GUIDEBOOK FOR UTILITY RELOCATION

Related to TDOT Construction Projects

February 2012

FIRST EDITION

Tennessee Department of Transportation

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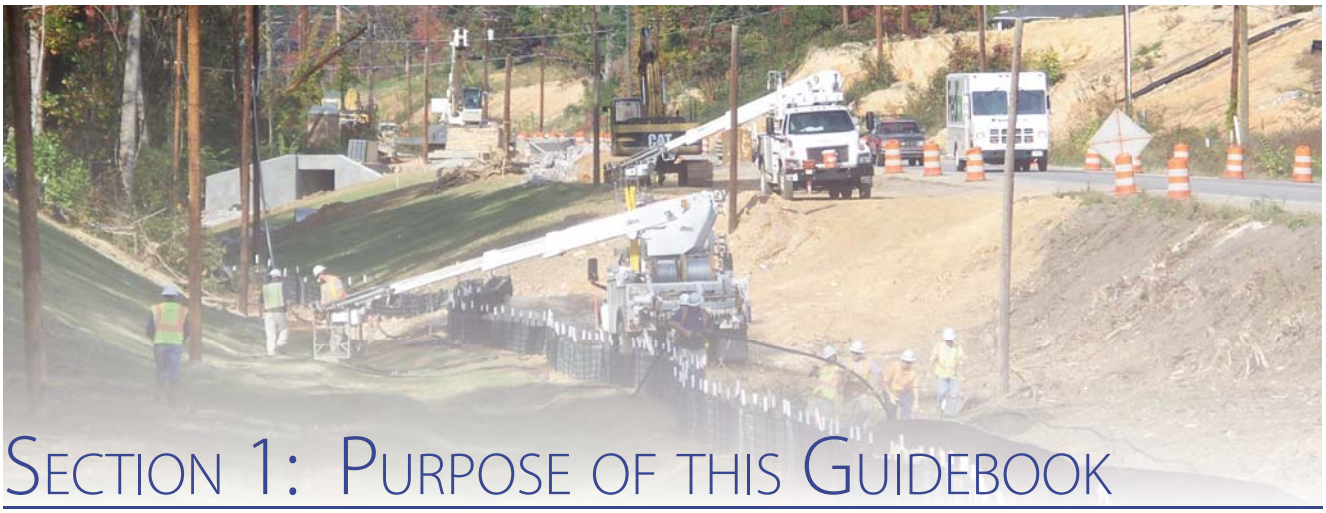

Section 1: Purpose of this Guidebook

The purpose of the TDOT Guidebook for Utility Relocation is to clearly illustrate the coordination process that Utility owners will follow when their utility facilities are located within the limits of a TDOT highway construction project. The extent of TDOT's coordination with a Utility will depend on the impact of the proposed highway construction on the Utility's facilities.

Utility coordination is an essential element of highway construction projects since utilities are most often found within or adjacent to the highway right-of-way (ROW). Coordination must begin early between TDOT and Utility owners and continue through the project development process and construction in order to help reduce costs, delays, interruption of utility services, and public inconvenience.

To avoid delays to State highway projects, a Utility must do the following prior to the start of construction:

- Plan for their relocation project;
- Budget necessary funds;
- Design their facilities; and
- Obtain necessary utility easements or property outside the proposed highway right-of-way.

For utility relocation work performed prior to the State construction project, the Utility must also:

- Obtain any necessary permits including but not limited to environmental and railroad;
- Order and receive materials;
- Schedule construction crews; and
- If necessary, schedule a service interruption period for the relocation.

If the Utility wants its relocation construction work to be included in the State's construction project, the Utility must submit its final plans to TDOT in accordance with the Department's schedule for the project letting, which is no less than sixteen (16) weeks prior to the scheduled letting date.

This Guidebook will help the Utility owner understand their obligations and the required submittals necessary to successfully plan, schedule, and implement utility relocation in order to meet statutory requirements, avoid delay, and minimize costs of project construction conflicts.

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This Guidebook describes:

1. Coordination and scheduling procedures to identify utility conflicts on State highway construction projects and to develop timely and economical solutions being mutually acceptable as much as possible.
2. Utility owner obligations for developing plans and specifications, obtaining permits and easements, and meeting schedules.
3. The TDOT Utility Relocation Item Number System.
4. Responsibilities required of TDOT, the Utility owner, and the construction contractor personnel in order to successfully implement the proposed utility relocation work.

In the electronic version of this document, references and required forms described in the Guidebook are hyperlinks. Clicking on the highlighted text will take the reader directly to the website location for that item.

Click on the **ORANGE HYPERLINKS** to open a website or online document in a pop-up window.

Relationship to Other Guidelines and Specifications

This Guidebook has been developed using available information from other TDOT resources including:

- TDOT Utilities Office website;
- TDOT Utility Manual;
- TDOT Local Government Guidelines for the Management of Federal and State Funded Transportation Projects; and
- TDOT Construction Specifications, Special Provisions and Circular Letters.

In case of conflict with this Guidebook, the information shown in the TDOT resources listed above shall prevail. This document is provided as guidance concerning the Department's procedures for utility relocation on TDOT construction projects and does not compile all the information available from the other TDOT resources. Utility owners should contact the TDOT Regional Utility Coordinator (RUC) at their local TDOT Region Utility Office when they have specific questions about the procedures or about individual projects and circumstances.

This Guidebook is only for utility relocation work associated with highway construction projects. For other utility construction on State right-of-way, permits are required. The required permit forms can be found on the TDOT Utilities website. Contact the TDOT RUC at the local TDOT Region Utility Office for more information regarding permitting.

Special Chapter 86 Requirements

The Tennessee Code was changed with the 2003 Public Chapter 86 legislative action to give the Commissioner of the Department of Transportation the authority to reimburse utility relocation associated with TDOT roadway construction projects. The Commissioner is not required to reimburse the Utility for relocation costs of existing facilities that occupy public right-of-way (city, county, or state), nor are all Department projects eligible for reimbursement under the provisions of this statute. (Note that existing utility facilities outside public right-of-way for which the Utility has a property right are reimbursable under U.S. Constitution 5th and 14th Amendments regarding property.) Additionally, there are both percentage and cap limits to the reimbursable amount. The reimbursement rate applied to utility districts, utility cooperatives, or municipal utilities is currently 75% while the reimbursement rate for all other companies is 100%. All reimbursements have a $1.75 million cap limit. (Refer to the current Department Policy No. 340-07.)

The Department will make the determination of whether utility relocation will be reimbursable on a TDOT construction project. When the Department distributes the Right-of-Way plans to the Utility, it will inForm the Utility in the accompanying Engineering Authorization letter (see Appendix D3 for example) if the project is Chapter 86 qualified. This notice officially begins the time period within which the Utility must respond to the Department per State Statute in order to meet the requirements

of Chapter 86. On Chapter 86 qualified projects, the individual utility's eligibility for reimbursement is determined in accordance with State law:

1. Submittal of engineering relocation plan, estimate of cost, and schedule of calendar days within the time provisions of TCA 54-5-854(b);
2. Enter into an agreement to include the relocation work in the Department's highway construction contract or to remove all utility conflict prior to the letting of the department's construction contract;
3. If required by law, have a valid permit to locate on the public highway right-of-way.

Upon receipt of the plans, if the Utility does not respond within the time limit specified in TCA 54-5-854(b), any Chapter 86 eligibility will be forfeited.

TCA 54-5-854(b) – Within one hundred twenty (120) calendar days following the receipt of the plans, the owner shall mark on the plans, or on a copy of the plans, the approximate vertical and horizontal locations of underground utility facilities, approximate horizontal location of above-ground utility facilities, a description of each of its existing utility facilities and any proposed new location of the facilities and additional facilities within all rights-of-way shown on the project plans, and prepare a plan and a schedule of calendar days to accomplish the proposed new location. The project plans, or a copy of the plans, and the plan and schedule of calendar days, shall be returned to the department in care of the person whose name and address are listed on the project plans. Should coordination with other owners be required in order for an owner to prepare a plan and schedule of calendar days, or should changes to the project plans cause the Utility to alter its relocation plan or schedule, then additional time shall be allowed by written approval by the Department, but in no case shall the additional time exceed the original one hundred twenty (120) calendar days by more than an additional forty-five (45) calendar days.

If the Utility does not respond within the time limit specified in TCA 54-5-854(b), any Chapter 86 eligibility will be forfeited. The Code does not give the Commissioner the authority to wave the time limit provisions of the Code, so it is mandatory for and solely the responsibility of the Utility to meet these time limit provisions to maintain its Chapter 86 eligibility for the project. Even if the project is initially deemed not to be Chapter 86 qualified, the Utility is still required (and it is in the Utility's best interest) to respond within the 120-day timeframe in case such funding becomes available.

The utility coordination process shown in this Guidebook provides information about Chapter 86 reimbursement for both move-prior and move-in State contract utility relocation work. For more detailed information about Chapter 86 requirements, see the TDOT Utilities Office website.

For utility relocation required in non-Chapter 86 projects, reimbursement for relocation costs depends on the percentage of the Utility's facilities that are on public or private property or easement. If the Utility has the property rights where their facilities are located, then the cost of obtaining new property rights is reimbursable. See Step 3J in Section 2 for various contract types that include reimbursement.

The TDOT Utilities Office website provides links to the following:

- Required Forms for Utility Relocation
- References regarding utilities on State ROW and Chapter 86
- TDOT Region Utility Coordinators (RUC) contact information

Section 2: Process for Identifying and Implementing Utility Relocation

The utility coordination process outlined in this section corresponds to the project phases in the TDOT project delivery process (i.e., from project initiation through construction). These are the milestones in the TDOT project delivery process where the Utility has the opportunity to be involved in the project development. The flowchart on the next page shows each step in the project development and delivery process where the Utility is contacted, receives information, and/or is required to provide information, letters, forms, or plans.

Following the flowchart, a narrative of the contacts made, work items and submittals required, and other pertinent information is provided for each step in the flowchart, including the corresponding TDOT forms and/or submittals required of the Utility. In the electronic version of the Guidebook, clicking on one of the process steps in the flowchart will take the reader directly to the process description for that step. In addition, clicking on the Form name will take the reader to that Form on the TDOT Utilities Office website.

Handouts from the 2011 Utility Workshops held in each Region are included in the Appendix D. Additional information contained in those handouts are linked to the appropriate steps in the narrative. In addition, a list of common errors regarding utility plan sheets is included in the appendix as well.

Utility Relocation Process for

2 Utility Relocation Process

Phase 1 | **Phase 2** | **Phase 3**

Project Initiation & Environmental Studies

1A Early Project Utility Contact

1B Utility Report for Location Study

Preliminary Design Plans

2A Preliminary Plans Field Review / PS&E Meeting

Right-of-Way Plans

3A ROW Plans Field Review / PS&E Meeting

3B ROW Plans Distributed

3C Initial Utility Response

3D Utility Request to Use Consultant

3E Utility Requests CADD Plans

3F Utility Reimbursement Request

3G Utility Requests Additional 45 Days

3H Utility Deconfliction Meeting

3I Utility Submits 'A' Date Utility Package

3J Utility Contract Executed

120-Day Maximum Time Limit per State Statute!

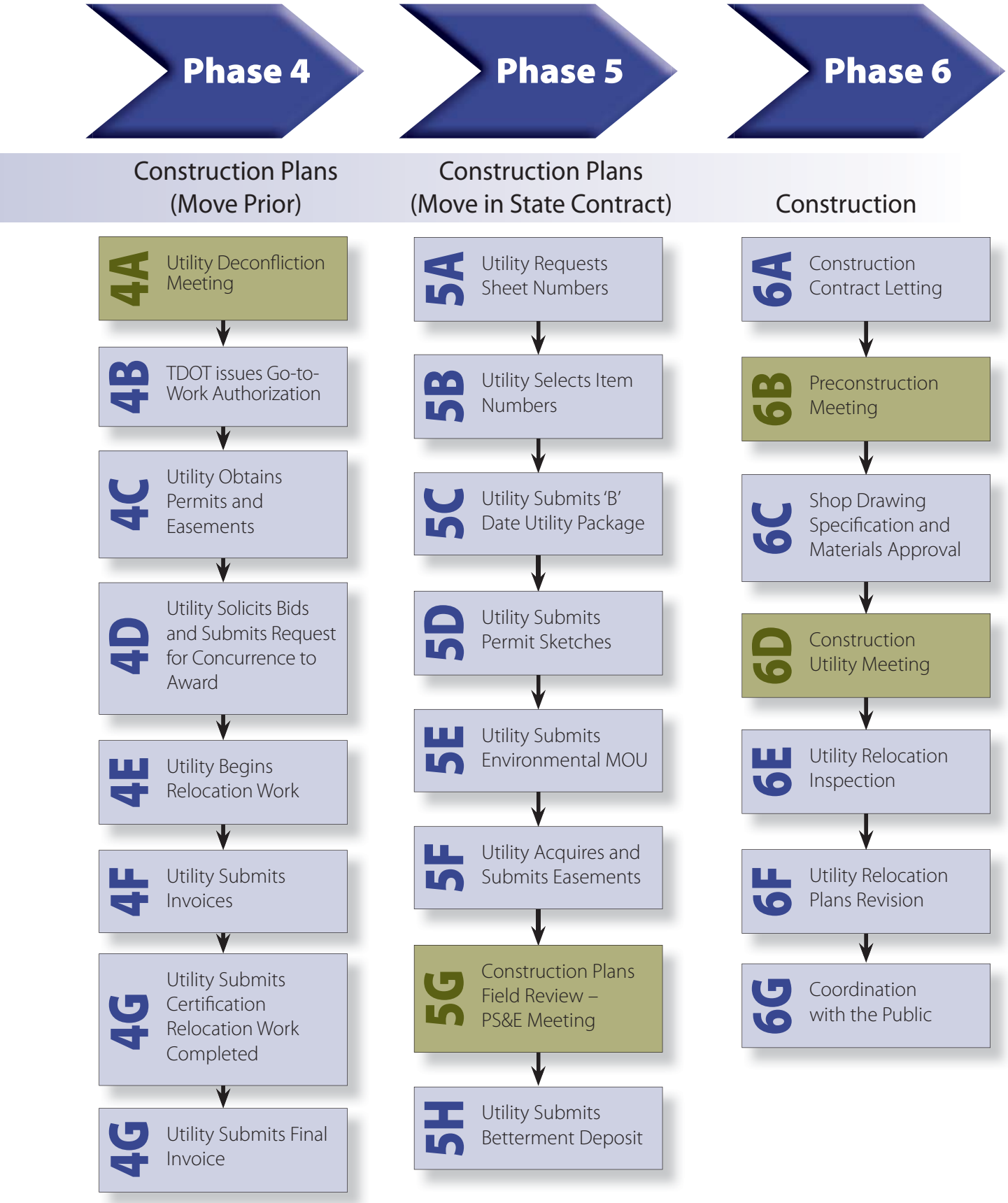
LEGEND

Process Step Number

1A Process Step or Event

2A Meeting Attended by the Utility

TDOT Construction Projects



Phase 1 – Project Initiation & Environmental Studies

Utility Coordination Process Step	Required Forms and/or Submittals by the Utility
STEP 1A Early Project Utility Contact The Utility is contacted by TDOT by registered mail to see if the Utility has any facilities in the proposed project area. If the Utility responds 'yes,' the Utility's name will be placed on a list for further coordination and contact.	Utility responds to TDOT's letter declaring whether or not any of their facilities are within the proposed project area.
STEP 1B Utility Report for Location Study The Utility is contacted by TDOT (or their consultant) to gather information about the Utility's facilities within the limits of the subject project and identify potential conflicts and the associated costs to relocate the infrastructure. A Utility Report is prepared by TDOT (or their consultant) that includes a preliminary cost estimate for the utility relocations.	Utility provides information about their facilities within the proposed project limits. Critical elements including high cost items are identified.

Phase 2 – Preliminary Design Plans

Utility Coordination Process Step	Required Forms and/or Submittals by the Utility
STEP 2A Preliminary Plans Field Review / PS&E Meeting The Utility receives a set of preliminary roadway design plans to review for the purpose of identifying any utility conflicts. This is the first chance for the Utility to see the design and provide input. The Utility is invited to attend the field review meeting for the project, where any utility conflicts should be voiced to TDOT and the design team. This is an opportunity for the Utility to request consideration for the roadway design to be adjusted to avoid utility conflicts, if possible. The Utility is urged to attend this very important meeting, but if the Utility is unable to attend in person, comments may be submitted to TDOT prior to the meeting.	Utility provides comments at the PS&E meeting or submits comments to TDOT prior to the meeting.

Phase 3 – Right-of-Way Plans

Utility Coordination Process Step	Required Forms and/or Submittals by the Utility
STEP 3A **ROW Plans Field Review / PS&E Meeting** The Utility receives a set of preliminary ROW plans to review for the purpose of identifying any utility conflicts. The Utility is invited to attend the field review meeting, where any utility conflicts should be voiced to TDOT and the design team. If the Utility is unable to attend the meeting, comments may be submitted to TDOT prior to the meeting.	Utility provides comments at the PS&E meeting or submits comments to TDOT prior to the meeting.
STEP 3B **ROW Plans Distributed (Day 1 of 120-Day Max. Deadline)** The Utility receives an authorization letter (see Appendix D3 for example) accompanied by ROW plans and cross-section plans, which will indicate whether the relocation costs are Chapter 86 eligible. The plans are delivered by registered mail (e.g., FedEx, certified mail, signed receipt) in either hard copy or electronic CD per the Utility's preference. The letter includes the 'A' date deadline for the Utility's initial response per State Statute and the 'B' date deadline for submitting final utility plans for inclusion in the TDOT construction contract (i.e., move-in) which is a minimum of sixteen (16) weeks prior to the letting. **NOTE: The period of 120 days within which the Utility must respond to TDOT per TCA 54-5-854(b) begins on the date that the Utility receives the plans.** If the project is not Chapter 86 qualified, the Utility still must adhere to the 120 day deadline because the project may become Chapter 86 qualified at a later date.	The Utility must provide proof of a permit when their existing facilities are on State ROW and they are seeking reimbursement under the provisions of Chapter 86. If the proposed Utility relocation is not on State ROW, the Utility must have an easement or property rights. If the Utility has existing property rights, they must relate that to TDOT for consideration for reimbursement of replacement property rights.

Phase 3 – Right-of-Way Plans

Utility Coordination Process Step	Required Forms and/or Submittals by the Utility
STEP 3C **Initial Utility Response** After receiving the ROW plans, the Utility must respond to TDOT as soon as possible with one of the following responses: 1. No conflicts; 2. Utility will relocate facilities prior to the TDOT construction project; or 3. Utility wants relocation work included in TDOT's construction project.	Letter with Initial Utility Response
STEP 3D **Utility Requests to Use Consultant** After receiving the ROW plans, the Utility must also decide as soon as possible whether they will be utilizing consultant services for development of their relocation plans. If the Utility wishes to use a Consultant, then the Utility must send a letter requesting approval to use a consultant along with the required forms and the consultant's scope of work to TDOT. **NOTE:** Approval must be received from TDOT **prior** to incurring any costs from the consultant if the Utility is seeking reimbursement. Reimbursement will be limited to the Estimate of Engineering Cost maximum ceiling amount. Any increases must receive written approval from TDOT prior to incurring additional costs.	Letter requesting approval of use of consulting services Consultant Scope of Work Certification of Consultant (Form 2011-13.1) Memorandum of Understanding (Form 2011-13.2) Estimate of Engineering Cost (Form 2011-16, p.1.1) If consultant fees are based on a 'continuing contract,' then a copy of Continuing Contract between the Utility and the consultant must be included.
STEP 3E **Utility Requests CADD Plans** Utility (or their Design Consultant) requests CADD plans, Bridge plans, and/or Cross-Section Plans for use in development of their utility relocation plans.	CADD Disclaimer (Form 2004-14) **NOTE:** If the Utility has a CADD disclaimer Form on file at the Region Utilities Office, this Form is not required to be resubmitted.

Phase 3 – Right-of-Way Plans

Utility Coordination Process Step	Required Forms and/or Submittals by the Utility
STEP 3F **Utility Reimbursement Request** Utility MUST submit a letter of declaration for reimbursement in order to stay eligible for Chapter 86. If the project status changes, the Utility remains eligible. It should be noted in the letter if the Utility requires an accelerated schedule. The following items must be covered in the letter: • Private Easement/Property • Move Prior/Before Construction Letting • Include Work in State Contract • Utility facilities are not on project • Utility not requesting reimbursement and will move at No Cost	Utility Declaration for Reimbursement Letter This letter can be included in the 'A' Date Package.
STEP 3G **Utility Requests Additional 45 Days** By State Statute, if there is a revision to the State's plans or if the Utility must coordinate with other Utilities prior to 120 days after distribution of the ROW plans, and the Utility needs additional time to prepare their 'A' Date Package, the Utility must make a request **prior to the 120-day time limit** for the additional 45 day extension allowed per TCA 54-5-854(b).	Utility Request for 45-Day Extension
STEP 3H **Utility Deconfliction Meeting(s)** TDOT or their utility coordination consultant meets with all Utilities to address any conflicts and discuss sequence of relocation work. Discussions may include joint easements and trench lines, etc. Multiple meetings may occur. The Utility can obtain information from TDOT at these meetings regarding possible conflicts with their utility relocation including signal pole foundations, bridge foundations, storm sewer, and retaining walls. **NOTE:** Utility deconfliction meetings can continue into the Construction Plans phase.	Utility attends meetings and provides comments.

Phase 3 – Right-of-Way Plans

Utility Coordination Process Step

Required Forms and/or Submittals by the Utility

STEP 3I

Utility Submits 'A' Date Utility Package Prior to Day 120

The Utility submits the complete utility package, including location approval plans (also called 'rainbow plans' – see Appendix F), preliminary cost estimate and schedule. If there are any proposed attachments of utilities to structures, check plans shall be included for TDOT's approval.

