SECTION A: ITEMIZED COST ESTIMATE

Item	Item Cost (\$)	Overhead (%)	Item Cost + Overhead (\$)
Preliminary Engineering			
Right of Way Acquisition			
Construction Engineering			
Construction Labor			
Materials and Supplies			
Transportation & Equipment			
Contract Construction			
Miscellaneous Expenses			

Total Cost Estimate =>

SECTION B: DEDUCTIONS

SECTION B	B: DEDUCTIONS	SECTION C: REIMBURSEMENT
Item	Item Value (\$)	Total Cost Estimate from SECTION A =>
Salvage Value		Total Deductions from SECTION $B \Rightarrow$
Betterment		
Extended Service Life		Total Reimbursement* =>
		*Update the estimated Total Reimbursement for changes in excess of 10%
Total Deductions =>		

UTILITY SIGNATURE

UAO Rep	 Date//
Name	-
Title	 _