It should be noted that additional costs for 'bettered' facilities are not compensable. The cost estimate includes the cost of any betterment to the facilities, but reimbursement is limited to functionally in-kind replacement only.

NOTE: The 'A' Date Package must be submitted Prior to Day 120 (or prior to Day 165 if an additional 45 days was approved). If this deadline is not met by the Utility, any Chapter 86 eligibility is forfeited. Meeting this 120-day deadline is State Law, not TDOT policy. TDOT cannot relieve the Utility of meeting this requirement nor allow any additional days past the statutory time limit.

Rainbow Plans (PDF and one set of half-size plans) with stations and offsets.

All pages of the Standard Estimate Spreadsheet (Form 2011-16), including:

- Sheet 1.1 - Consultant Engineering Cost
- Sheet 1.2 - In House Engineering Cost
- Sheet 2.1 - Site Cost
- Sheet 3.1 - Removal, Labor & Materials
- Sheet 4.1 - Installation, Labor & Materials
- Sheet 5.1 – Labor
- Sheet 6.1 - Relocation Estimate (indicate percent of public and private), including:
- Engineering Cost
- Construction Cost
- Replacement Easement Cost
- Betterment Cost
- Sheet 6.2 - Chapter 86 Certification
- Sheet 7.1 - Move Prior Obligation
- Sheet 8.1 - Calendar Days

Three (3) sets of check plans or PDF file for any proposed attachments to structures.

STEP 3J

Utility Contract Executed

If the Utility is due compensation, TDOT sends the Utility a contract that includes the reimbursement limits. The typical types of contracts for reimbursement include:

- Percentage Contract (Move Prior or Move In State Contract) %Public / % Private
- Chapter 86 Move Prior
- Chapter 86 Move In State Contract
- Easement Replacement
- Pipelines (special contracts for transmission pipelines)

Utility executes contract and returns to TDOT.

Phase 4 – Construction Plans – Move Prior

Utility Coordination Process Step	Required Forms and/or Submittals by the Utility
STEP 4A Utility Deconfliction Meeting (if needed) TDOT or their utility coordination consultant meets with all Utilities to address any conflicts and discuss sequence of relocation work.	Utility attends meetings and provides comments.
STEP 4B TDOT Issues Go-to-Work Authorization for Move Prior Relocation Work	
STEP 4C Utility Obtains Permits and Easements The Utility must obtain all permits and easements necessary for relocation work that occurs prior to TDOT construction. This will include obtaining all environmental construction permits or the submittal of the Environmental Agreement (Form 2011-20) if less than one (1) acre is being disturbed. The Utility is responsible for staking the ROW and should include an item for survey in their cost estimate, as well as for clearing and grubbing since these activities will occur prior to the State contractor occupying the project.	Environmental Agreement (Form 2011-20) (if less than 1 acre disturbed)
STEP 4D Utility Solicits Bids and Submits Request for Concurrence to Award If the Utility takes bids on its relocation work, it must submit a request to TDOT for concurrence in the award of the work. If approved, TDOT will send the Utility a notice to proceed with the work.	Request for Concurrence to Award

Phase 4 – Construction Plans – Move Prior

Utility Coordination Process Step	Required Forms and/or Submittals by the Utility

Utility Begins Relocation Work

STEP 4E

The Utility must notify TDOT Construction of the intended date to begin utility relocation construction no less than 3 days prior to beginning of work.
For work performed prior to TDOT construction, the Utility has the following responsibilities:

- Coordinate the relocation;
- Construct the relocation;
- Provide all environmental construction permits (Notice of Coverage);
- Schedule inspectors as required by the environmental construction permits;
- Provide erosion prevention and sediment control;
- Clearing and grubbing (must get TDOT authorization);
- Disposal of waste;
- Traffic control;
- Surveying; and
- Utility easements

NOTE: If TDOT has not acquired the proposed ROW prior to the utility's need to access the property, the utility will be required to obtain easements at not cost to the State. The RUC in the Region Utility Office can assist in determining ROW availability.

Utility Submits Invoices

STEP 4F

The Utility submits invoices to the Regional Utility Office who in turn will get approval from the Construction Office prior to making payment. All material with iron content must meet the Buy American Federal Regulations (23CFR635,410) requirement, and proper documentation of compliance must be maintained by the Utility Inspector.

See Section 4 of the Guidelines for more information on Buy America requirements.

The **Invoice** must be in same format as the estimate.

Progressive payments are capped at 80%.

Billing number must be sequential (#1, #2, etc.).

Accumulated cost to date and accumulated payments received must be shown.

Phase 4 – Construction Plans – Move Prior

Utility Coordination Process Step	Required Forms and/or Submittals by the Utility
STEP 4G **Utility Submits Certification Relocation Work Completed** Once the Utility completes the relocation, prior to the contract obligation date, they must secure the approved Contract Obligation Certification Form from the TDOT Construction Office Project Supervisor to ensure eligibility for reimbursement. Utility submits the Form to the Regional Utility Office and Construction Office certifying that all utility relocation work has been completed.	2011-16, p. 7.1 - Contract Obligation Certification Form (need signature of TDOT Construction Supervisor) **NOTE:** Utility must keep the Original signed Certification (TDOT Construction Office returns the original to the Utility and copies the Region Utility Office)
STEP 4H **Utility Submits Final Invoice** Utility submits final invoice to the Regional Utility Office who in turn will get approval from the Construction Office prior to making final payment. **Note:** A final Bill over the contract amount requires an estimate line item justification.	**Final Invoice** must be submitted within one (1) year of project completion.

Phase 5 – Construction Plans – Move in State Contract

Utility Coordination Process Step	Required Forms and/or Submittals by the Utility
STEP 5A **Utility Requests Sheet Numbers** After the rainbow plans are approved by the TDOT Utility Office, the Utility can proceed with the development of detailed relocation plans. The utility requests sheet numbers for their plans from the Region Utility Office.	Request for sheet numbers

Phase 5 – Construction Plans – Move in State Contract

Utility Coordination Process Step	Required Forms and/or Submittals by the Utility
STEP 5B **Utility Selects Item Numbers** Using the standard item number list for utilities, the Utility selects the appropriate item numbers for the relocation work to be performed. Go to the TDOT Construction Division website to view the list of Standard Utility Item Numbers. If a Utility cannot find a standard item number that covers a particular item of relocation work, the Utility will contact TDOT for direction. Utilities cannot assign item numbers themselves. The Utility must complete and submit the Request for Utility Item Number Form found in the Appendix A. The TDOT Utility Office in coordination with the TDOT Construction Contract Office will provide the necessary unique item numbers if it is determined that standard item numbers do not meet the needs of the Utility. See Section 4 of the Guidelines for additional information when new or specialty item numbers are required.	Request for Utility Item Number Form (only when needed)

Phase 5 – Construction Plans – Move in State Contract

Utility Coordination Process Step

STEP 5C

Utility Submits 'B' Date Utility Package

Utility submits relocation plans in TDOT format, Utility Item Spreadsheet, and utility construction specifications by the date specified by TDOT to be included in the Department's project for contract letting.

Depending on the volume, specifications can be shown on the utility relocation plans or be provided as a separate document to be included the bid book along with the Department's other construction specifications for the project. Utility construction specifications should include:

- Time period of acceptable service outage
- Required License, Certification, Drug testing of workers submitted to Utility
- Liability insurance submitted to Utility
- Industry standards, safety standards, and material standards
- Approval of shop drawings, field changes, and substitution of materials or methods by the Utility
- Name, address, phone, email, fax, cell phone of utility approval contact.

Material specification cannot be sole source. Specification can be given for at least three (3) material suppliers or as approved by the utility contract provided.

All materials with iron content must meet the Buy America Federal Regulations (23CFR635,410) requirement. See Section 4 of the Guidebook for more information.

See common errors in Appendix D6 for additional guidance regarding utility plans. Also, see Appendix G for instruction regarding line styles and designations for utility plans.

Required Forms and/or Submittals by the Utility

Utility submits 'B' Date Package:

- Printed copy of completed Utility Item Spreadsheet
- PDF of relocation plans (black and white, 22"x34")
- PDF of color-coded relocation plans (22"x34")
- CAD files of relocation plans (dgn format)
- Modified Utility Spreadsheet (MUES) (Both a printed copy and a pdf copy)
- Electronic copy of Specifications (PDF format)

All electronic files are to be burned to a CD and submitted along with the printed copies of required materials

SENT TO CONTRACTOR: Construction specifications including the items listed under 'Utility Action'

Phase 5 – Construction Plans – Move in State Contract

Utility Coordination Process Step	Required Forms and/or Submittals by the Utility
STEP 5D Utility Submits Permit Sketches Utility prepares and submits permit sketches to TDOT for relocation work to be included in the roadway construction contract. See Section 4 of the Guidebook for more detailed information.	Permit sketches
STEP 5E Utility Submits Environmental MOU Operational Environmental Permits obtained by TDOT for the construction of the Utility's facilities via this memorandum of understanding will be assumed by the Utility once the facility is placed into operation in order that the Utility possesses the permit to operate and maintain.	Environmental MOU (Form 2011-19)
STEP 5F Utility Acquires and Submits Easements Any easements for utility facility installation or construction outside the proposed State ROW must be obtained by the Utility. Prior to the TDOT contract letting, even if the Utility's facilities will be entirely located within the State ROW, the Utility must obtain any easements for their facilities off the State ROW required for tree trimming, overhead lines, bore pits outside the ROW, etc. See Section 4 of the Guidebook for more detailed information.	Easements for Relocation Work
STEP 5G Construction Plans Field Review – PS&E Meeting Utility receives a set of preliminary construction plans to review for utility conflicts and is invited to attend the field review of the project.	Provide comments at PS&E Meeting or submit comments prior to the meeting.

Phase 5 – Construction Plans – Move in State Contract

Utility Coordination Process Step	Required Forms and/or Submittals by the Utility
STEP 5H **Utility Submits Betterment Deposit** Utility submits deposit for betterment work or any other (above CH86 cap) amount for which the Utility is responsible for the cost, if any. The TDOT Finance Office can provide specifics on the forms of deposits that are available.	Utility Deposit (Form 2011-17)

Phase 6 – Construction Phase

Utility Coordination Process Step	Required Forms and/or Submittals by the Utility
STEP 6A **Construction Contract Letting** TDOT takes bids and compares to Estimates. If deemed acceptable, the Department will award the project to the lowest responsible bidder. This step is shown only as a milestone event with no actions required of the Utility, except that the Utility may be asked to evaluate the utility item bids to provide subject matter expert opinions to variances from the estimated cost.	
STEP 6B **Preconstruction Meeting** Utility attends and provides contractor with issues concerning the Utility's relocation related to the schedule and coordination of the contractor's work. This is an opportunity for the Utility to meet the State highway contractor awarded the project (and representatives of the railroad, if involved) to address special issues or concerns of the Utility during construction.	Utility attends meeting and provides comments.

Phase 6 – Construction Phase

Utility Coordination Process Step	Required Forms and/or Submittals by the Utility
STEP 6C Shop Drawing, Specifications and Materials Approval Utility certifies all shop drawings, specifications and materials submitted by the contractor prior to work beginning. The Utility's contact for submittals from the contractor should be identified at the preconstruction meeting.	Certified shop drawings, specifications and materials to the contractor.
STEP 6D Construction Utility Meeting The TDOT construction inspection supervisor may hold project progress meetings with the Utilities involved in order to coordinate the utility relocation work with the roadway construction and address issues as they may arise.	Utility attends meetings and provides comments.
STEP 6E Utility Relocation Inspection The Utility Inspector is responsible for overseeing and certifying that the installation is constructed to safety and industry standards. Subsequent to TDOT approval, the utility inspector approves field engineered changes, approves substitution of materials or methods of installation, accepts progressive installation of utility facility, maintains all certified documentation of materials, and certifies the percentage of installation that has been completed in the daily diary. The Utility Diary is to be completed daily while work is being performed. See Section 6 of the Guidebook for more detailed information regarding inspection. The Utility is responsible for associated work with the public including work inside customer residences such as re-lighting pilot lights, re-establishing services, etc.	Project Utility Diary (Form DT-0667) Utility Item Certification/ Final Acceptance (Form DT-1716) Summary of Installed Utility Items (Form DT-1716A) **Note:** These 3 forms are found in Circular Letter 105-07.04

Phase 6 – Construction Phase

Utility Coordination Process Step	Required Forms and/or Submittals by the Utility
STEP 6F Utility Relocation Plans Revision A revised pay item or work item must first be approved using the Utility Field Change Form by TDOT Construction staff and the Region Utility Office. The Utility then must submit a Revision Request Letter with a revised Modified Utility Estimate Spreadsheet (MUES) Excel Spreadsheet and revised utility plans. All changes to the utility construction plans in the State contract must be revised by the Utility, signed and sealed, and submitted to the TDOT Utility Office for processing a construction revision. See Section 5 of the Guidebook for more detailed information.	Utility Field Change Form (See Appendix B) Revision Request Letter (2011-21) Revised Excel Spreadsheet (MUES)
STEP 6G Coordination with the Public Utility is responsible for utility customer interaction for the relocation work (e.g., notification of outages).	

SECTION 3: TDOT UTILITY RELOCATION ITEM NUMBER SYSTEM

Description of the Item Number System

The utility relocation item numbering system is grouped by utility type. Each utility category has a unique set of numbers that correspond with individual types of equipment and construction items. Wherever possible, the items represent assemblies that include all installation items associated with a complete in-place installation cost. For example, trenching of pipe would include the cost of opening and closing the trench, bedding material, marking tape, tracer wire, removal of spoils, surface restoration such as seeding or temporary restoration of driveways, sidewalks, roadways, etc. in accordance with the Utility's specifications and to minimum TDOT standards. The prime contractor is responsible for final restoration of roadway items such as asphalt, concrete and gravel.

The item numbers are assigned by utility type as follows:

Electric 790-xx.xx

Gas 791-xx.xx

Communications 793-xx.xx

Water 795-xx.xx

Sewer 797-xx.xx

CATV 798-xx.xx

Wherever possible, the items represent assemblies that include all installation items associated with a complete in-place installation cost.

Using the Item Number Spreadsheet

The Utility Relocation Item Number spreadsheet is located on the TDOT Utilities Office website and is presented in a Microsoft Excel format. The first column (A) contains the item number in TDOT format, for example 790-27.01. The second column (B) is the Item Short Description which meets TDOT's maximum 40 character limit and would be the description shown on the utility quantity sheet for move-in projects. For the item number used as the example, the short description is DBL CKT CROSSARM 15KV. The third column (C) is the UNIT of measure for payment of the item, which in this case is EACH. That is followed in the fourth column (D) by the Item Long Description which expands any acronyms or contractions used in the short description. For this example, the long description is DOUBLE CIRCUIT CROSSARM 15KV.

The fifth Column E includes any footnotes to the item number which would be shown on the Utility's relocation plans on the utility quantities Sheet UX-1. Each footnote on the utility quantities plan sheet must be uniquely numbered, and that number placed adjacent to the item number to which the footnote applies.

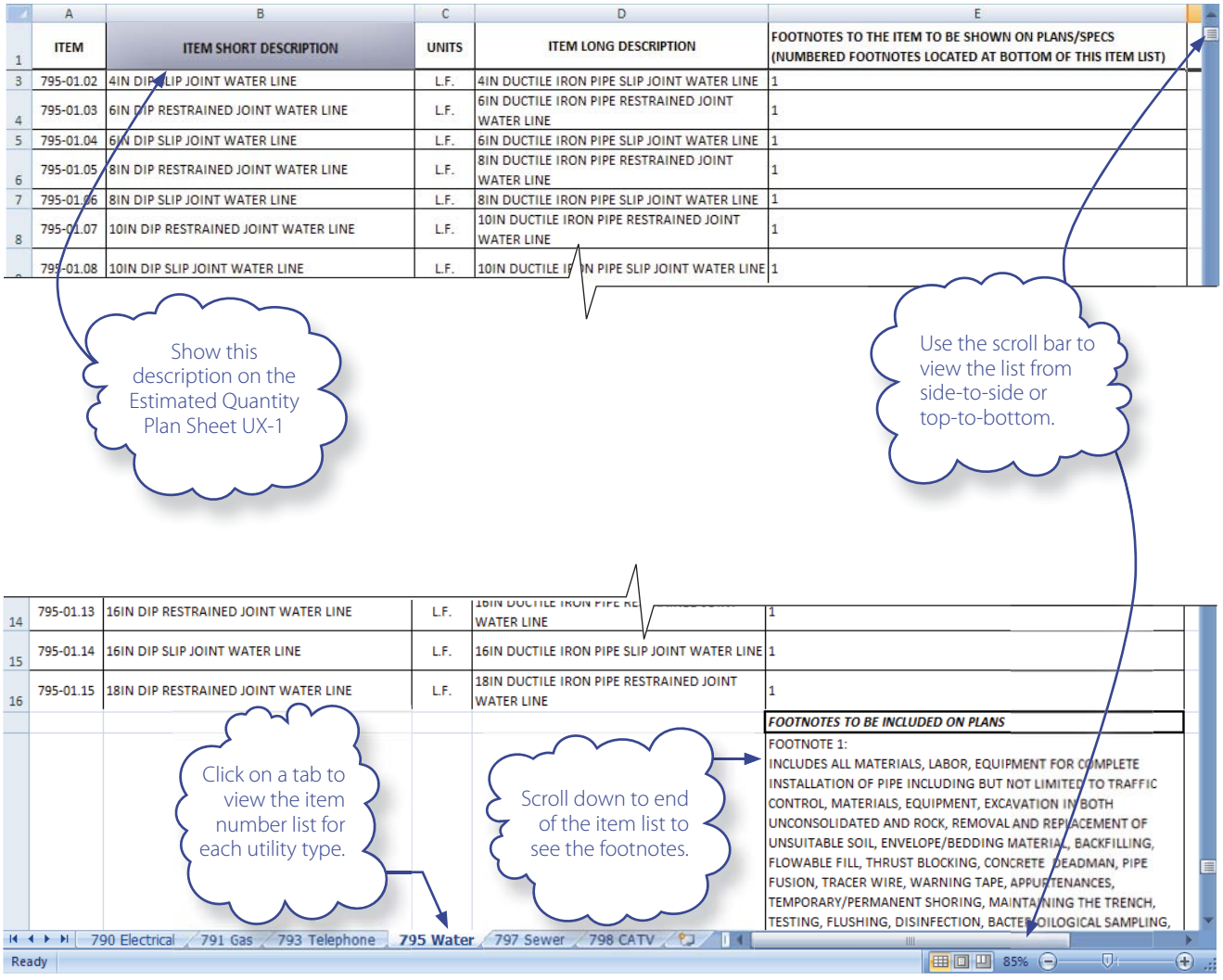
There is a sixth column available to the Utility which is an optional description used within the industry or by the Utility to identify an item of plant or assembly using their own standard designations. For example, these optional units are normally used within the electrical industry and were derived from the Tennessee Valley Public Power Association (TVPPA), Rural Electric Administration (REA), or Rural Utilities Service (RUS). This information could be helpful to utility contractors familiar to working for the Utility.

An example of a utility quantities sheet is shown in the Appendix C.

The Utility will select items from the spreadsheet that are needed for the utility relocation work to be performed. The spreadsheet can be searched by key words to find an appropriate item number. See the example search shown on the next page.

It is very important that the Utility use the utility relocation item numbers and descriptions provided so that historical data can be maintained by the Department. The standard item descriptions and units are **not** to be changed or modified by the Utility.

Utility Relocation Item Number Spreadsheet



Searching the Item Number Excel Spreadsheet

The Item Number Excel spreadsheet can be searched to quickly find a specific word or phrase, numbers, or combination of letters and numbers.

1. In order to start the search, click on the **Home** tab in the upper left.

2. Next, click on the **Find & Select** button in the top right hand corner, and then on the Find option from the drop-down menu. The **Find and Replace** box will appear. (TIP: use keyboard shortcut by pressing the Ctrl and the 'F' key at the same time [Ctrl+F], and the Find and Replace box will appear.)

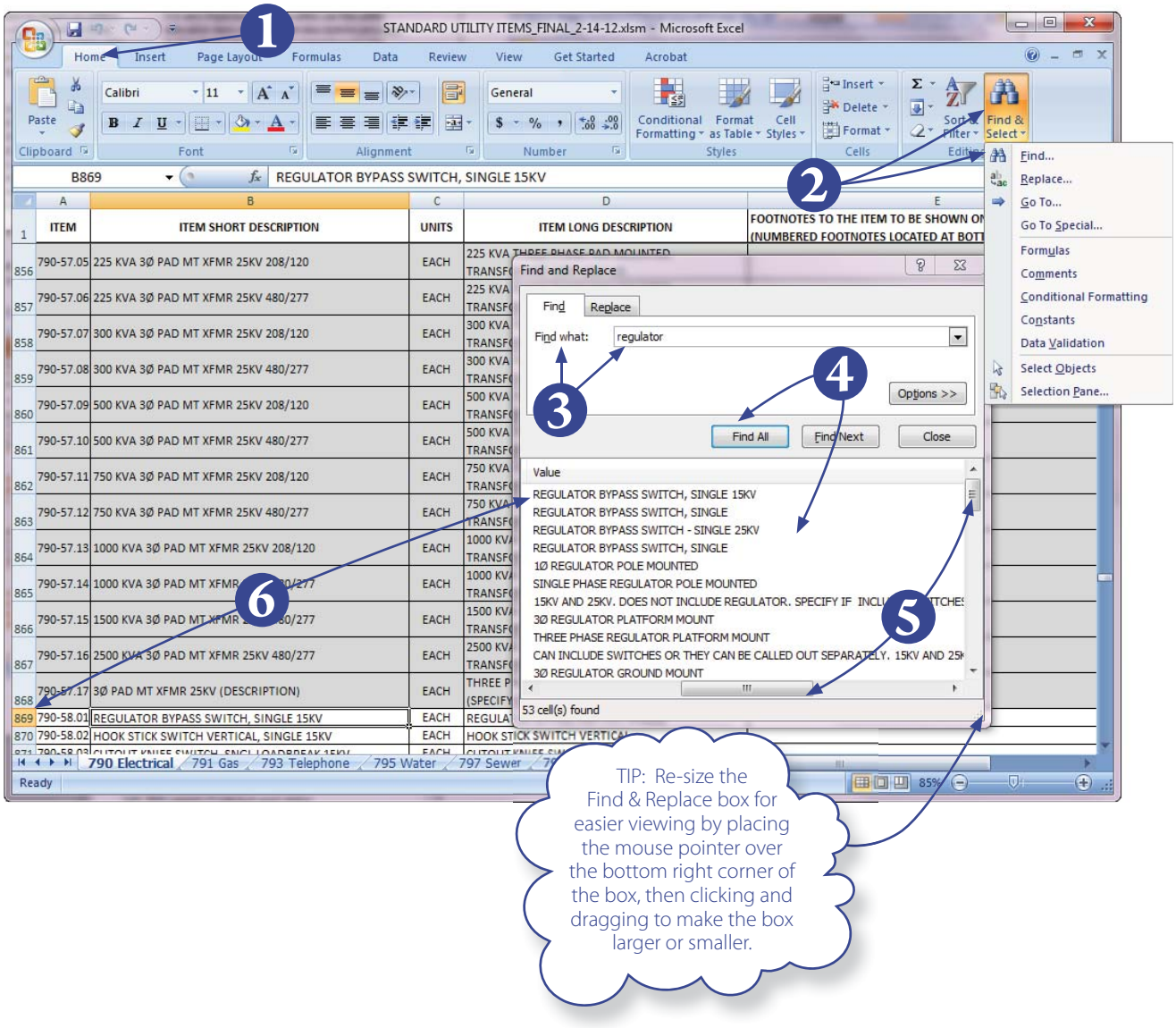
3. In the **Find What** box, type the text or numbers that you want to search for.

4. In the example below, a search in the 790 Electrical Series has been performed looking for the word 'regulator.'

   The **Find All** button was then clicked, and a list of ALL the occurrences of the word regulator in the 790 series are listed in the window.

5. To find the name of a specific regulator, scroll down.

6. Finally, by clicking on a specific regulator in the window, and the row in the spreadsheet that contains that regulator will be highlighted including its assigned item number.



When New or Specialty Item Numbers are Required

There may be occasions when a Utility wishes to use an item of different size than those provided in the list or wants to use a new item not found in the list. There have been provisions made in anticipation of this situation.

Within the Standard Item List, there are items with descriptions left blank for the Utility's Engineer to fill in for a size or type that is not included in the standard items. The Utility's engineer would fill in the desired size or type information within the (DESCRIPTION) area of the short description. The description should follow the size or type descriptions of the standard items and not exceed the total 40-character limit. For example, if a particular communications precast manhole size cannot be found in the list, then the Utility's Engineer can use the Item 793-14.07, MH PRECAST (DESCRIPTION). If the Utility wanted to use a 18-foot long by 12-foot wide by 7-foot high precast manhole, then the item short description would be:
MH PRECAST (18-FT L x 12-FT W x 7-FT H).

In the unusual instance when an item cannot be found in the Standard Item List, the Utility's Engineer must fill out the **Request For Utility Item Number Form** (see Appendix A) and forward the completed Form to appropriate TDOT Region Utility Office. If in the Utility's Engineer's opinion the item would be a recurring item, then he should make that known to TDOT on the Form so TDOT will make considerations to add the item to the Standard Item List on a permanent basis. If the item requested would likely be used only once or very rarely, then TDOT would assign an item number for one-time use only. There are item numbers in the Standard Item List reserved for TDOT use only just for these instances.

The standard item descriptions and units are ***not*** to be changed or modified by the Utility.

SECTION 4: GENERAL STANDARDS FOR UTILITY CONSTRUCTION

Erosion Prevention and Sediment Control

Prior-To Moves

For utility relocation that is done prior to the beginning of the TDOT construction project, the Utility is responsible for providing appropriate erosion prevention and sediment control (EPSC) for their relocation work.

The Utility will be responsible for performing EPSC inspections and other permit compliance items relative to its environmental construction permits. If the utility relocation work is ongoing when the TDOT construction project begins construction, the TDOT ESSC Inspector will inspect all areas within TDOT's ROW (including utility work areas), but excluding any utility work areas that are off the TDOT ROW. If directed by the TDOT Project Supervisor and if the Utility is in agreement, the TDOT EPSC Inspector will attempt to conduct joint EPSC inspections with the Utility's EPSC Inspector.

The project's QA/QC Project Assessment Team will begin QA/QC Project Assessments after the Prime Contractor starts TDOT project construction work using the QA/QC Project Assessment procedures. The QA/QC Project Assessment Team will assess all areas within TDOT's ROW, but will not assess off-ROW utility work areas.

In-Contract Moves

During the construction project, TDOT will provide on the plans the necessary erosion prevention and sediment control measures for the roadway construction within the proposed right-of-way. The roadway contractor will be responsible for installing these measures as specified in the Storm Water Pollution Prevention Plan (SWPPP) for the duration of the construction project. If the utility construction is outside the proposed ROW, the contractor shall be responsible for installing appropriate EPSC measures.

The SWPPP requirements for roadway construction may or may not be suitable or sufficient for the utility relocation work, particularly when the utility relocation work is the first item of work for the contractor. TDOT places additional EPSC notes on the roadway plans specific to the utility relocation work when such

For in-contract moves, the roadway contractor is responsible for ensuring that erosion control measures are in place prior to the start of any construction, including the utility relocation work.

work is included in the contract (see the "TDOT Design Guidelines", Section 6-290.04). The roadway contractor is responsible for ensuring that erosion control measures are in place prior to the start of any construction, including the utility relocation work. If suitable for the utility relocation work, the contractor may place the erosion and sediment control measures in accordance with the SWPPP. If installing the roadway construction erosion control at the time of the utility relocation work is not practical or suitable, the roadway contractor must submit to TDOT for approval a proposed erosion and sediment control plan that applies specifically to the utility relocation work. This erosion control plan is required regardless of the location of the utility relocation work (i.e., either within or outside the State ROW). TDOT approval must be received before the erosion and sediment control pay items for the roadway construction can be used to pay for any additional erosion control measures required for the utility relocation work.

The TDOT EPSC Inspector will be responsible for inspecting all areas included in the TDOT Construction contract. This includes both construction within the TDOT ROW and any utility work off-ROW. The QA/QC Project Assessment Team should include all areas included in the environmental construction permits in the QA/QC Project Assessment, including off-ROW utility work areas.

Permits and Easements

Prior-To Moves

For utility relocation work performed prior to the TDOT construction project, the Utility is responsible for obtaining all permits and easements/property rights. A NPDES (National Pollution Discharge Elimination System) Stormwater Construction Permit is required from TDEC if the utility work involves disturbing more than one (1) acre. If the utility work involves disturbing less than an acre, the utility shall complete and submit to TDOT the Environmental Agreement Form 2011-20 attesting that their work will not disturb more than one (1) acre. If streams, wetlands, or sinkholes are present on the project site, the Utility is responsible for obtaining Water Quality Permits from TDEC. The Utility shall obtain any other permits as required from other agencies such as the Corps of Engineers, TVA, TWRA, railroads, other state agencies, and local cities and counties.

In-Contract Moves

TDOT will acquire all permits for construction work in the roadway project including utility relocation work, ***except that Utilities are required to get their own railroad permits, TDEC water or sewer approval permits, or other operational permits required for the utility facilities.*** The TDOT Permitting Section will prepare the permit applications necessary for construction of the project based on the information supplied by the Utility, including any utility relocation work performed by the State contractor required outside the State ROW.

Outside the project ROW, the Utility will be responsible for acquiring all necessary easements/property rights. Failure to obtain these easements will result in the inability of the State contractor to relocate the facilities as designed and could severely impact the progress of the job. Therefore, it is necessary for the Utility to obtain these critical easements or property rights prior to the TDOT contract letting, preferably by the B date. Failure by the Utility to obtain critical easements in a timely manner could result in loss of relocation funding or penalties. The Utility shall also obtain any additional easements required for their facilities including, but not limited to, tree-trimming easements, pole and anchor easements, overhang easements, and special equipment easements. A list of all easements and availability dates should be shown on the Utility's plans along with a statement on the plans that conveys right-of-entry to the State contractor for the purpose of constructing the utility facilities.

Cut vs. Boring

During the utility design phase of a TDOT project, the Utility's designer may identify locations where the proposed facilities need to cross the existing roadway. It is critical that the installation of this utility crossing does not severely interfere with traffic flow in the area during construction. For this reason and for the safety of workers and drivers, ***TDOT requires that any proposed utility road crossing five (5) feet or deeper (measured to the bottom of the trench) must be installed as a bore.*** The Utility must make a request to the TDOT Utility Office for an exception to this policy on a case-by-case basis.

Any utility crossing that is less than five (5) feet deep, measured to the bottom of the trench, may be installed with an open cut as long as at least one (1) lane of traffic is maintained on a two (2) lane road or two (2) lanes of traffic (one [1] in each direction) is maintained on a four (4) lane road, and the OSHA requirements for worker safety in open trenches are followed. A traffic control plan to accomplish this work must be submitted to TDOT for approval by the State contractor if the work is move-in or by the Utility if the work is move-prior. The backfill for open cut crossings must be compacted to TDOT specifications to minimize settlement. The backfill shall consist of compacted 57 stone to the top of the pipe/structure and then flowable fill to the sub-grade. Steel plating may also be required if the crossing cannot be completed within one construction day. Steel plating must be in accordance with TDOT Utility Office practices for placement and restrictions during inclement weather. There may be exceptions to these general requirements but any deviation must be discussed with the TDOT Region Utility Office to obtain prior approval before any work is performed.

TDOT requires that any proposed utility road crossing five (5) feet or deeper (measured to the bottom of the trench) must be installed as a bore.

Betterment

If a Utility is due compensation for relocation, TDOT will reimburse the Utility only for a like-for-like functionally equivalent equipment replacement. Any proposed upgrade by the Utility of an existing facility would be considered 'Betterment,' and the additional cost above a like-for-like functionally equivalent replacement would not be compensable. For example, if a water company proposed replacing an existing four-inch cast iron pipe with a new ten-inch PVC pipe, this upgrade in size would be considered a betterment, and the additional cost would not be reimbursable. However, the change from cast iron to PVC would not be considered a betterment and would be reimbursed. In this case, TDOT would only reimburse the Utility for the cost for a four-inch PVC pipe replacement. In another situation, if the existing four-inch cast iron pipe is replaced with a new six-inch PVC pipe, and the waterline has fire service for which TDEC requires a minimum six-inch pipe, then the increase in size would be reimbursed due to the mandated minimum.

However, an exception can occur when the Utility has a local standard that dictates the replacement of a certain type of facility deemed as antiquated with a newer upgraded facility. An example would be where an electric company no longer places wood poles but instead has documented standards or policy that require steel poles for all new installations. In this case, the full cost of the replacement of the existing wood pole with the new standard

but must be an ongoing and documented policy applied throughout the Utility's entire system.

If a change of material is needed by the Utility after the job goes to construction, then a Utility Field Change Form (see Appendix) must be filled out and signed by all parties involved in the project for processing. The Field Change Form must be reviewed and approved by the TDOT Region Utility Office who will note whether the change in material is compensable or considered a betterment or non-compensable.

Salvage and Return of Materials to the Utility

(Including Hazardous Materials)

Salvage must be considered and accounted for when designing the utility relocation. The estimated value of the salvage material is captured on Form 2011-16 and is credited to TDOT, since the item removed retains a value and can be re-used by the Utility. Salvage is reflected in the final reimbursement contract with the Utility. Salvageable items include, but are not limited to, equipment such as transformers, street lights, and traffic control cabinets. These salvageable items must be specified on the Utility's plans and accounted for in the Form 2011-16 figures. The Utility should specify to the contractor exactly what is to be retained, any protection of equipment upon removal, and where and how it will be stored and/or delivered. Unless a drop-off location is specified on the Utility's plans, the Utility will be responsible for picking up the salvageable items from the project site. All other items not specified as salvage on the plans and on Form 2011-16 become the property of the contractor for disposal.

All known or suspected hazardous materials must be identified on the Utility's plans, and the proper method of disposal specified for the contractor, unless the Utility specifies on the plans that the hazardous material is to be returned to them. The procedures for salvageable items above would then be used. This would include, but not be limited to, electrical transformers, creosote material, asbestos conduits/wraps/pipes, or other similar materials.

Any salvageable items must be specified on the Utility's plans and accounted for in the Form 2011-16 figures.

Retired-In-Place Facilities

(Including filling with grout, gravel or sand)

In those situations where parts of existing facilities will remain in-place on State ROW but not in active use, the Utility shall specify the location of these facilities and note that they shall be retired-in-place. A record of the location of retired-in-place facilities shall be maintained by the Utility. The State does not allow the abandonment of facilities within State right-of-way, nor will the Utility be reimbursed to remove utility facilities that do not conflict with construction. The Utility may opt to remove the facility at the cost of the Utility during the highway construction in order to remove potential liability. Facilities to be retired-in-place that are located under the roadway, such as pipe, shall be filled with flowable fill/grout and capped and sealed in accordance with TDOT Specifications. Manholes shall not be allowed to remain within the roadway. Manholes that are retired within the ROW shall be filled with sand or gravel.

Driveway, Sidewalk and Roadway Restoration

Driveway, sidewalk and roadway restoration shall be part of the in-place cost of placing the utility item within the ROW. The intent is that a temporary restoration will be done by the State contractor or subcontractor when constructing the relocated utilities, and the State contractor shall be responsible for replacing the temporary restoration with the permanent surface (which is included in the roadway items). The exception to this rule would be where the Utility work goes off the ROW onto private easement or a side road not within the project construction limits. When this situation is encountered, the utility standard item numbers for the restoration of the driveway, sidewalk or roadway would be utilized. The restoration shall be performed in accordance with TDOT standards or with local standards, whichever is most appropriate. If this cannot be determined then the TDOT Standards and Specifications shall take precedence. A note and/or detail showing the proper means of restoration shall be included in the Utility plans.

Projects with Federal funding require a 100% Buy America provision which applies to any utility relocation work whether performed prior-to or move-in the TDOT construction contract.

Buy America Requirements

Projects with Federal funding require a 100% Buy America provision which applies to any utility relocation work whether performed prior-to or move-in the TDOT construction contract. These requirements can be found at the following web address: http://www.fhwa.dot.gov/construction/cqit/buyam.cfm.

Standard Notes to be Shown on the Utility Plans

As was discussed in Section 3, the intent of Standard Utility Items is to provide a standard item number to be used for the placement of utility facilities where all incidentals such as backfill material, rock removal, trenching, etc. are included in the unit price. **The standard item number is for an in-place cost for complete installation of the item including all materials and labor.** Notes related to utility relocation installation are required on the Utility's plans to inForm the contractor for bidding purposes. See Appendix C for example Utility Estimated Quantity and General Notes Plan Sheets.

In addition to the Standard Notes, the Utility can show construction specifications and special requirements on the General Notes Plans Sheet. Specifications can also be included as a separate document to be included in TDOT's bid book See the description for Step 5C in Section 2 for additional guidance.

Listed below are required Standard General Notes to be shown on ALL Utility's Plans (see Appendix C).

1. Except for erosion sediment control items, no Roadway or Bridge Items shall be utilized to compensate for work methods or materials associated with and/or specified for the utility installation, even though the same or similar roadway or bridge materials may have been called for in the Utility Specifications or drawings.

2. All materials, methods, and/or integral materials outlined in the utility specifications or drawings necessary to provide a complete and functional installation must be included in the Unit Price for the associated Utility Work Item.

3. The contractor must maintain all services during the construction of the relocated facility. Any costs associated with installation of required temporary service lines due to the roadway construction sequence of work (i.e., cuts, fills, phasing, etc.) shall be included in the cost of the permanent utility items. (Note to Utility: The utility relocation plans shall provide to the contractor the Utility's requirements for temporary tie-ins (including necessary testing and sterilization to accomplish the tie-in) and also any restrictions for taking lines out of service. If a temporary line will be a major item of work, a specific temporization plan and item must be included in the Utility's plans.)

4. It shall be the responsibility of the Prime Contractor's surveyor to lay out all the facilities being relocated within the contract.

5. For buried utilities, the Prime contractor or subcontractor shall be required to provide to the Utility upon completion of the Utility's relocation work a set of as-built drawings for their records. These as-built drawings should be prepared as the job progresses to ensure their accuracy.

6. Where erosion control measures are needed for the utility relocation work occurring inside or outside State right-of-way, the contractor shall submit to the TDOT Project Supervisor for approval a proposed erosion and sediment control plan prior to beginning the work. TDOT approval must be received before the erosion control pay items for roadway construction can be used for any additional erosion control measures required for the utility relocation work.

7. Driveway, sidewalk and roadway temporary restoration shall be part of the in-place cost of placing the utility item within the ROW.

When applicable, the utility relocation plans will show any stream crossings and cross-sections of the streams crossings with the following note:

8. Any excavation of the stream channel area shall be separated from flowing water and accomplished during low flow conditions. This shall be accomplished by the use of flumes, lined diversion channel with sandbag berm, diversion pipe with sandbag dam at pipe inlet, or in some cases cofferdams. Alternatively, based on field conditions and contractor selection, the utility relocation may be accomplished using bore technology with no stream channel impacts.

Section 5: Coordination with Utilities

During Early Project Review And During Design

During the design phase of the TDOT project development process, early project review meetings will be held by TDOT. The Utility Owners will be invited to participate in these meetings and will have the ability to voice their concerns and bring any information to TDOT's attention that could alter the design. Utility involvement during this preliminary phase has the ability to prevent unnecessary relocation of expensive utility items through early coordination with the project designers (e.g., the roadway design may be altered in a way that utility relocation costs are minimized and with minimal impact to the roadway design).

Once the Right-of-Way plans have been sent to the TDOT Region Utilities Office (or a TDOT Consultant firm) and disbursed to the Utility Companies involved in the project, regular 'deconfliction' meetings (at least one, and more if necessary) with the utilities will occur in order to assist the Utility through the design phase. **The objective of deconfliction meetings is to coordinate the involved Utilities and to answer any questions that may arise to address utility relocation for the proposed roadway design.** The deconfliction meetings should prevent the Utilities from designing relocation that conflicts with other Utilities due to a lack of communication with the Department and other Utilities. Phasing of the utility relocation work, rock blasting effects on utility placements, and joint-use arrangements between Utilities are examples of issues to be discussed with the purpose of minimizing the impact on the roadway construction and adjacent utilities.

During Construction

Problem Resolution

After the preconstruction meeting, regular meetings will occur with the prime roadway contractor, the prime's subcontractors, the Utility Companies and TDOT personnel. These meetings are held for the purpose of resolving scheduling conflicts and physical conflicts that may arise during a construction project. Unforeseen conflicts or issues are identified, progress is updated, compliance with schedules is reviewed, and any road blocks removed so construction can proceed in an orderly fashion. Meeting minutes will be distributed to the participants documenting the problems and resolutions. Sometimes things are overlooked or unanticipated, and these regular

meetings help resolve the problems in a timely manner by involving all the participants in one collective meeting to resolve issues.

Utility Field Change Form

When a change is encountered during construction that affects the estimated quantities, it is imperative that the change be documented. The Utility Field Change Form (see Appendix) was created to capture these unexpected changes. The change could be initiated by the Utility Company, the prime contractor, the prime's sub contractor or TDOT. All pertinent information is included in the form, which is then forwarded to all involved parties for their concurrence. This allows for an audit trail by documenting the need for the change. It also allows TDOT to review the change to be sure it is warranted and that any betterment is captured. This Form should be filled out regardless of whether the change is a minor change or a major revision. Any significant change to the signed/sealed utility plans will require the utility plans to be revised in accordance with professional engineering board requirements for signed/sealed plans.

Revisions to Utility Plans

Revisions to the utility plans require review by a TDOT Construction Representative with input from TDOT Utilities. If the change is a minor change utilizing existing items without a significant alignment change, the change can be documented on the Utility Change Request Form and approved by TDOT Construction in the field. If the change is a major change involving additional items and redesign of the plans provided by the Utility, then TDOT Construction will request TDOT Utilities Office involvement to review and approve the change. The Utility will revise the Utility's plans in accordance with professional engineering board requirements for signed/sealed plans to show the change and will attach the Utility Field Change Form. The completed revised drawings will be sent to TDOT Region Utilities for review with a copy to TDOT Construction. Once the drawings have been approved by TDOT Region Utilities, they will be sent to TDOT Construction and the Prime Contractor. All parties will sign off on the completed Form acknowledging and approving the change.

Revisions to the utility plans require review by a TDOT Construction Representative with input from TDOT Region Utilities.

Section 6: Utility Responsibilities During Construction

When the Utility includes its relocation plans in the state contract, the Utility must perForm the following activities during construction:

- Approval of shop drawings submitted to the Utility;
- Approval of materials submitted to the Utility and maintaining documentation for certification and acceptance of materials including Buy America requirements;
- Inspection of all phases of the utility relocation work;
- Approval of any field changes or substitution of materials or methods submitted to the Utility;
- Documentation of daily progress reports (Project Utility Diary) for payment of utility construction;
- Revisions to Utility plans, specifications, items; and
- Coordination of utility operations (e.g., cut overs, interruptions, notification of customers, relight pilot lights, etc.)

Utility's Material Approval

The Utility will be responsible for reviewing and approving the material submittals from the Prime Contractor or his sub to be certain that the materials meet their job specifications as specified on the Utility's plans. The Utility Company must adhere to the Buy America provision when Federal Funds are involved. Failure to buy American will result in the loss of reimbursement under Chapter 86. TDOT Materials and Tests will not be involved in inspecting the materials or testing, certifying, or documenting the materials used to build a Utility's facilities to confirm these materials meet the Utility's specifications. All certification and acceptance documentation will be maintained by the utility inspector and be subject to audits by State and/or federal investigators.

No substitution of materials will be permitted or approved without the proper Utility Additional Item Request Form (see Section VI) filled out and approved by all parties.

TDOT Materials and Tests will not be involved in inspecting the materials or testing, certifying, or documenting the materials used to build a Utility's facilities . . .

Inspection

The Utility is responsible for the daily approval of the relocation work as it is installed. The Utility can be held responsible for the cost of the correction

of any relocation work determined to be installed improperly or of additional work performed at the direction of the utility inspector/representative that is not in accordance with the current utility construction plans because either the utility inspector/representative was not present as required at the time of the installation, or the utility inspector approved the relocation work at the time it was installed and was later determined to be incorrect or was aware the work was not performed in accordance with the current utility construction plans. Any work performed by the State's contractor a the direction of the Utility's inspector or personnel, that was not in the plans or a revision to the plans, will be the financial responsibility of the Utility. The State's contractor will be responsible for collecting the cost of work not included in the State contract plans.

The Utility is responsible for inspecting the relocation work of its facilities as the work progresses, regardless of whether the work is reimbursable or not. The Utility will assign an inspector to the job to ensure that the materials ordered and placed meet the Utility's specifications. Failure of the Utility Inspector to monitor the utility relocation construction could be very costly to the Utility. Therefore, it is important that the Utility and its Inspector realize the importance of their role in the construction process.

TDOT Circular Letter 105-07.04 provides guidance for the required inspection procedures including documentation requirements. There are several forms that the utility inspector is required to complete:

- Form DT-0667 is the Project Utility Diary with a daily log of the relocation work being performed.
- Form DT-1716 is the Utility Item/ Certification Acceptance which certifies that the items installed meet all applicable specifications.
- Form DT-1716A is the Summary of Installed Utility Items.

These three forms are completed by the utility inspector and submitted to the TDOT Project Supervisor (or if applicable, TDOT's CEI consultant) each estimate period.

Any issues arising out of the construction process need to be brought to the TDOT Construction Supervisor's and the Prime Contractor's attention so that they can be immediately corrected. **Only TDOT or their representative can actually stop the State contractor's utility relocation work.**

As the relocation work nears completion, the Utility will provide the Prime Contractor with an itemized punch list of items that need attention to finalize the utility construction. A copy of the punch list should be provided to the TDOT Construction representative managing the job. At the completion of the utility relocation work, the Utility will be required to promptly complete the Final Acceptance of Work section on Form DT-1716 and submit it to the TDOT Construction Supervisor. The warranty period as specified in the Utility's specifications begins at the acceptance by the Utility of the relocation work.

The Utility is responsible for inspecting the relocation work of its facilities as the work progresses . . .

Appendix A.
Request for Utility Item Number Form

The document included in this appendix is a non-working copy of the form. For the fillable Request for Utility Item Number Form, go to the TDOT Utilities Office Website.

Request for Utility Item Number

If an appropriate item number is not found in the Standard Utility Item Number Spreadsheet, the utility must submit this form to TDOT to create an item number for your project.

Provide answers to the questions below and email the completed form to the appropriate TDOT Region Utilities Office for the project:
http://www.tdot.state.tn.us/Chief_Engineer/assistant_engineer_design/row/regional.htm

Utility Name:

Company Contact:

Phone Number: **Email:**

Explain the Reason for this Item Number Request:

Is this an item used repeatedly within your industry? ☐ **Yes** ☐ **No**

Is this item expected for this one time use only? ☐ **Yes** ☐ **No**

Item Long Description (no abbreviations)***:**

Item Short Description (40 Character Limit including Spaces)*:

Unit of Measure (Click on entry field and select from drop down list): _____

*Note: If a Utility has several items to request at one time, the next page can be submitted along with this first page.

.....

For TDOT Use Only:

Item Number Assigned:

One Time Use Only ☐ Reoccurring Use/Added to Standard Item Spreadsheet ☐

Date:

Comment:

Request for Utility Item Number

Use this sheet if multiple item numbers are being requested at one time.

Item Long Description:

Item Short Description (40 Character Limit including Spaces):

Unit of Measure: _____

Item Long Description:

Item Short Description (40 Character Limit including Spaces):

Unit of Measure: _____

Item Long Description:

Item Short Description (40 Character Limit including Spaces):

Unit of Measure: _____

Item Long Description:

Item Short Description (40 Character Limit including Spaces):

Unit of Measure: _____

Item Long Description:

Item Short Description (40 Character Limit including Spaces):

Unit of Measure: _____

Appendix B. Utility Field Change Form

For the electronic version of the Utility Field Change Form, go to the TDOT Utilities Office website.

Appendix B contains a blank Field Change Form along with an example of a completed form.

EXAMPLE

UTILITY FIELD CHANGE REQUEST

CHANGE NO. 3

REQUESTED BY: CONTRACTOR [ ] SIGNATURE

SUBCONTRACTOR [ ]

UTILITY [X] Witt Utility District

REASON FOR REQUEST:

Proposed change is extend 8" water line across Frontage Road as depicted. This change will eliminate the chance of cutting roadway to extend across the Frontage Rd at some later date. Also, the new water service for Super 8 motel will be moved to the NW corner of the property(match existing location of water meter). Eliminate approximately 200' of 6" dip water line of water line D and relocate the new fire hydrant assembly to suitable location accessed from Frontage Rd.

CONTRACT ITEMS IMPACTED:

	Unit	Unit Cost	Est. Quantity	Subtotal
775-62-72 8IN DIP WATER LINE	LF	$44.10	90	$3,969.00
775-62.71 6IN DIP WATER LINE	LF	$42.00	-200	($8,400.00)

CONTRACT ITEMS ADDED:

	Unit	Unit Cost	Est. Quantity	Subtotal

REQUEST DATE: 11/7/2011

TOTAL ($4,431.00)

APPROVAL	DATE	SIGNATURE
PRIME CONTRACTOR		
UTILITY APPROVAL		
CEI APPROVAL		
TDOT APPROVAL		

Revised 6/22/11

UTILITY FIELD CHANGE REQUEST

CHANGE NO. _____

REQUESTED BY: CONTRACTOR ☐ SIGNATURE

SUBCONTRACTOR ☐

UTILITY ☐

REASON FOR REQUEST:

CONTRACT ITEMS IMPACTED:

Unit	Unit Cost	Est. Quantity	Subtotal
			$

CONTRACT ITEMS ADDED:

Unit	Unit Cost	Est. Quantity	Subtotal

REQUEST DATE: _____

TOTAL

$

APPROVAL	DATE	SIGNATURE
PRIME CONTRACTOR		
UTILITY APPROVAL		
CEI APPROVAL		
TDOT APPROVAL		

Revised 6/22/11

Appendix C.
Example General Notes Sheet

Included are the following:

- Example Quantities Sheet
- Example General Note Sheet
- Example Plans Sheet

In this example, the TDOT Region Utility Coordinator assigned 'U3' for this Utility's plans sheet numbers

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	19025-2226-94	U3-1
CONST.	2009	ARRA-STP-M-4967	

State Project No.: 19959-2761-54
Route : SR-29 (Lebanon Rd.) to West End Of Stoners Creek Bridge
County: Davidson
Submitted By: Carl Cornfield
Utility Office Contact: Carl Cornfield

Index Of Sheets

THIS EXAMPLE PROJECT SHOWS A 100% PROJECT COST FOR UTILITY RELOCATION. WHEN THE UTILITY WILL BEAR A PERCENTAGE OF THE COST FOR BETTERMENT, THEN THE PERCENT PROJECT AND PERCENT UTILITY WILL BE SHOWN FOR EACH ITEM.

DESCRIPTION: UNIT DESCRIPTIONS CANNOT BE CHANGED FROM THE STANDARD DESCRIPTION

DESCRIPTION: UNIT OF MEASURE FOR LISTED ITEM (LF, EACH, LS, CY, ETC.)

TOTAL QUANTITY OF ITEM LISTED

ITEM NUMBER ASSIGNED FROM STANDARD ITEM NUMBER LIST

THIS COLUMN CAN BE UTILIZED BY THE UTILITY TO SHOW ITS OWN INTERNAL OR INDUSTRY DESCRIPTIONS FOR THE ITEM.

ESTIMATED UTILITY QUANTITIES

	TELEPHONE QUANTITIES		100% PROJ / 0% UTILITY		AT&T
	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	ITEM DESCRIPTION
(2)	793-01.41	ANCHOR 1IN	EACH	10	PLAC-MR1-1" MANTA RAY ANCHOR
(16)	793-13.51	LOWER DUCT FORMATION@12 IN DEPTH	EACH	2	LOWER DUCT
(1)	793-01.18	POLE 45FT CLASS 4 WOOD	EACH	1	PLAC-45-4 POLE
	793-11.19	MARKER POST (PROVIDED BY AT&T)	EACH	2	PLAC-MARKER POST
	793-98.04	REMOVE POLE ALL SIZES	EACH	12	REMO-POLES
(1)	793-01.08	POLE 35FT CLASS 5 WOOD	EACH	3	PLAC-35-5 POLE
(1)	793-01.12	POLE 40FT CLASS 4 WOOD	EACH	1	PLAC-40-4 POLE
(16)	793-13.07	INSTALL 4" SCH 40 PVC INCLUDES BENDS	L.F.	90	PLAC-4"SCH 40 PVC INCL BENDS
	793-12.01	DIG SPLICE PIT 80 CU.FT.	EACH	4	PIT
(15)	793-13.17	2 DUCT FORMATION @ 36 IN DEPTH	L.F.	45	PLAC 2 DUCT FORMATION

THESE NOTES CLARIFY THE WORK OF THE ITEM NUMBER. THAT THE FOOTNOE IS REFERENCING. THE STANDARD UTILITY ITEM NUMBER SPREADSHEET INCLUDES REQUIRED FOOTNOTES FOR SOME ITEMS. THE UTILITY CAN ALSO USE ADDITIONAL FOOTNOTES AS NECESSARY.

FOOTNOTES

(1) INCLUDES ALL MATERIALS, LABOR, EQUIPMENT FOR COMPLETE INSTALLATION INCLUDING BUT NOT LIMITED TO BUTT WRAP, MGNV, GROUND ROD, DIG HOLE, TAMP, BLASTING, AND NUMBER POLE.

(2) INCLUDES ALL MATERIALS, LABOR, EQUIPMENT FOR COMPLETE INSTALLATION INCLUDING BUT NOT LIMITED TO DIGGING HOLE, BLASTING OR MECHANICALLY INSERTING INTO GROUND, BONDING/GROUNDING.

(15) INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BUT NOT LIMITED TO SETUP, BENDS, AND TRAFFIC CONTROL.

(16) INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BUT NOT LIMITED TO SPACERS, COUPLINGS, BENDS, OPENING TRENCH, BACKFILL PER SPECS, SURFACE RESTORATION OF ALL CROSSINGS TO TDOT STANDARDS, SETUP, TRAFFIC CONTROL.

UTILITY TITLE BLOCK SHOWS CONTACT INFORMATION

PHONE CO.

Construction Work Drawing

PROPRIETARY INFORMATION
Not for disclosure outside AT&T or any of its subsidiaries except under written agreement

State: TENNESSEE
District: MIDDLE TN
Exchange:
Wire Ctr:

A.A./Taper:
Tax District:
RZ/CZ:

Designer: Carl Cornfield

Phone: (615) XXX-XXXX

COVER SHEET

Not to Scale

Job Description:

TDOT Proj.# 19025-2226-94
PROPOSED TELEPHONE STRUCTURE LAYOUT

Job Number:

DWG U3-1 OF U3-3

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PHONE CO. COVER SHEET

ENGINEER'S STAMP
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
STATE OF TENNESSEE

UTILITY INFORMATION:
UTILITY NAME
UTILITY ADDRESS
CITY, STATE, ZIP
CONTACT NAME
CONTACT PHONE
CONTACT FAX
CONTACT EMAIL

PHONE COMPANY
200 UTILITY AVE.
NASHVILLE, TN 37219
CONTACT: CARL CORNFIELD
PHONE: 615-XXX-XXXX
FAX: 615-XXX-XXXX
EMAIL:CCORNFIELD@AOL.COM

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	19025-2226-94	U3-2
CONST.	2009	ARRA-STP-M-4967	

DWG NUMBER ASSIGNED BY TDOT UTILITIES COORDINATOR OR UCCC

GENERAL NOTES TO CONTRACTOR

THESE STANDARD NOTES ARE REQUIRED (SEE SECTION 4 OF THE GUIDEBOOK)

STANDARD UTILITY NOTES

(1) EXCEPT FOR EROSION AND SEDIMENT CONTROL ITEMS, NO ROADWAY OR BRIDGE ITEMS SHALL BE UTILIZED TO COMPENSATE FOR WORK METHODS OR MATERIALS ASSOCIATED WITH AND/OR SPECIFIED FOR THE UTILITY INSTALLATION, EVEN THOUGH THE SAME OR SIMILAR ROADWAY OR BRIDGE MATERIALS MAY HAVE BEEN CALLED FOR IN THE UTILITY SPECIFICATIONS OR DRAWINGS.

(2) ALL MATERIALS, METHODS, AND/OR INTEGRAL MATERIALS OUTLINED IN THE UTILITY SPECIFICATIONS OR DRAWINGS NECESSARY TO PROVIDE A COMPLETE AND FUNCTIONAL INSTALLATION MUST BE INCLUDED IN THE UNIT PRICE FOR THE ASSOCIATED UTILITY WORK ITEM.

(3) THE CONTRACTOR MUST MAINTAIN ALL SERVICES DURING THE CONSTRUCTION OF THE RELOCATED FACILITY. ANY COSTS ASSOCIATED WITH INSTALLATION OF REQUIRED TEMPORARY SERVICE LINES DUE TO THE ROADWAY CONSTRUCTION SEQUENCE OF WORK (I.E., CUTS, FILLS, PHASING, ETC.) SHALL BE INCLUDED IN THE COST OF THE PERMANENT UTILITY ITEMS. (NOTE TO UTILITY: A SPECIFIC TEMPORIZATION ITEM CAN BE INCLUDED IN THE PLANS IF IT IS A MAJOR ITEM OF WORK.)

(4) IT SHALL BE THE RESPONSIBILITY OF THE PRIME CONTRACTOR'S SURVEYOR TO LAY OUT ALL THE FACILITIES BEING RELOCATED WITHIN THE CONTRACT.

(5) FOR BURIED UTILITIES, THE PRIME CONTRACTOR OR HIS SUBCONTRACTOR SHALL BE REQUIRED TO PROVIDE TO THE UTILITY UPON COMPLETION OF THE UTILITY'S RELOCATION WORK A SET OF AS-BUILT DRAWINGS FOR THEIR RECORDS. THESE AS-BUILT DRAWINGS SHOULD BE PREPARED AS THE JOB PROGRESSES TO ENSURE THEIR ACCURACY.

(6) WHERE EROSION CONTROL MEASURES ARE NEEDED FOR THE UTILITY RELOCATION WORK OCCURRING INSIDE OR OUTSIDE STATE RIGHT-OF-WAY, THE CONTRACTOR SHALL SUBMIT TO THE TDOT PROJECT SUPERVISOR FOR APPROVAL A PROPOSED EROSION AND SEDIMENT CONTROL PLAN PRIOR TO BEGINNING THE WORK. TDOT APROVAL MUST BE RECEIVED BEFORE THE EROSION CONTROL PAY ITEMS FOR ROADWAY CONSTRUCTION CAN BE USED FOR ANY ADDITIONAL EROSION CONTROL MEASURES REQUIRED FOR THE UTILITY RELOCATION WORK.

(7) DRIVEWAY, SIDEWALK AND ROADWAY TEMPORARY RESTORATION SHALL BE PART OF THE IN-PLACE COST OF PLACING THE UTILITY ITEM WITHIN THE ROW.

(8) ANY EXCAVATION OF THE STREAM CHANNEL AREA SHALL BE SEPARATED FROM FLOWING WATER AND ACCOMPLISHED DURING LOW FLOW CONDITIONS. THIS SHALL BE ACCOMPLISHED BY THE USE OF FLUMES, LINED DIVERSION CHANNEL WITH SANDBAG BERM, DIVERSION PIPE WITH SANDBAG DAM AT PIPE INLET, OR IN SOME CASES COFFERDAMS. ALTERNATIVELY, BASED ON FIELD CONDITIONS AND CONTRACTOR SELECTION, THE UTILITY RELOCATION MAY BE ACCOMPLISHED USING BORE TECHNOLOGY WITH NO STREAM CHANNEL IMPACTS.

DAMAGES TO EXISTING UTILITIES

(9) REPAIRS AND/OR REPLACEMENTS TO ANY UTILITIES DAMAGED BY CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. NO ADDITIONAL PAYMENT WILL BE ALLOWED.

STAKING PROPOSED FACILITIES

(10) NOTIFY CARL CORNFIELD @ (615) XXX-XXXX TWO WEEKS IN ADVANCE FOR ARRANGEMENTS TO HAVE THE PROPOSED MANHOLE LOCATIONS STAKED.

TRENCHING AND BURIED FACILITY PLACEMENT GUIDELINES

(11) THE BOTTOM OF THE TRENCH SHOULD BE RELATIVELY SMOOTH, UNDISTURBED EARTH. IT SHOULD BE WELL TAMPED, OR IT CAN BE SAND. THE CONDUIT SHOULD BE LAID ON A PROTECTIVE LAYER OF 6 INCH WELL TAMPED SAND. BACKFILL 12 INCHES OF SAND ABOVE THE CONDUIT. BACKFILL ABOVE THE SAND ENCASEMENT SHOULD BE ADEQUATELY COMPACTED. MACHINE COMPACTIONS SHOULD NOT BE USED WITHIN 12 INCHES OF THE CONDUIT. THE FILL SHOULD BE FREE OF ROCKS PAVEMENT AND FROZEN MATERIAL THAT MIGHT DAMAGE CONDUIT. THE CONDUIT SHALL BE LAID ALWAYS OBSERVING THE TENSION AND BENDING LIMITATIONS OF THE CABLE PRESCRIBED BY THE MANUFACTURER. AS A GENERAL RULE, COPPER CONDUCTOR CABLES SHOULD NOT BE BENT TO A RADIUS LESS THAN 10 TIMES ITS OWN CROSS-SECTIONAL DIAMETER. FIBER OPTIC CABLE SHOULD NOT BE BENT LESS THAN 20 TIMES THE CABLE DIAMETER. SEE "CONDUIT TRENCH" DETAIL, DRAWING U3-X.

SAMPLE

THE UTILITY CAN PLACE ITS OWN NOTES AND SPECIFICATIONS AS NEEDED ON THIS SHEET AND ON ADDITIONAL SHEETS

PHONE CO.

Construction Work Drawing

PROPRIETARY INFORMATION
Not for disclosure outside AT&T or any of its subsidiaries except under written agreement

State: TENNESSEE
District: MIDDLE TN
Exchange:
Wire Ctr:

A.A./Taper:
Tax District:
RZ/CZ:

Designer: Carl Cornfield
Phone: (615) XXX-XXXX

Not to Scale

Job Description:
TDOT Proj.# 19025-2226-94
PROPOSED TELEPHONE STRUCTURE LAYOUT

Job Number:

DWG U3-2 OF U3-3

ENGINEER'S STAMP
REGISTERED ENGINEER
AGRICULTURE
OWNERS
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PHONE CO. GENERAL NOTES

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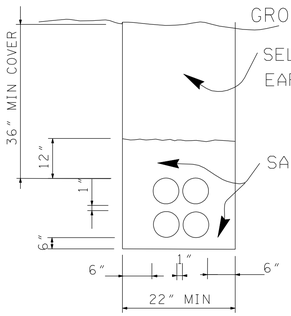
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2009	19025-2226-94	U3-3
CONST.	2009	ARRA-STP-M-4967	



TYPICAL TRENCH DETAIL

ROD AND MANDRILL ALL DUCTS AND PLACE MULE TAPE IN ALL DUCTS AFTER BCKFILLING AND BEFORE PLACING FINISHED SURFACE.

RODDING AND MANDRILLING, MULE TAPE PLACEMENT, SELECT BACFILL AND SAND ENCASEMENT COST TO BE INCLUDED IN THE COST OF THE TRENCH.

GREEN-REMOVE/RETIRE IN PLACE
ORANGE-EXISTING TO REMAIN
BLUE-TEMPORARY
RED-PROPOSED

EXISTING (1976) 115'-4C DUCT-6

EXISTING (1963) 127'-4C DUCT-2

EXISTING (1960) 446'-4C DUCT-8

4C DUCT-6

4C DUCT-12

(1975) 104'-4X DUCT-4 REMOVE/RETIRE IN PLACE

(1978) (201'-4X) (DUCT-2) (BURIED CABLE)

REMOVE/RETIRE IN PLACE (1978) (567'-4X) (DUCT-1) (BURIED CABLE)

TEMP

REMOVE (40-5)

REMOVE (30-4)

REMOVE (45-4)

REMOVE (40-5)

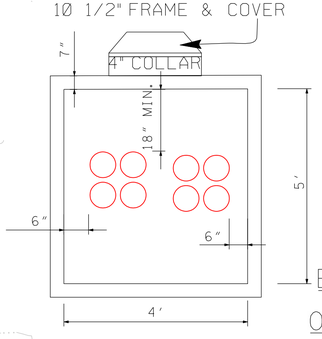
PLACE **1200'-4C DUCT-4**

MARKER POST

EXISTING 4C (1975) MH A-19-A VOL:113 cu ft 4'Wx5-6'Lx5'H

(1975) 508'-4C DUCT-15

10 1/2" FRAME & COVER



END WALL OF MANHOLE

PROPOSED STRAIN POLE #3 STA. 122+00, 70.0' RT.

BOLLARDS

3'X3' COL.

BILLBOARD

SIGN (STONES RIVER PROFESSIONAL BLDG.)

2-B (STONES RIVER PROFESSIONAL BUILDING)

SIGN (RIVERVIEW BUSINESS CENTER)

1-BLOCK (KEVCO CARPETS & VINYL)

PRES. & PROP. R.O.W.

PROP. R.O.W.

SLOPE ESMT.

10' CONST. ESMT.

CENTRAL PIKE

DRAIN. EASM.

MATCH LINE STA. 22+00 SEE SHEET NO. U3-3

PHONE CO.

Construction Work Drawing

PROPRIETARY INFORMATION
Not for disclosure outside AT&T or any of its subsidiaries except under written agreement

State: TENNESSEE
District: MIDDLE TN
Exchange:
Wire Ctr:

A.A./Taper:
Tax District:
RZ/CZ:

Designer: Carl Cornfield

Phone: (615) XXX-XXXX

Not to Scale

Job Description:

TDOT Proj.# 19025-2226-94
PROPOSED TELEPHONE STRUCTURE LAYOUT

Job Number:

DWG U3-3 OF U3-3

ENGINEER'S STAMP
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
STATE OF TENNESSEE

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00006 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

BEG. OF JOB TO STA. 22+00

SCALE: 1"= 50'

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Appendix D.
2011 Utility Workshop Documents

The documents in Appendix D are handouts from the TDOT 2011 Utility Workshop held at each region. These documents contain more in-depth information regarding the utility relocation process.

APPENDIX D1.
2011 UTILITY WORKSHOP PRESENTATION

Utility Workshop
2011

Agenda

1. Welcome - Housekeeping – Joe Shaw
2. Introduction – Joe Shaw
   - Chapter 86
   - Chapter 86 Certification affects percentage of reimbursement and cap
   - Standardization of Utility Items
   - "Deconfliction" and TDOT Development Meetings
   - Filenet PDF Files
   - Street lighting
   - Permits
3. Utility Contracts – Joe Shaw
   - Contracts = Percentage / Easement / CH86 Move Prior / CH86 Move In State
   - Consultant Approvals
   - State & Federal Disbarment Lists
   - Overhead Rates
   - Certification Contract Obligation – Insurance for Utility
4. - Rick Yeager with Allen & Hoshall Engineering Knoxville
   - PE Authorization / Cover Letter
   - Location / Rainbow Plans
   - Utility Relocation Estimate Spreadsheet
   - Chapter 86 Certification
   - Certification Contract Obligation
   - Declaration of Calendar Days
   - Utility Plan Sheets
   - Move In State Contract
   - Utility Diary and Inspections
   - "Go To Work" Letter

   Invoicing
5. CMS EXCEL Spreadsheet – Gus Awali
6. Environmental Notice of Coverage – Michael Horlacher
   - Permits
   - Relocation Construction Utility Move
7. Questions

Welcome

Introduction

- TDOT Staff: Joe Shaw, Asst Director ROW Division
  Gus Awali, HQ Utility Coordinator Regions 1 & 2
  Michael Horlacher, HQ Utility Coordinator Regions 3 & 4
- Region Staff: Tom Foley, Rg Utility Coordinator Region 1
  Steve Langford, Rg Utility Coordinator Region 2
  Jim Nikahd, Rg Utility Coordinator Region 3
  Charles Green, Rg Utility Coordinator Region 4
- Consultant: Rick Yeager, Allen & Hoshall Engineering, Knoxville
- Breaks
- Restrooms
- Smoking
- Emergency

Workshop Schedule

July 12	**Knoxville, TDOT Regional Auditorium**
July 13	**Johnson City, Johnson City Power Board**
July 19	**Cookeville, Gas Department**
July 26	**Cleveland Chamber of Commerce**
July 28	**Jackson, TDOT Regional Auditorium**
August 10	**Nashville TDOT Regional Auditorium**
August 11	**Nashville TDOT Regional Auditorium**

Highlights

- **Existing Utilities outside Public ROW Relocation is Compensable**
  - Outside Public ROW (City, County, State)
  - Prior Property Rights
  - US Constitution 5th & 14th Amendments compensation for property
- **Chapter 86 amendment to State Statute in 2003 TCA 54-5-854**
  - Is at the Department's discretion to reimburse utilities on Public ROW
  - Is not an entitlement ★
  - **TDOT Qualifies projects for CH86 Policy 340-07**
    - Grade & Drain with right-of-way acquisition
    - Bridge REPLACEMENT on State Route
  - **Utility Eligibility**
    - Have a permit for existing utility facilities
    - Respond with plans/estimate/schedule within 120-165 days per statute
    - Relocate "conflicts" prior to the letting date or include work in state contract
- **Street Lighting**
  - Under CH86, street lights are eligible for reimbursement in like kind cost
  - Generally the electric utility will submit relocation plans

Reimbursements

- **100% public reimbursement up to cap of $1.75 million**
  - Utility District
  - Municipal Utility
  - Utility Cooperative
- **75% public reimbursement up to cap of $1.75 million**
  - All other utilities
- **CH86 Certification**
  - Must be submitted on Estimate of Cost Spreadsheet

Response

- **Three (3) sets of check plans for any attachments to structures.**
  Must be approved by TDOT prior to inclusion in the plans.
- **One (1) PDF and**
  One (1) set "Location Approval" plans or RAINBOW PLANS
  color coded as directed in authorization letter indicating existing facilities, to be removed, added, temporary, or to remain.
- **Cost Estimate** TDOT Form 2000-16 if reimbursement is requested. (Sheet 6.1 Required)
  Clearly indicate percent public and private on estimate. Include:
  - Engineering Cost (Consultant and In-House/staff. If consultant used a reasonable staff cost will be considered)
  - Construction Cost (Includes Staking & Clearing/Grubbing if request Move Prior)
  - Replacement Easement Cost
- **Declaration of Scheduled Calendar Man days** (TDOT Form 2000-12.1 or similar)
- **Letter Request for Reimbursement**
  @ Private Easement/Property
  @ Move Prior/Before Letting
  @ Include Work in State contract
  @ Utility facilities are Not On Project
  @ Utility not requesting reimbursement, will move at No Cost
  The Utility MUST have an executed contract with TDOT before any relocation cost can be incurred.

Meetings

Utilities invited, it is up to you to participate

- **Preliminary PS&E**
  First meeting chance to see design and influence design
- **ROW PS&E**
  Last chance before ROW plans are issued to utility for relocations
- **Construction PS&E**
  Last chance before project is Let for contract
- **Utility "Deconfliction" Meeting**
  TDOT Utility Consultants hold after ROW plans issued
- **Preconstruction Meeting**
  First meeting with the Contractor, Utilities, Railroads, and TDOT present
- **Construction Utility Meeting**
  Meetings held during construction to resolve issues and schedules
- **Utility Workshops**
  Intent is to have these workshops annually

Submittals

TDOT moving toward all electronic submittals:
saves time, storage, cost, and easier

- Form 2004-16 Electronic Spreadsheet
  (Consultant Estimate, Construction Estimate, Schedule of Days, Certifications)
- CADD Disclaimer
- PDF of Location / Rainbow Plans
- PDF Detailed Relocation Plans for MOVE IN utility relocation
  (Required PE sign/seal)
- PDF Utility Specifications for MOVE IN utility relocation
- State Statute deliver plans by certified mail or hand delivery
  CD's delivered FEDX
- TDOT Use of FILENET
  All plans, revisions, CADD files, documents electronically stored
- Use Adobe Electronic Signature

Required

- Utilities must have a permit for installations on State ROW
  (Your CH86 eligibility depends on it)
- Currently there are no fees for a utility permit
- General Agreement
  (Allows utility to have a Running Bond
  or one Surety Bond for all permits)
- WHEN Permit is NEEDED:
  - New installation
  - Relocation of existing facilities
  - Anytime traffic flow is affected
  - Any excavation

TDOT Go.

Utility Permits

Application

- **Request/Application from the utility**
  signed by individual authorized to obligate the utility in a contract
- **Include plan or sketch**
  - 5 copies if involves roadway lighting, culvert or bridge encroachment
  - 4 copies for all other permits
- **TDEC Notice of Coverage (NOC)** or attestation less than one (1) acre
- **Color coding:**
  - **Green - to be removed or retired**
  - **Orange or Yellow - existing and to remain**
  - **Red - new installation**
  - **Blue - For temporary location**

TDOT Go.

Utility Permits

Submit

- Location in relationship to outside edge of pavement (EOP) / (whiteline)
- Location in relationship to Right-of-Way (ROW) line
- Depth of proposed cover
- State Route Log Mile (LM) of beginning & end of utility project
- State Route Number
- County
- Elevation of poles in relation to EOP and distance from EOP
- Posted speed limit
- GPS Longitude / Latitude
- TDEC Notice of Coverage (NOC)

Reimbursement

Contracts

- **Percentage Contract (Prior or In State Contract)**
  % Public / % Private
- **CH86 Move Prior**
  State statute move prior to the letting date
- **CH86 Move In**
  Utility construction included in the state contract
- **Easement Replacement**
  Replace existing utility easement property rights
- **Pipelines**
  Special contracts for transmission pipelines
- **Move Again**
  If TDOT necessitates the utility relocate facilities already relocated

Chapter 86 Move Prior

Required

- **Utility completes the work under supervision by TDOT Construction Project Manager**
- **Utility Submits certification to the TDOT Construction Project Manager** ★
- **TDOT Construction Reviews :**
  - **Approves**
  - **Approves pending verification by project staking**
  - **Disapproves**
- **TDOT Construction returns Certification to Utility and copies Regional Utility Office**
- **Utility submits invoice and approved certification letter to Regional Utility Office for payment**

Utility Certification

Certification Exceptions:
The following business and/or residences on proposed State right-of-way have not been vacated at the time of the relocation, and utility services are being maintained temporarily. Upon written notice to the utility contact listed below, the utility will relocate the services indicated within the period of time specified. The State may retain final payment until the utility fulfills this obligation.

State Proj. Tract No.	Type of Occupied property (Residence / Business)	Type of Utility Service (water,sew w/,gas, electric,C/TV)	Address (Of occupied residence / business)	Period of time utility obligates to remove facility (Calendar days)
				days

TDOT Certification Contract Obligation

Date: _____

TDOT Region ___ Construction Office

Attn: _____, Project Engineer

Address _____

(Information is provided on the Utility 3egin Work Authorization letter)

PROJECT#/S: _____ **COUNTY/S:** _____

FEDERAL: _____ **PIN #:** _____

DESCRIPTION: _____

UTILITY CONTRACT: #_____

The utility completed on _____ (date of completion) the utility relocation in accordance with the approved relocation plans for the above referenced project number prior to the date specified and in accordance with the executed contract referenced.

NOTE EXCEPTIONS:
Maintaining services to business and/or residences is attached.

Signature indicates this individual has the legal authority to sign contracts and agreements to obligate the utility

Signed: _____ Date: _____
Utility representative

Print Name: _____

Title: _____

Utility Name: _____

Address: _____

City, State, Zip: _____

Phone Number: _____ Utility Type: ☐ Water ☐ Sewer ☐ Power ☐ Gas ☐ Telephone ☐ CATV ☐ Other:_____

Fax Number: _____

E-Mail: _____

TDOT USE ONLY:

☐ This Certification letter is accepted
☐ This Certification letter is accepted pending Final Verification by project staking.
☐ This Certification letter is not accepted. Reason: _____

Signed: _____ Date: _____
TDOT Construction office representative

CC: File
TDOT Regional Utilities Office

Rev. 10-24-2003

TDOT Utility Form 2003-18 – Certification Contract Obligations

Responsibilities

If the utility performs the relocation prior to the letting:

- ❑ Coordinate the Relocation
- ❑ Construct the Relocation
- ❑ Provide all environmental permits (NOC required)
- ❑ Provide Erosion control
- ❑ Clearing and grubbing
- ❑ Disposal of waste
- ❑ Traffic control
- ❑ Surveying
- ❑ Easements

★ Erosion Control

Who

- ❑ If the utility work is done by the utility
  - - Utility responsible for all erosion control measures
  - - Utility responsible for all permits (NOC, Corp., TVA, etc)
- ❑ If the utility work is done by the state contractor
  - - Review roadway erosion control for conflicts, areas of coverage, etc.
  - - Permit Sketches
  - - Assume permits by MOU (Corp Engineers, TVA) to maintain facilities after construction completed.

Erosion Control

Move In State Contract

Memorandum of Understanding
(For Environmental Permits required for Utility Construction)

Date: _____

PROJECT#/S: _____ **COUNTY/S:** _____
_____ _____
FEDERAL: _____ **PIN #:** _____
DESCRIPTION: _____
UTILITY CONTRACT: #_____

It is agreed hereto by and between the parties as follows:

The Utility agrees to provide information requested by the Department that is required to obtain environmental construction permits, or any other permits that are required for the Department to include the utility construction in the State roadway construction contract.

The Utility agrees to provide environmental permit sketches, as directed by the Department, for areas identified as having environmental concerns associated with wetlands, stream crossings, or any other such concerns required to obtain an environmental construction permits, or any other permits that are required for the Department to include the utility construction in the State roadway construction contract.

The Utility agrees to accept transference of any environmental construction permits, or any other permits that are required for the Department to include the utility construction in the State roadway construction contract, once the project is completed.

The Utility agrees to revise the utility plans provided as requested by the Department in order to obtain any environmental construction permits, or any other permits that are required for the Department to include the utility construction in the State roadway construction contract.

The Utility agrees to provide electronic utility plans as requested by the Department in order to obtain any environmental construction permits, or any other permits that are required for the Department to include the utility construction in the State roadway construction contract.

The Utility agrees to clearly define private utility easements outside the public right-of-way, provide written authorization for the Department and the State contractor to access this easement, and to notify the Department in writing of utility relocation work in this easement that is outside the erosion control measures shown on the Department plans.

By: _____
Utility Name

By: _____ Date: _____
Utility Signature
Title: _____ Date: _____
Title of Utility Signer

Approved: _____ Date: _____
State Utilities Office

Utility Environment Notes

Rain water which collects in the utility trench shall be pumped into a temporary dewatering structure or filter bag.

Silt fence to be installed on the downstream side of all stockpiled soil. Trenching across wet weather conveyances to be done during no flow conditions and stabilized by the end of the work day.

Utility crossings for perennial streams shall be constructed in accordance with TDOT Standards, and no work shall be conducted in flowing waters. Tennessee Department of Environment and Conservation (TDEC) Regulations apply to the Utilities in this project in regards to Erosion Control. Contractor shall comply with all requirements of the Storm Water Pollution Prevention Plan.

It is the responsibility of the utilities installer to protect from erosion exposed earth resulting from his operations and to provide for containment of sediment that may result from his work. Prior to beginning work, adequate measures must be in place to trap any sediment that may travel off-site in the event of rain. During the progression of his work, exposed earth areas shall be stabilized as soon as possible to prevent erosion. At no time shall exposed earth resulting from his operations have unprotected access to flowing off-site and becoming waters of the State.

FOR THE INSTALLATION OF BURIED UTILITIES (PIPES AND CABLES), TRENCHES SHALL BE BACKFILLED DAILY AS CONSTRUCTION PROCEEDS. BACKFILLED TRENCHES SHALL BE SEEDED AND MULCHED OR SODDED DAILY IF POSSIBLE BUT NO LATER THAN 7 DAYS AFTER TRENCHING. ANY TEMPORARY SPOIL PILE OF EXCAVATED EARTH SHALL BE LOCATED WITHIN THE TDOT ROW EROSION CONTROL MEASURES OR RECEIVE SEPARATE EROSION CONTROL MEASURES. IF TRENCHES ARE NOT BACKFILLED OVERNIGHT, APPROPRIATE EROSION CONTROL MEASURES WILL BE INSTALLED UNTIL SUCH TIME THE TRENCH IS BACKFILLED.

Standard Utility Items

- **Reduce the number of utility relocation items**
  Group “assemblies”; use industry standards TVPA / RUS / REA; fittings by pound
- **Inspection by Utilities (Construction Diary):**
  - items installed
  - certification of material and testing
  - acceptance of material and installation
- **Produce a Guide Book for utility relocation**
  - Revisions to utility plans (supplements / change orders)
    (Sign off by State contractor, TDOT Construction, TDOT Utility Office, Utility)
  - Betterment / Salvage
  - Erosion & Sediment Control
  - Clearing and Grubbing
  - Boring vs Trenching (When to use which)
  - Utility Easements
  - Specifications
  - Utility Detail Plans
- **Training Workshops**

Feb. 10,2012
Letting

Item Rules

Item Descriptions/numbers when possible should combine items as lump descriptions. A single item Description/number should be specified for hardware, not individual items for bolts, another for the nut, another for the washer, and another for installing. The listing of the item and the plans generally indicate that it is to be installed. It should be clear what the contractor is to do, any clarification can be done by footnoting the item with details and instructions.

1. Item Quantities:
   Cannot have a "0" quantity
   Cannot be a decimal quantity, must be whole number (Except Linear Mile Unit of Measure)

2. MS EXCEL file in the following format:
   The Regional Utilities Office can provide a sample MicroSoft EXCEL file for this use.

ESTIMATED UTILITY QUANTITIES									
				Proj No. 1:			Proj No. 2:		
ITEM NO.	DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	% Utility	%Project	QUANTITY	% Utility	%Proj

Everything is to be in ALL IN CAPS.
Do Not use any commas in the descriptions.
Only one (1) set of parenthesis is allowed. Use only when necessary.

The Regional Utilities Office (RUC) should be contacted for the assignment of Item Numbers and proper categories. Provide the RUC the item descriptions, and the Regional Utilities Office will contact TDOT Construction for the assignment of Item numbers. The RUC will return the item assignment to the utility for the use on plans.

ITEM NUMBER Category assignments:
755- = miscellaneous, open for miscellaneous & clear out backlog from past assignments.
770- = Electrical utilities
771- = Gas/petroleum Distribution Utilities
772- = Gas/Petroleum Transmission Utilities
773- = Phone utilities (BST, Peoples, etc.)
774- = Fiber Optic Utilities (Sprint, XO, etc.)
775- = potable water utilities
776- = reclaimed water, irrigation, slurry utilities
777- = Sewers
778- = Cable TV
779- = Steam/Hazardous utilities
780- = Electrical Transmission Utilities

Reprodicable Plan Sheets must meet following specifications
- Must be 4 Mil mylar
- Size of sheet 22"X36"
- Must have the state sheet border block in the upper right hand corner

TENNESSEE DEPARTMENT OF TRANSPORTATION
Rules for Utility Items included in State Highway Construction Projects

1. The Item numbers will be provided by the TDOT Regional Utilities Office (RUC). The Utility will specify how many item numbers they have, and the RUC will assign a block of item numbers accordingly. These TDOT Item Numbers must appear on the Utility Item Quantity Sheet submitted by the Utility and the Utility MS EXCEL spreadsheet file submitted by the utility.
2. Item Descriptions must be limited to no more than 60 characters. The description should describe the item of construction. A footnote can be made to the item number for further details concerning the work to be done under this item number. The Footnote will appear on the Utility Tabulation Sheet (U2-1, U3-1, etc.). All the information cannot be included in the description. Since the description is limited to 60 characters, wording should be minimized. The descriptions *new* or *existing* or *proposed* usually don't add to the item description, and should be avoided.
3. Units must conform to our standards.(If not on list, please call for coordination.)

Inches	= IN (not ")	Month	= MNTH
Feet	= FT (not ')	Metric Station	= MSTA
		Pass	= PASS
15 Minutes	= 15MN	Per	= PER
30 Minutes	= 30MN	Quart	= QART
Acre	= ACRE	Square Feet	= S.F.
Bag	= BAG	Square Yard	= S.Y.
Bale	= BALE	Set	= SET
Boring	= BORI	Site	= SITE
Cubic Feet	= C.F.	Spike	= SPKE
Cubic Yard	= C.Y.	100 Square Feet	= SQ.
100 Feet	= CL.F	Station	= STA.
Cycle	= CYCL	100 meter/yard	= STM3
Day	= DAY	Station/Yard	= STYD
Dollar	= DOLL	Ton Kilometer	= TNKM
Each	= EACH	Ton Mile	= TNMI
Gallon	= GAL.	Ton	= TON
Hectares	= HA.	Metric Ton	= TONN
Hour	= HOUR	Track Feet	= TRFT
Incident	= INCI	Unit	= UNIT
1000 Brick	= KBRK	Vertical Feet	= V.F.
Linear Feet	= L.F.	Vertical Meter	= V.M.
Linear Mile	= L.M.	Vertical Millimeter	= VMM
Lane	= LANE	Weekend	= WKND
Pound	= LB.	Year	= YEAR
Liter	= LITR	Kilogram	= kg
Lump Sum	= LS	Kilometer	= km
1000 Gallon	= M.G.	Meter	= m
1000 Board Feet Meas	= MBFM	Square Meter	= m2
1000 Brick	= MBRK	Cubic Meter	= m3
Man Hour	= MNHR		

Composite

Move In State Contract

Composite Percentage Calculations

TDOT system allows a maximum of three (3) percentage combinations per utility per project. An exception on a case by case basis may be made when a composite percentage high cost and percentage low costs are extreme.
Generally allowed: 100% Utility Cost
100% Project Cost
A Composite%

EXAMPLE:

Item Number	Description	% Utility (Betterment)	% Project
	12" Ductile Iron Pipe	0	100
	10" Ductile Iron Pipe	100	0
	6" Ductile Iron Pipe	35	65

NOTE: %Utility + %Project must ALWAYS equal 100%

When there is more than one (1) item on a project with betterment other than 100% Utility Cost, a "composite" percentage must be computed. This will be shown on Cost Estimates provided to TDOT. The following is an example:

					A	B	C	D	E
Item No.	Description	Unit	Unit Cost	Total Quantity	% Utility	% Project	Utility Cost	Project Cost	Total Cost
1	6" Ductile Iron Pipe	LF	$10.00	1,000	35	65	$ 3,500	$ 6,500	$ 10,000
2	6" PVC Pipe	LF	$ 8.00	500	25	75	$ 1,000	$ 3,000	$ 4,000
3	4" Ductile Iron Pipe	LF	$ 8.00	1,000	30	70	$ 2,400	$ 5,600	$ 8,000
4	12" Ductile Iron Pipe	LF	$20.00	1,000	0	100	$ 0	$ 20,000	$ 20,000
5	10" Ductile Iron Pipe	LF	$15.00	1,000	100	0	$ 15,000	$ 0	$ 15,000
Totals							$ 21,900	$ 35,100	$ 57,000

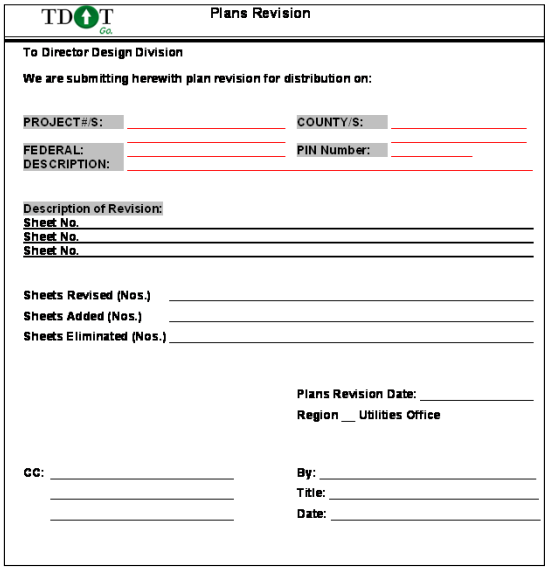
Composite Percentage = Total of C (1-3)(Utility Cost) / Total of E (1-3)(Total Cost of Items) **OR** $6,900 / $22,000 = **.3136 X 100 = 31.36%**

Revised Spreadsheet and Plan Tabulation Block Percentages would be as follows:

Item No.	Description	Unit	Total Quantity	% Utility	% Project
1	6" Ductile Iron Pipe	LF	1,000	31.36	68.64
2	6" PVC Pipe	LF	500	31.36	68.64
3	4" Ductile Iron Pipe	LF	1,000	31.36	68.64
4	12" Ductile Iron Pipe	LF	1,000	0	100
5	10" Ductile Iron Pipe	LF	1,000	100	0

Revisions

1. Revision Letter
2. Revised EXCEL Spreadsheet
3. Revision notes on utility drawings
4. Revised Utility Drawings (PDF)



TDOT Go.

Plans Revision

To Director Design Division

We are submitting herewith plan revision for distribution on:

PROJECT#/S: _____ COUNTY/S: _____

FEDERAL: _____ PIN Number: _____

DESCRIPTION: _____

Description of Revision:

Sheet No. _____

Sheet No. _____

Sheet No. _____

Sheets Revised (Nos.) _____

Sheets Added (Nos.) _____

Sheets Eliminated (Nos.) _____

Plans Revision Date: _____

Region __ Utilities Office

CC: _____

By: _____

Title: _____

Date: _____

Inspection

- **Utility Inspector oversees installation** ★
  - Approval / Certification / Testing of materials
  - Approval of shop drawings
  - Approval of Engineering field changes
  - Approval of substitution material or installation
  - Approval of quantity items installed
  - Inspect installation according to safety and industry standards
  - Acceptance of progressive utility facility installed
- Utility Plans & Utility Specifications govern the state contractor.
- **TDOT Construction Manager oversees Contract Obligations:**
  - Plans (location)
  - Specifications with respect to State Contractor
  - Pay Item expenditures

If the Utility Inspector has concerns, they are to be put in writing to the TDOT Construction Manager and a copy sent to the Regional Utility Office.

Move In State Contract

Diary

PROJECT UTILITY DIARY

CONTRACT NO:_____ RECORDED BY:_____ UTILITY COMPANY_____

PROJECT NO:_____ PROJECT ENGINEER_____ UTILITY CONTRACT NO:_____

REF. NO:_____ UTILITY REPRESENTATIVE:_____

DATE:_____ (For "Work Order" Reimbursable Projects)

LABOR

DESCRIPTION OF WORK PERFORMED	NAME	CLASSIFICATION	HOURS

LABOR USED TO RESTORE RECOVERED MATERIAL TO SUITABLE CONDITION FOR REUSE SHOULD BE INCLUDED ON THIS REPORT.

MATERIALS REMOVED

ITEM	U.S.	QUANTITY

IF BOTH PARTIES AGREE THAT MATERIAL IS NOT SALVAGEABLE, A CHECKS TO BE ENTERED IN THE U.S. COLUMN

MATERIALS USED

ITEM	QUANTITY

TRANSPORTATION AND EQUIPMENT

TYPE	HOURS	MILES

Distribution of copies:
White: Resp. Eng.
Yellow: Utility Co.
Pink: Field

DT-0987
Rev. 6/03

SAMPLE

Move In state Contract

Utility Cost

TDOT Finance Office Guidelines Package

Utility will make payment to the State in the amount of the estimated cost of these "non-participating" items prior to advertisement for bids. The Utility may provide these funds by one of the following means:

A. A check made payable to the order of and sent to the Department.

B. Documentation of a deposit made only by wire or by immediate credit transfer with the Treasurer of the State.

In the event said deposit exceeds the aggregate amount of charges, the difference will be refunded to the Utility. In the event said charges exceed the deposit, the Utility agrees to reimburse the State for such additional amount within 30 days.

If the **Utility** failed to send the payment with the signed contract, the **Central Utility Office** will notify the **Utility** that this contract can not be executed by the department until the office receives the payment in full.

Tennessee Department of Transportation
Finance Office Contact person:

If you have any questions concerning check or LGIP account in connection with your TDOT Non-Participating/Participating Contract, please contact the following person:

Cathey Marek	Region-1	(615) 741-7787
Erian Goda	Region-2	(615) 741-8990
Jeff Albritton	Region-3	(615) 532-5298
Thomas Whitfield	Region-4	(615) 741-8991

Or contact the Regional Utility Office for further assistance.

Specifications

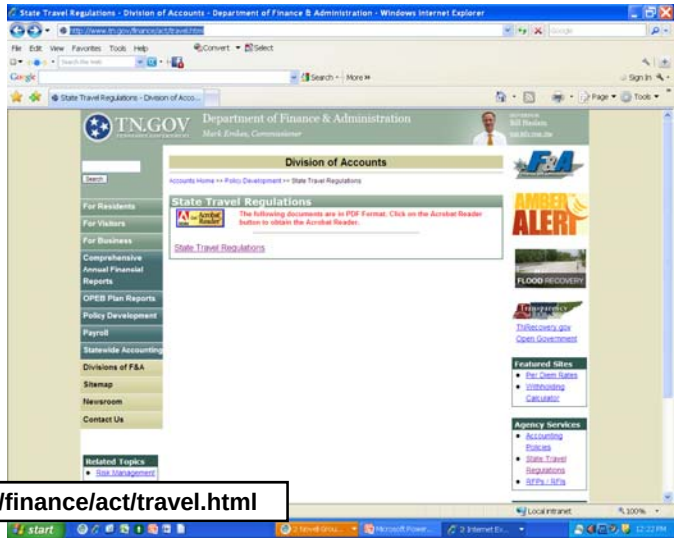
- Time period of acceptable Service Outage
- Required License, Certification, Drug testing of workers submitted to the utility.
- Liability Insurance submitted to the utility
- Approval of Material, material certifications by the utility
- Approval of shop drawings by the utility
- Approval of field changes by the utility
- Approval of substitution materials or methods by the utility
- Work inside customers residences such as re-lighting pilot lights, re-establishing services, etc. will be the responsibility of the utility
- Industry standards, safety standards, and material standards.
- Name, address, phone, E-mail, fax, cell phone of utility approval contact

More About Specs

1. Utility CANNOT include “boiler plate” language that contradicts the state contract. (Such as Performance Bonds). The State bond provides the performance guarantee.
2. The Utility CAN include qualifications, but CANNOT pre-qualify a sub-contractor:
   - Drug Testing certifications to be provided to the utility for approval
   - Certifications to be provided to the utility for approval
   - Licenses to be provided to the utility for approval
   - Proficiency (Need to be careful it does not specifically exclude, or will result in a delay to the project
3. The Utility can require INSURANCE. The contractor may in some cases be working on utility property (easement or poles).
4. Electronic CD copy (PDF)

Reimbursements

Travel Regulations



http://www.tn.gov/finance/act/travel.html

Travel Regulations

Department of Finance and Administration
Standard Reimbursement Rates
Lodging and Meals Revised October 1, 2010
Mileage Revised January 1, 2010

General Reimbursement Rates

Standard Mileage Rate Effective January 1, 2010	$	0.46/ mile
Maximum Parking Fee Without Receipt		8.00/day
Fees for Handling Equipment/Promotional Materials		20.00/hotel

Out-of-State Reimbursement Rates

Employees should utilize the U.S. General Services Administration CONUS (Continental United States) rates provided by the federal government. To view the CONUS rates, access the Department of Finance and Administration web page @ http://www.tn.gov/finance/divisions.html Click on Division of Accounts, then scroll to Policy Development where there is a direct link to the GSA CONUS rates. There is also a link on the Finance and Administration Intranet Travel Page Site at: http://intranet.state.tn.us/finance/employeeInfo/empTravelEmpTravel.html

Use the CONUS standard rates for all locations within the continental United States not specifically shown on the CONUS web page as a listed point. Both in-state and out-of-state meals and incidentals are reimbursed at 75% for day of departure and/or day of return.

In-State Travel Reimbursement Rates

In-state lodging and meal rates follow the CONUS rates for Tennessee. The standard in-state lodging rate of $77.00 and $46.00 for meals and incidentals should be used for all in-state locations not listed below.

Counties	Maximum Lodging	Maximum Meals & Incidentals	75% of Meals & Incidentals
Davidson (Nashville)	110	66	49.50
Shelby (Memphis)	96	61	45.75
Williamson (Brentwood/Franklin)	94	56	42.00
Hamilton (Chattanooga)	88	56	42.00
Knox (Knoxville)	84	56	42.00
Anderson (Oak Ridge)	90	46	34.50

In accordance with the provisions of TCA 4-3-1-9 (3) and the Comprehensive Travel Regulations, the above travel rates supersede and rescind all previous promulgated travel rates. These rates are effective October 1, 2010 and shall remain in effect until subsequently modified or withdrawn.

Signature is on file with the Division of Accounts, Department of Finance and Administration.

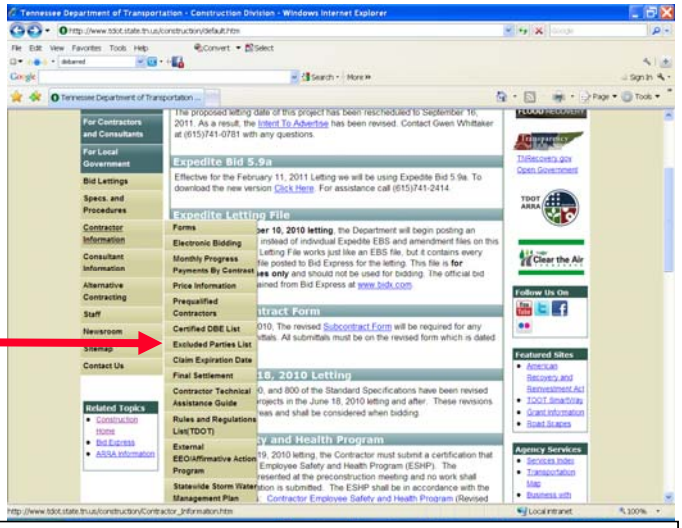
M.D. Goetz, Commissioner
Department of Finance and Administration

Date

TDOT Go.

Utility Bid Contract

Excluded Debarred



http://www.tdot.state.tn.us/construction/default.htm

TDOT Go.

Utility Bid Contract

Excluded Debarred

http://www.epls.gov

Reimbursement

Invoices

Process:

1. Submitted for review by Regional Utility Office.
2. Submitted for review and approval by Construction office.
3. Reviewed by Regional Utility Office, coded, & submitted to accounts for payment.

To Expedite Payment:

- ❑ Must be in same format as estimate.
- ❑ Progressive payments capped at 80%.
- ❑ Invoice MUST cite:
  - which sequential bill it is (Progressive #1, #2, #3, etc.)
  - total accumulated cost to date of last bill.
- ❑ Final bill over contract amount requires estimate line item justification.
- ❑ Final Bill must be submitted within one (1) year of project completion.

Loans

URLP

- ◆ The Utility Relocation Loan Program (URLP) criteria has been modified.
- ◆ Administered by Tennessee Department of Environment and Conservation (TDEC)
- ◆ The intent is to make loans more accessable to utilities for relocation costs.

Project Phases

Department Procedures

19000-1000-00
19000-2000-00
19000-3000-00

County Number

Phase 1000 = Preliminary
Phase 2000 = ROW / Utility
Phase 3000 = Construction

Funding Source
04 = State
44/94 = Federal
54 = Local Agency

PIN 104456.00
ROW Project

104456.01
104456.02
104456.03
Construction Projects

Questions?

Currently Vacant
State Utility Coordinator
505 Deaderick Street
Suite 600 JK Polk Bldg.
Nashville, TN 37243-0337
615.741.2892
_____@tn.gov

Michael Horlacher
Asst. State Utility Coord. Regions 3 & 4
505 Deaderick Street
Suite 600 JK Polk Bldg.
Nashville, TN 37243-0337
615.741.6802
michael.horlacher@tn.gov

Gus Awali
Asst. State Utility Coord. Regions 1 & 2
505 Deaderick Street
Suite 600 JK Polk Bldg.
Nashville, TN 37243-0337
615.253.1106
gus.awali@tn.gov

Joe Shaw
Asst. Director ROW Division
505 Deaderick Street
Suite 600 JK Polk Bldg.
Nashville, TN 37243-0337
615.741.2891
joe.shaw@tn.gov

Appendix D2. Utility Relocation Guidelines Handout from the Workshop

TDOT Go.

Tennessee Department of Transportation

Utility Relocation Guidelines

TDOT Cover Letter for Utility Relocation

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
NASHVILLE, TN 37243-0360

JOHN C. SCHROER
COMMISSIONER

Bi... AM
GO...

Engineering Authorization Date: 5/24/2011 **Federal Fi...** 3/15/2011

JOE SHAW
TENNESSEE DEPARTMENT OF TRANSPORTATION
SUITE 600, JAMES K. POLK BUILDING
NASHVILLE, TN 37243

PROJECT#/S: XXXXX-XXXX-XX **COUNTY/S...** SON
FEDERAL: XX-XXX-XXX(XX) **PIN #:** ...0
DESCRIPTION: SAMPLE ROADWAY PROJECT

P...oject Eligible For Chapter 86 Reimbursement: YES X NO

Please refer to the above captioned project number o... rrespondenc... ing utility relocation.

Dear Mr. Joe Shaw,

This letter will serve as authority for the Utility to proce... wi... ineering that is necessary to prepare plans, schedule of working days, and estimates of cost for the ...ustm... ...r facilities which may be in conflict with this project. This is done in accordance with the provisions o... CA 54-5-...4.

If a consultant is needed, see paragrap... ...sultant package must be submitted and approved by this office before consultant engineering will b... ...sement.

Estimates of cost prepared in response to th... uthorization a... confidential and shall not be released or made available to anyone other than the Utility, the approved c... ...ultant, and TDOT.

Reimbursement will be in ...ordance with TCA 5-... 304 and as amended by Public Chapter No. 86 of the Public Acts of 2003. The cost of any w... ...r to the author... ation date of this letter will not be eligible for reimbursement.

This notice is not to be con... ...ued ... ...tually relocate any of your facilities. Any relocation work done prior to written approval from the St... Utility ... ...r will not be eligible for reimbursement.

This project is currently sched... ...r letting: 06/12/2012

To be eligi... ...r reimbursem... t, if the project is qualified for Chapter 86 reimbursement as noted above, the Utility M... ST submit to this offi... for Location Approval by the revised due date (A): 10/14/2011

1) ...5) half-... ...oded ... ...ocation plans.
2) ... ...m 2004-16, including signed Schedule of Working Days and Chapter 86 Eligibility.
3) ... ...claration fo... ...imbursement.

In addition, to be eligible ...r inclusion of the utility relocation work in the State Construction contract, the following must be su... ...ted by due date (B): 04/01/2012

1) PDF files of detailed Utility relocation plans.
2) PDF file of detailed Utility Specifications.
3) Completed Utility Item Spreadsheet in Excel format, including estimated construction costs.
4) Completed Utility individual permit sketches, if required.

The following will be provided to assist you in responding to the Department request:

SAMPLE

Engineering Approval Requirements

If a Utility wished to use a Consultant for Engineering services, the Utility must submit the following information to TDOT for approval before work can begin to prepare any submittals for relocation on the project. The information that needs to be submitted to TDOT for approval of a Consultant is as follows:

- Certification of Consultant and Memorandum of Understanding (TDOT Form 2004-13)
- Letter from Utility requesting approval of Consulting services
- Estimate of Engineering Cost (TDOT Form 2004-16, page 1.1, shown on later slides)
- Consultant Scope of Work
- If a consultant is requesting Engineering fees based on a "continuing contract", then a copy of the Continuing Contract between Utility and Consultant must be used.

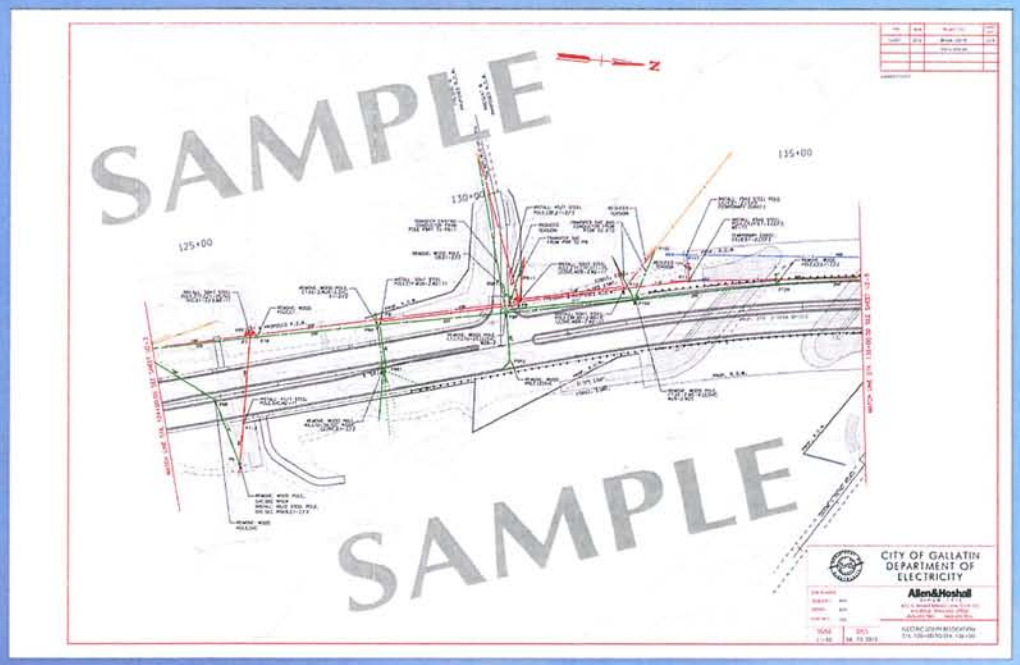
** Any work done by a Consultant Engineer **prior** to written approval from TDOT **will not** be eligible for reimbursement

** **Reimbursement will be limited to the Engineering Estimate of Cost maximum ceiling amount.** If the Engineer finds that it is necessary to increase their fees, the Utility shall make a written request to the State for the fee increase, along with reasoning for the overrun, which will have to be approved by TDOT prior to incurring any additional costs. **No increase shall be binding upon the State unless written prior approval is given by the State.**

CAD File Access Requirements

In order to gain access to the electronic files that TDOT uses for the project in which a utility is relocating, the Utility or Consultant must fill out a CADD Files Disclaimer (TDOT Form 2004-14). Once the form has been submitted and received by TDOT, then they will release access to the electronic files for use by the Utility or Consultant.

Rainbow Plans



"A" Date Submittal Requirements

When a Utility or Consultant is submitting an "A" date package for relocation, the submittal needs to consist of the following:

- (1) Printed, color-coded half-size copy of Utility Marked Relocation Plans (red-new, green-remove, yellow-existing to remain, blue-temporary) + 1 pdf copy
- Utility Estimate of Cost (TDOT Form 2004-16, shown on later slides)
- Schedule of Estimated Calendar Days (TDOT Form 2004-16, page 8.1, shown on later slides)
- Utility "Declaration for Reimbursement" letter

"B" Date Submittal Requirements

When a Utility or Consultant is submitting a "B" date package for relocation, the submittal needs to consist of the following:

- (1) Printed copy of completed Utility Item Spreadsheet (including Item Numbers, Descriptions, Units, Percentages and Per Unit Labor and Material Costs)
- (1) Electronic copy of detailed Relocation Plans (Black and White) (pdf format)
- (1) Electronic copy of color-coded relocation plans (pdf format)
- (1) Electronic copy of Construction Specifications (pdf format)
- (1) Electronic copy of Utility Item Spreadsheet (excel format)
- (1) Electronic copy of CAD files of utility relocation (dgn format)

All electronic files are to be burned to a CD and submitted along with the printed copies of the required materials.

TDOT Form 2004-16 (Utility Relocation Estimate)

The TDOT Form 2004-16 for Utility Relocation can be very overwhelming at first glance.

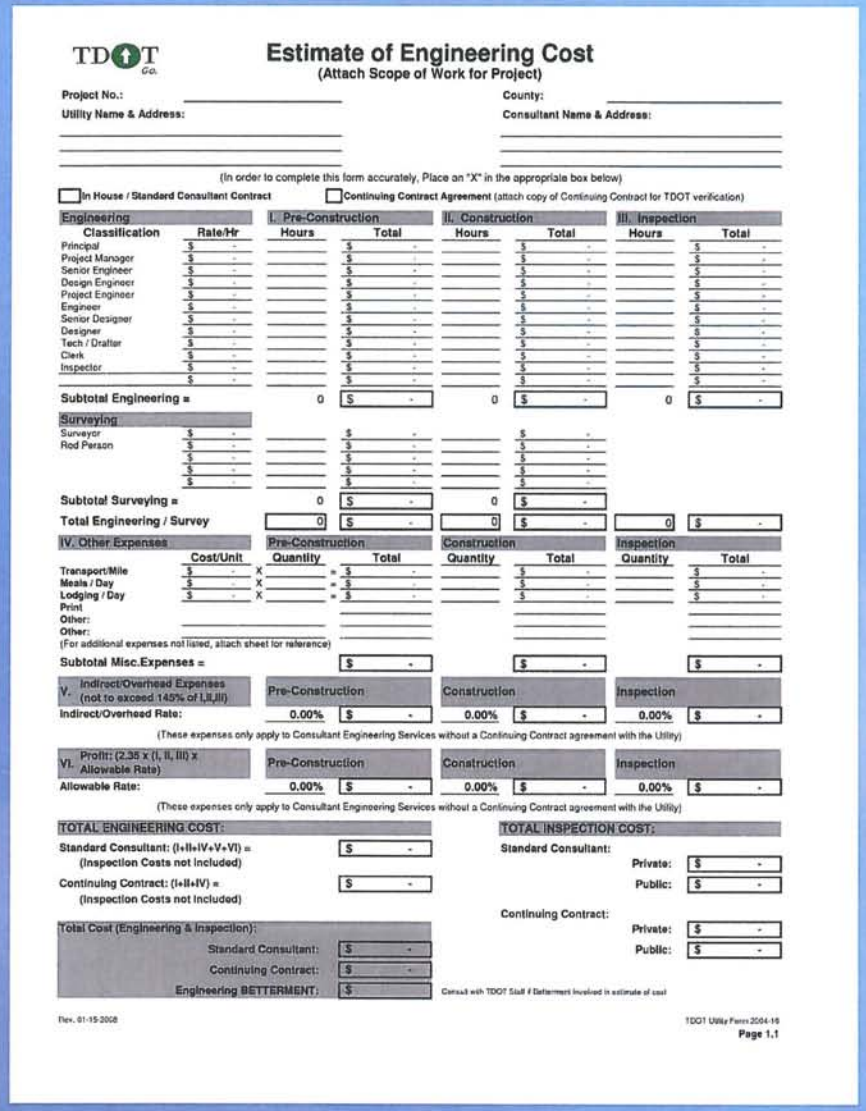
The 2004-16 Form is made up of (10) Different pages, and is filled out in Excel Format. These pages are filled out and submitted to TDOT as part of the "A" date package for Utility Relocation. The sheets are labeled as follows:

- Sheet 1.1 – Consultant Engineering Cost
- Sheet 1.2 – In House Engineering Cost
- Sheet 2.1 – Site Cost
- Sheet 3.1 – Removal, Labor & Materials
- Sheet 4.1 – Installation, Labor & Materials
- Sheet 5.1 – Labor
- Sheet 6.1 – Relocation Estimate
- Sheet 6.2 – Chapter 86 Certification
- Sheet 7.1 – Move Prior Obligation
- Sheet 8.1 – Calendar Days

This form must be completed in its entirety and submitted along with (5) half-size sets of Color-coded plans to satisfy the "A" date submittal for TDOT to be considered for Chapter 86 Reimbursement (if applicable).

The form is "protected", so please do not attempt to "unprotect" the spreadsheet when filling out the required information. If there are any questions concerning the information required in the spreadsheet, please contact the TDOT Utility Representative for the region in which the project is located. This information can be found on the Notification letter for that project that was sent to the Utility.

Sheet 1.1, Consultant Estimate of Engineering Cost



TDOT Go.

Estimate of Engineering Cost
(Attach Scope of Work for Project)

Project No.: _____ County: _____

Utility Name & Address: _____ Consultant Name & Address: _____

(In order to complete this form accurately, Place an "X" in the appropriate box below)

☐ In House / Standard Consultant Contract ☐ Continuing Contract Agreement (attach copy of Continuing Contract for TDOT verification)

Engineering Classification	Rate/Hr	I. Pre-Construction Hours	I. Pre-Construction Total	II. Construction Hours	II. Construction Total	III. Inspection Hours	III. Inspection Total
Principal	$ -		$ -		$ -		$ -
Project Manager	$ -		$ -		$ -		$ -
Senior Engineer	$ -		$ -		$ -		$ -
Design Engineer	$ -		$ -		$ -		$ -
Project Engineer	$ -		$ -		$ -		$ -
Engineer	$ -		$ -		$ -		$ -
Senior Designer	$ -		$ -		$ -		$ -
Designer	$ -		$ -		$ -		$ -
Tech / Drafter	$ -		$ -		$ -		$ -
Clerk	$ -		$ -		$ -		$ -
Inspector	$ -		$ -		$ -		$ -
	$ -		$ -		$ -		$ -
Subtotal Engineering =		0	$ -	0	$ -	0	$ -
Surveying							
Surveyor	$ -		$ -		$ -		
Rod Person	$ -		$ -		$ -		
	$ -		$ -		$ -		
	$ -		$ -		$ -		
	$ -		$ -		$ -		
Subtotal Surveying =		0	$ -	0	$ -		
Total Engineering / Survey		0	$ -	0	$ -	0	$ -

IV. Other Expenses	Cost/Unit	Pre-Construction Quantity	Pre-Construction Total	Construction Quantity	Construction Total	Inspection Quantity	Inspection Total
Transport/Mile	$ -	X =	$ -		$ -		$ -
Meals / Day	$ -	X =	$ -		$ -		$ -
Lodging / Day	$ -	X =	$ -		$ -		$ -
Print							
Other:							
Other:							

(For additional expenses not listed, attach sheet for reference)

Subtotal Misc.Expenses = $ - $ - $ -

V. Indirect/Overhead Expenses (not to exceed 145% of I,II,III)	Pre-Construction		Construction		Inspection	
Indirect/Overhead Rate:	0.00%	$ -	0.00%	$ -	0.00%	$ -

(These expenses only apply to Consultant Engineering Services without a Continuing Contract agreement with the Utility)

VI. Profit: (2.35 x (I, II, III) x Allowable Rate)	Pre-Construction		Construction		Inspection	
Allowable Rate:	0.00%	$ -	0.00%	$ -	0.00%	$ -

(These expenses only apply to Consultant Engineering Services without a Continuing Contract agreement with the Utility)

TOTAL ENGINEERING COST:

Standard Consultant: (I+II+IV+V+VI) = $ -
(Inspection Costs not included)

Continuing Contract: (I+II+IV) = $ -
(Inspection Costs not included)

TOTAL INSPECTION COST:

Standard Consultant:
Private: $ -
Public: $ -

Continuing Contract:
Private: $ -
Public: $ -

Total Cost (Engineering & Inspection):
Standard Consultant: $ -
Continuing Contract: $ -
Engineering BETTERMENT: $

Consult with TDOT Staff if Betterment involved in estimate of cost

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TDOT Utility Form 2004-16
Page 1.1

Estimate of Engineering Cost can be filled out one of two ways, using either Standard Consulting or Continuing Contract. If there is no continuing contract between the Utility and the Consultant for Engineering services, check the "standard contract" box. If using a consultant that has an existing continuing contract, then check the "continuing contract" box.

Engineering: When filling in the engineering, input the rate and hours for the positions that will be utilized for the project for areas I, II and III (if applicable). Pre-Construction Engineering will be any engineering needed **PRIOR** to the Letting. Construction Engineering will be any engineering potentially needed during the construction of the project.

Surveying: Most survey work is done by TDOT, if there will be additional surveying needed for relocation, input that information.

Other Expenses: List all other expenses in this area. TDOT has standard "reimbursable rates" for mileage and lodging, so check with them before assigning an amount in these areas. If listing an expense next to "Other", please include a description of this expense or it may not be approved for reimbursement.

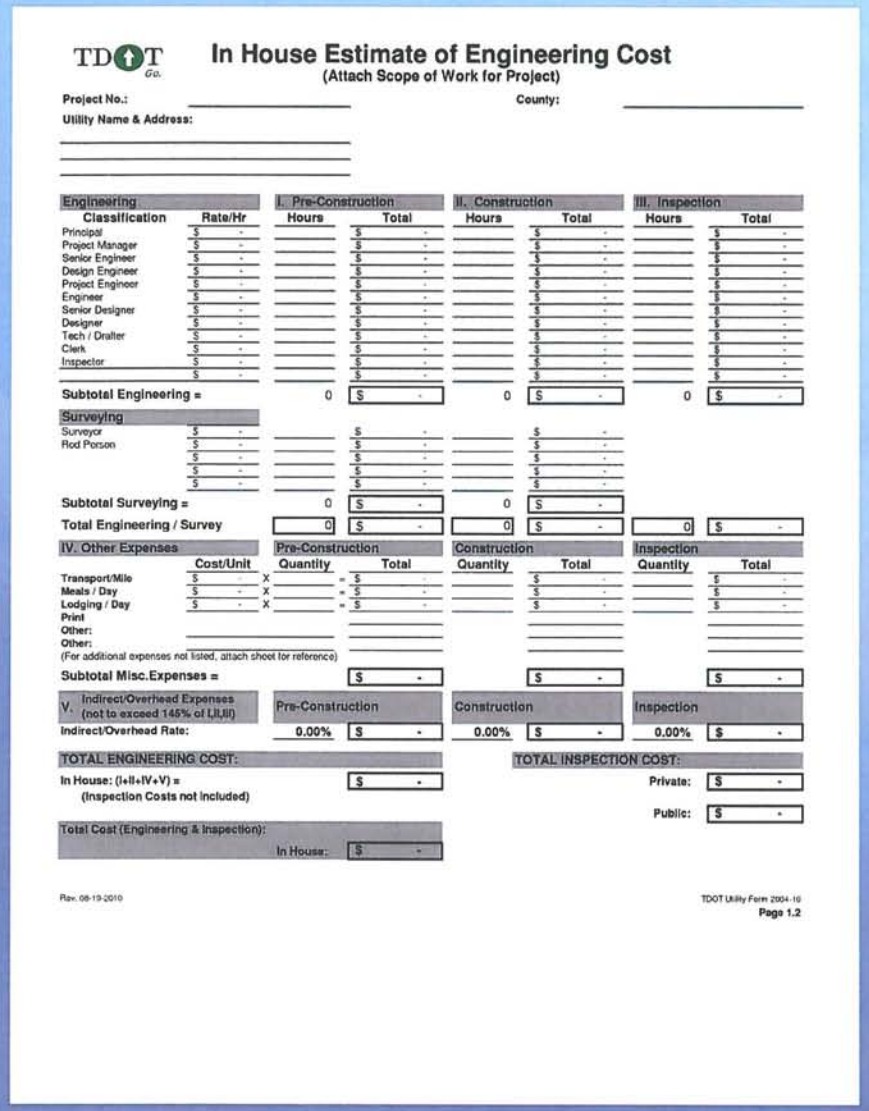
Indirect/Overhead Expenses: Only fill out if using a "standard" contract. The appropriate rate should be calculated internally.

Profit: Only fill out if using a "standard" contract. The allowable rate should be calculated internally.

Total Engineering Cost: The total engineering will fill itself out based on the information provided in areas I through VI of the sheet, no input is necessary in this section.

Total Inspection Cost: Inspection costs are reimbursed on a "private/public" percentage. Utilities will only be reimbursed for inspection services for areas of their facilities that are currently on Private ROW. The Total Inspection Cost cells will not be filled in until the percentage of Private and Public are calculated on Sheet 6.1.

Sheet 1.2, In House Estimate of Engineering Cost



TDOT Go.

In House Estimate of Engineering Cost
(Attach Scope of Work for Project)

Project No.: _____ County: _____

Utility Name & Address:

_____

_____

_____

Engineering Classification	Rate/Hr	I. Pre-Construction Hours	I. Pre-Construction Total	II. Construction Hours	II. Construction Total	III. Inspection Hours	III. Inspection Total
Principal	$ -		$ -		$ -		$ -
Project Manager	$ -		$ -		$ -		$ -
Senior Engineer	$ -		$ -		$ -		$ -
Design Engineer	$ -		$ -		$ -		$ -
Project Engineer	$ -		$ -		$ -		$ -
Engineer	$ -		$ -		$ -		$ -
Senior Designer	$ -		$ -		$ -		$ -
Designer	$ -		$ -		$ -		$ -
Tech / Drafter	$ -		$ -		$ -		$ -
Clerk	$ -		$ -		$ -		$ -
Inspector	$ -		$ -		$ -		$ -
	$ -		$ -		$ -		$ -
Subtotal Engineering =		0	$ -	0	$ -	0	$ -
Surveying							
Surveyor	$ -		$ -		$ -		
Rod Person	$ -		$ -		$ -		
	$ -		$ -		$ -		
	$ -		$ -		$ -		
	$ -		$ -		$ -		
Subtotal Surveying =		0	$ -	0	$ -		
Total Engineering / Survey		0	$ -	0	$ -	0	$ -

IV. Other Expenses	Cost/Unit	Pre-Construction Quantity	Pre-Construction Total	Construction Quantity	Construction Total	Inspection Quantity	Inspection Total
Transport/Mile	$ -	x	= $ -		$ -		$ -
Meals / Day	$ -	x	= $ -		$ -		$ -
Lodging / Day	$ -	x	= $ -		$ -		$ -
Print							
Other:							
Other:							
(For additional expenses not listed, attach sheet for reference)							
Subtotal Misc.Expenses =			$ -		$ -		$ -

V. Indirect/Overhead Expenses (not to exceed 145% of I,II,III)	Pre-Construction		Construction		Inspection	
Indirect/Overhead Rate:	0.00%	$ -	0.00%	$ -	0.00%	$ -

TOTAL ENGINEERING COST:

In House: (I+II+IV+V) = $ -
(Inspection Costs not included)

TOTAL INSPECTION COST:

Private: $ -

Public: $ -

Total Cost (Engineering & Inspection):

In House: $ -

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TDOT Utility Form 2004-10
Page 1.2

In House Engineering Costs are calculated differently than Consulting costs, so a new sheet 1.2 has been designed to assist in those costs, keeping the utility from having to supply their own internal spreadsheets as was done in the past.

The same information applies that is in the Consultant Estimate of Engineering Cost, for the exception of a line item for Profit. Therefore, the completion of both forms are very similar.

Engineering: When filling in the engineering, input the rate and hours for the positions that will be utilized for the project for areas I, II and III (if applicable). Pre-Construction Engineering will be any engineering needed **PRIOR** to the Letting. Construction Engineering will be any engineering potentially needed during the construction of the project.

Surveying: Most survey work is done by TDOT. If there will be additional surveying needed for relocation, input that information.

Other Expenses: List all other expenses in this area. TDOT has standard "reimbursable rates" for mileage and lodging, so check with them before assigning an amount in these areas. If listing an expense next to "Other", please include a description of this expense or it may not be approved for reimbursement.

Indirect/Overhead Expenses: The appropriate rate should be calculated internally.

Total Engineering Cost: The total engineering will fill itself out based on the information provided in areas I through V of the sheet, no input is necessary in this section.

Total Inspection Cost: Inspection costs are reimbursed on a "private/public" percentage. Utilities will only be reimbursed for inspection services for areas of their facilities that are currently on Private ROW. The Total Inspection Cost cells will not be filled in until the percentage of Private and Public are calculated on Sheet 6.1.

Sheet 2.1, Site Cost (Move Prior Only)

Site Cost - (Used ONLY for MOVE PRIOR contracts.)

Description	Clearing/ Grubbing	Traffic Control	Erosion Control
Total Chapter 86 Provisions	$ -	$ -	$ -
	(To Page 7.1; C.1)	(To Page 7.1; C.2)	(To Page 7.1; C.3)

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TDOT Utility Form 2004-16
Page 2.1

The Site Cost sheet is fairly self-explanatory. It is only to be used when a Utility is moving their facilities "Prior To" the letting of the project.

When providing this information, attach any internal supporting documentation for the rates and fees that are being applied to the estimate so that TDOT can verify that the amounts being requested are reasonable.

Sheet 3.1, Removal – Labor, Materials and Salvage

Poles/Length of Facility = ________ Public ROW = ________ Private ROW = ________ TDOT Sheet No. ________

Labor and Materials & Supply Removal; Salvage & Non-Usable (Junked) Materials

		Labor							Material			
		In House		Bid Contract		Continuing						
Item	Qty	Unit	Extended	Unit	Extended	Unit	Extended	Betterment	Unit Cost	Extended	Salvage / Reused	Junked / Scrapped
			$ -		$ -		$ -			$ -		
			$ -		$ -		$ -			$ -		
			$ -		$ -		$ -			$ -		
			$ -		$ -		$ -			$ -		
			$ -		$ -		$ -			$ -		
			$ -		$ -		$ -			$ -		
			$ -		$ -		$ -			$ -		
			$ -		$ -		$ -			$ -		
			$ -		$ -		$ -			$ -		
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			$ -		$ -		$ -			$ -		
			$ -		$ -		$ -			$ -		
			$ -		$ -		$ -			$ -		
Subtotal Labor Removal Costs:			$ - (To Page 6.1: 1b)		$ - (To Page 6.1: 1b)		$ - (To Page 6.1: 1b)					
Removal Betterment:								$ - (To Page 7.1, E.1)				
Material Removal Costs:										$ -		
Subtotal Salvage and Junked:											$ - (To Page 7.1: B.1.1)	$ - (To Page 7.1: B.1.2)

Total Salvage Value (by Salvage Value Percentage): **Percentage:** 20.00%

Total Value (Material Extended x Salvage Value %) $ -

If scrapped material is saleable, the estimated sale value must be shown as a credit. If no net value, must footnote item has no value.

Revision 04-04-2011

TDOT Utility Form 2004-16

Page 3.1

Removal of Labor and Materials should reflect an "estimated" value for the removal of the existing facilities on the project.

Items should be listed in groups, not broken down in detail, that will be addressed during the final design of the utility relocation process.

Labor: Labor Unit Prices should include all equipment needed to remove the facilities for the project. If the relocation is being done "prior to" the letting, the units can be listed under either "In House" or "Continuing". If the relocation is being done as part of the roadway contract, then the unit will be listed under "Bid Contract".

Material: Material Unit prices should include all existing material on the unit that is being listed.

Salvage Material: Any materials that are going to be salvaged from the Utility need to be assigned a value. TDOT will not reimburse a utility for materials that can be re-used by the utility for their facilities.

Sheet 4.1, Installation – Labor and Materials

\# Poles/Length of Facility = ____________ Public ROW = ________ Private ROW = ________ TDOT Sheet No. ________

Labor and Materials Installation; Betterment; Material Provided to State Contractor

Equipment Cost included installation cost ☐

Item	Qty	Labor (including Betterment) In House Unit	In House Extended	Bid Contract Unit	Bid Contract Extended	Continuing Contract Unit	Continuing Contract Extended	Betterment Labor	Betterment Material	Material (including Betterment) Unit Cost	Provided to State	Install Extended
			$ -		$ -		$ -					$ -
			$ -		$ -		$ -					$ -
			$ -		$ -		$ -					$ -
			$ -		$ -		$ -					$ -
			$ -		$ -		$ -					$ -
			$ -		$ -		$ -					$ -
			$ -		$ -		$ -					$ -
			$ -		$ -		$ -					$ -
			$ -		$ -		$ -					$ -
			$ -		$ -		$ -					$ -
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			$ -		$ -		$ -					$ -
			$ -		$ -		$ -					$ -
			$ -		$ -		$ -					$ -
Total from detail sheet 5.1A			$ -		$ -		$ -					$ -
Subtotal Labor Installation Costs:			$ - (To Page 6.1; 1a)		$ - (To Page 6.1; 1a)		$ - (To Page 6.1; 1a)					
Betterment Costs:								$ - (To Page 7.1; E.1)	$ - (To Page 7.1; E.2)			
Installation Material Costs:											$ - (To Page 7.1; B.2)	$ - (To Page 7.1; B.1)

Show footnotes for each line on separate Sheet.

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TDOT Utility Form 2004-16
Page 4.1

Installation Labor and Materials should reflect an "estimated" value for the installation of the new facilities that will be required on the project.

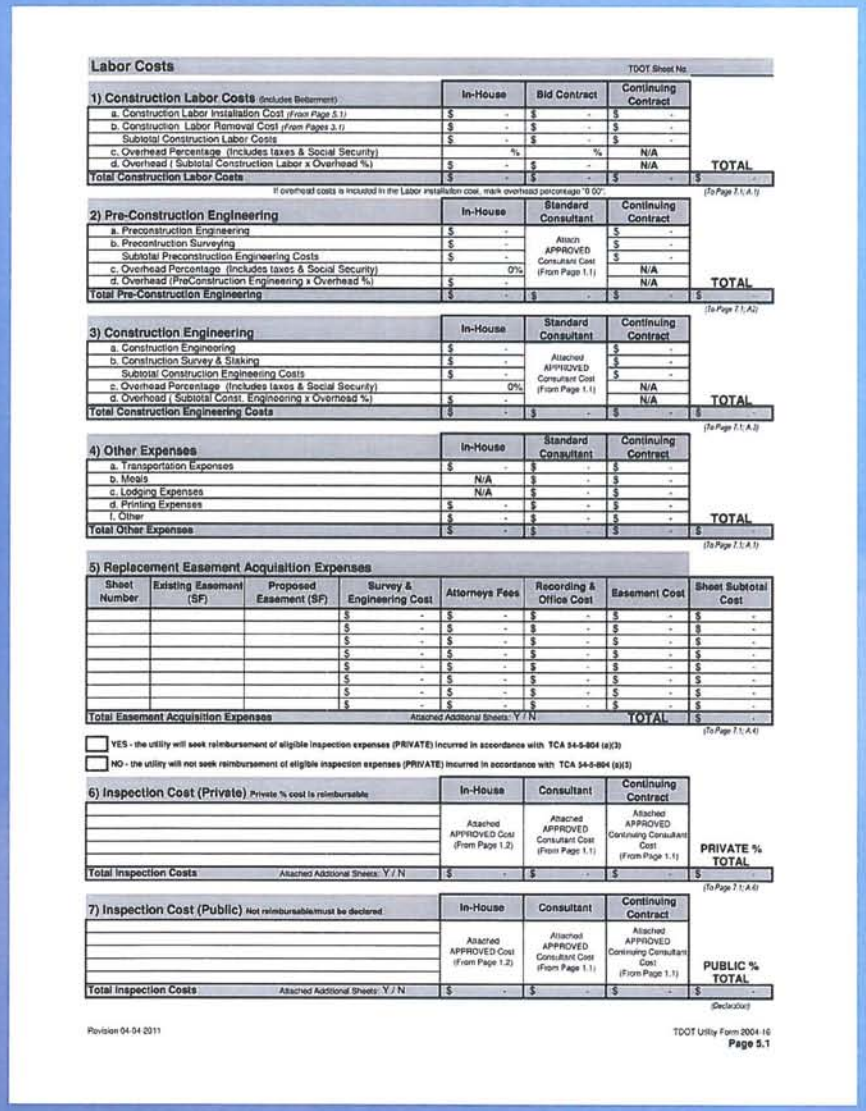
Labor: Labor Unit Prices should include all labor costs necessary to install the facilities for the project. If the relocation is being done "prior to" the letting, the units can be listed under either "In House" or "Continuing". If the relocation is being done as part of the roadway contract, then the unit will be listed under "Bid Contract".

Whether equipment is being listed separately and not being included in the installation labor unit pricing, or if it is to be included in the unit price for installation, make sure to note that by checking the appropriate box in the upper left corner of the sheet.

Material: Material Unit prices should include all materials necessary to install the unit that is being listed in it's entirety. If a utility is providing some or all of the materials, list those costs under "provided to state".

Betterment: If a utility is considering "upgrading" their existing facilities, the difference in what is existing on their facilities versus what they want to install is considered "betterment". The values for this difference (in both labor and material costs) need to be noted in the Betterment column of the sheet. TDOT will reimburse utilities for "in kind" replacement of their facilities. Anything that the utility wished to install that will improve their system will need to be listed as betterment.

Sheet 5.1, Combined Labor Costs, Easement and Inspection



Labor Costs TDOT Sheet No.

1) Construction Labor Costs (Includes Betterment)	In-House	Bid Contract	Continuing Contract	
a. Construction Labor Installation Cost (From Page 3.1)	$ -	$ -	$ -	
b. Construction Labor Removal Cost (From Pages 3.1)	$ -	$ -	$ -	
Subtotal Construction Labor Costs	$ -	$ -	$ -	
c. Overhead Percentage (Includes taxes & Social Security)	%	%	N/A	
d. Overhead (Subtotal Construction Labor x Overhead %)	$ -	$ -	N/A	TOTAL
Total Construction Labor Costs	$ -	$ -	$ -	$ -

If overhead costs is included in the Labor installation cost, mark overhead percentage "0.00". (To Page 7.1; A.1)

2) Pre-Construction Engineering	In-House	Standard Consultant	Continuing Contract	
a. Preconstruction Engineering	$ -	Attach APPROVED Consultant Cost (From Page 1.1)	$ -	
b. Preconstruction Surveying	$ -		$ -	
Subtotal Preconstruction Engineering Costs	$ -		$ -	
c. Overhead Percentage (Includes taxes & Social Security)	0%		N/A	
d. Overhead (PreConstruction Engineering x Overhead %)	$ -		N/A	TOTAL
Total Pre-Construction Engineering	$ -	$ -	$ -	$ -

(To Page 7.1; A.2)

3) Construction Engineering	In-House	Standard Consultant	Continuing Contract	
a. Construction Engineering	$ -	Attached APPROVED Consultant Cost (From Page 1.1)	$ -	
b. Construction Survey & Staking	$ -		$ -	
Subtotal Construction Engineering Costs	$ -		$ -	
c. Overhead Percentage (Includes taxes & Social Security)	0%		N/A	
d. Overhead (Subtotal Const. Engineering x Overhead %)	$ -		N/A	TOTAL
Total Construction Engineering Costs	$ -	$ -	$ -	$ -

(To Page 7.1; A.3)

4) Other Expenses	In-House	Standard Consultant	Continuing Contract	
a. Transportation Expenses	$ -	$ -	$ -	
b. Meals	N/A	$ -	$ -	
c. Lodging Expenses	N/A	$ -	$ -	
d. Printing Expenses	$ -	$ -	$ -	
f. Other	$ -	$ -	$ -	TOTAL
Total Other Expenses	$ -	$ -	$ -	$ -

(To Page 7.1; A.1)

5) Replacement Easement Acquisition Expenses

Sheet Number	Existing Easement (SF)	Proposed Easement (SF)	Survey & Engineering Cost	Attorneys Fees	Recording & Office Cost	Easement Cost	Sheet Subtotal Cost
			$ -	$ -	$ -	$ -	$ -
			$ -	$ -	$ -	$ -	$ -
			$ -	$ -	$ -	$ -	$ -
			$ -	$ -	$ -	$ -	$ -
			$ -	$ -	$ -	$ -	$ -
			$ -	$ -	$ -	$ -	$ -
			$ -	$ -	$ -	$ -	$ -
Total Easement Acquisition Expenses		Attached Additional Sheets: Y / N				TOTAL	$ -

(To Page 7.1; A.4)

☐ YES - the utility will seek reimbursement of eligible inspection expenses (PRIVATE) incurred in accordance with TCA 54-5-804 (a)(3)

☐ NO - the utility will not seek reimbursement of eligible inspection expenses (PRIVATE) incurred in accordance with TCA 54-5-804 (a)(3)

6) Inspection Cost (Private) Private % cost is reimbursable	In-House	Consultant	Continuing Contract	
	Attached APPROVED Cost (From Page 1.2)	Attached APPROVED Consultant Cost (From Page 1.1)	Attached APPROVED Continuing Consultant Cost (From Page 1.1)	PRIVATE % TOTAL
Total Inspection Costs Attached Additional Sheets: Y / N	$ -	$ -	$ -	$ -

(To Page 7.1; A.6)

7) Inspection Cost (Public) Not reimbursable/must be declared	In-House	Consultant	Continuing Contract	
	Attached APPROVED Cost (From Page 1.2)	Attached APPROVED Consultant Cost (From Page 1.1)	Attached APPROVED Continuing Consultant Cost (From Page 1.1)	PUBLIC % TOTAL
Total Inspection Costs Attached Additional Sheets: Y / N	$ -	$ -	$ -	$ -

(Declaration)

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TDOT Utility Form 2004-16
Page 5.1

The majority of the Combined Labor Cost sheet will be filled in as the first (5) sheets of the spreadsheet are completed. However, there are areas of the sheet that are not formulated and will need to be addressed and completed.

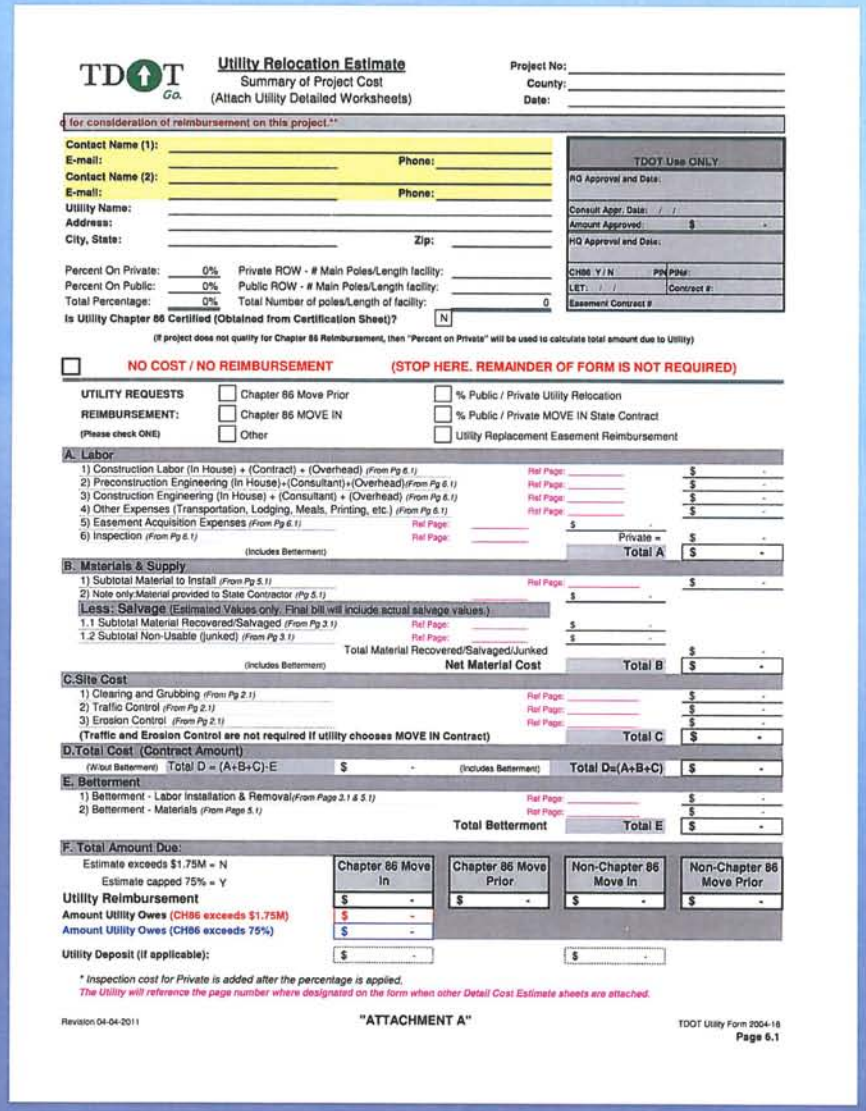
Replacement Easement Acquisition: For areas of relocation that fall outside public ROW, the utility is required to acquire the ROW necessary to relocate their facilities. In order for the utility to get reimbursed for these purchases, the information in this section needs to be filled out.

Inspection Cost: The costs associated with Inspection services will be calculated from Sheet 1.1 (or 1.2 if Utility is going to be doing Inspections In-House). However, the utility will need to check the appropriate box on whether or not they are seeking reimbursement for any eligible inspection expenses.

Inspection Costs on PRIVATE ROW are reimbursable under Chapter 86, so Utilities need to ensure that they pay close attention to whether or not their existing facilities fall on existing PRIVATE ROW.

Other Expenses: When listing "other" expenses (from Sheet 1.1 or 1.2), please make sure to provide a definition as to what those costs are or they may not be designated as reimbursable.

Sheet 6.1, Utility Relocation Estimate Summary



TDOT Co.

Utility Relocation Estimate
Summary of Project Cost
(Attach Utility Detailed Worksheets)

Project No:
County:
Date:

for consideration of reimbursement on this project.**

Contact Name (1):
E-mail: Phone:
Contact Name (2):
E-mail: Phone:
Utility Name:
Address:
City, State: Zip:

TDOT Use ONLY
RO Approval and Date:
Consult Appr. Date: / /
Amount Approved: $ -
HQ Approval and Date:
CH86 Y / N PIN PIN#:
LET: / / Contract #:
Easement Contract #

Percent On Private: 0% Private ROW - # Main Poles/Length facility:
Percent On Public: 0% Public ROW - # Main Poles/Length facility:
Total Percentage: 0% Total Number of poles/Length of facility: 0
Is Utility Chapter 86 Certified (Obtained from Certification Sheet)? N

(If project does not qualify for Chapter 86 Reimbursement, then "Percent on Private" will be used to calculate total amount due to Utility)

☐ NO COST / NO REIMBURSEMENT (STOP HERE. REMAINDER OF FORM IS NOT REQUIRED)

UTILITY REQUESTS REIMBURSEMENT: (Please check ONE)
☐ Chapter 86 Move Prior ☐ % Public / Private Utility Relocation
☐ Chapter 86 MOVE IN ☐ % Public / Private MOVE IN State Contract
☐ Other ☐ Utility Replacement Easement Reimbursement

A. Labor
1) Construction Labor (In House) + (Contract) + (Overhead) *(From Pg 6.1)* Ref Page: $ -
2) Preconstruction Engineering (In House)+(Consultant)+(Overhead)*(From Pg 6.1)* Ref Page: $ -
3) Construction Engineering (In House) + (Consultant) + (Overhead) *(From Pg 6.1)* Ref Page: $ -
4) Other Expenses (Transportation, Lodging, Meals, Printing, etc.) *(From Pg 6.1)* Ref Page: $ -
5) Easement Acquisition Expenses *(From Pg 6.1)* Ref Page: $ -
6) Inspection *(From Pg 6.1)* Ref Page: Private = $ -
(Includes Betterment) Total A $ -

B. Materials & Supply
1) Subtotal Material to Install *(From Pg 5.1)* Ref Page: $ -
2) Note only:Material provided to State Contractor *(Pg 5.1)* $ -
Less: Salvage (Estimated Values only. Final bill will include actual salvage values.)
1.1 Subtotal Material Recovered/Salvaged *(From Pg 3.1)* Ref Page: $ -
1.2 Subtotal Non-Usable (junked) *(From Pg 3.1)* $ -
Total Material Recovered/Salvaged/Junked $ -
(Includes Betterment) Net Material Cost Total B $ -

C.Site Cost
1) Clearing and Grubbing *(From Pg 2.1)* Ref Page: $ -
2) Traffic Control *(From Pg 2.1)* Ref Page: $ -
3) Erosion Control *(From Pg 2.1)* Ref Page: $ -
(Traffic and Erosion Control are not required if utility chooses MOVE IN Contract) Total C $ -

D.Total Cost (Contract Amount)
(W/out Betterment) Total D = (A+B+C)-E $ - (Includes Betterment) Total D=(A+B+C) $ -

E. Betterment
1) Betterment - Labor Installation & Removal*(From Page 2.1 & 5.1)* Ref Page: $ -
2) Betterment - Materials *(From Page 5.1)* Ref Page: $ -
Total Betterment Total E $ -

F. Total Amount Due:

Estimate exceeds $1.75M = N Estimate capped 75% = Y	Chapter 86 Move In	Chapter 86 Move Prior	Non-Chapter 86 Move In	Non-Chapter 86 Move Prior
Utility Reimbursement	$ -	$ -	$ -	$ -
Amount Utility Owes (CH86 exceeds $1.75M)	$ -			
Amount Utility Owes (CH86 exceeds 75%)	$ -			

Utility Deposit (if applicable): $ - $ -

** Inspection cost for Private is added after the percentage is applied.*
The Utility will reference the page number where designated on the form when other Detail Cost Estimate sheets are attached.

Revision 04-04-2011 "ATTACHMENT A" TDOT Utility Form 2004-18
Page 6.1

The Utility Relocation Estimate Summary, similar to the Combined Labor Cost sheet will be filled in as the first (5) sheets of the spreadsheet are completed. However, there are additional areas of this sheet that will need to be completed.

Contact Information: Contact information listed here is to be for the Utility, not the Consultant.

Percentage Information: The cells that list the percentages of the facility on Private and Public are automatically calculated by the number of poles/length of facility information. Only the cells showing the Private ROW & Public ROW - # Main Poles/Length facility need to be filled out. **DO NOT** input the percentages directly on the sheet.

No Cost/No Reimbursement: If a Utility is relocating their facilities at no cost to the state, then check this box.

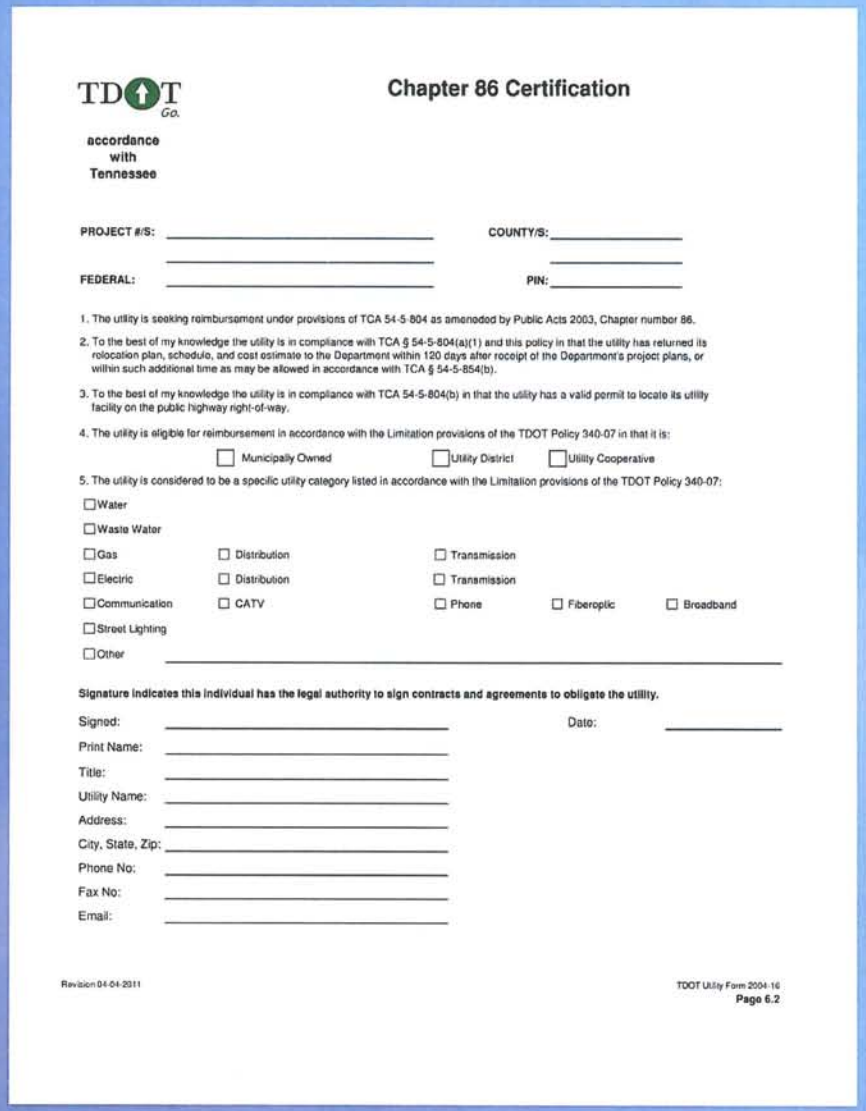
Utility Requests Reimbursement: Check the appropriate box for the reimbursement that is being requested on the project.

All other fields of this sheet will be filled in automatically when the appropriate box is checked for which type of reimbursement is being requested by the utility.

Amount Utility Owes: In 2007, restrictions were put in place concerning the reimbursement limitations for Chapter 86 relocation projects. These limitations were made effective for all projects that were issued after September 17, 2007, and they are as follows:

- Municipally Owned utilities, Utility Districts and Utility Cooperatives will be eligible for 100% reimbursement up to $1.75 million of the relocation cost. Anything over $1.75 million will be paid entirely by the utility.
- All other utilities will be eligible for 75% reimbursement up to $1.75 million of the relocation cost. Anything over $1.75 million will be paid entirely by the utility.

Sheet 6.2, Chapter 86 Certification



TDOT Go.

Chapter 86 Certification

accordance
with
Tennessee

PROJECT #/S: _____ COUNTY/S: _____

_____ _____

FEDERAL: _____ PIN: _____

1. The utility is seeking reimbursement under provisions of TCA 54-5-804 as amended by Public Acts 2003, Chapter number 86.
2. To the best of my knowledge the utility is in compliance with TCA § 54-5-804(a)(1) and this policy in that the utility has returned its relocation plan, schedule, and cost estimate to the Department within 120 days after receipt of the Department's project plans, or within such additional time as may be allowed in accordance with TCA § 54-5-854(b).
3. To the best of my knowledge the utility is in compliance with TCA 54-5-804(b) in that the utility has a valid permit to locate its utility facility on the public highway right-of-way.
4. The utility is eligible for reimbursement in accordance with the Limitation provisions of the TDOT Policy 340-07 in that it is:

☐ Municipally Owned ☐ Utility District ☐ Utility Cooperative

5. The utility is considered to be a specific utility category listed in accordance with the Limitation provisions of the TDOT Policy 340-07:

☐ Water
☐ Waste Water
☐ Gas ☐ Distribution ☐ Transmission
☐ Electric ☐ Distribution ☐ Transmission
☐ Communication ☐ CATV ☐ Phone ☐ Fiberoptic ☐ Broadband
☐ Street Lighting
☐ Other _____

Signature indicates this individual has the legal authority to sign contracts and agreements to obligate the utility.

Signed: _____ Date: _____

Print Name: _____

Title: _____

Utility Name: _____

Address: _____

City, State, Zip: _____

Phone No: _____

Fax No: _____

Email: _____

Revision 04-04-2011

TDOT Utility Form 2004-16
Page 6.2

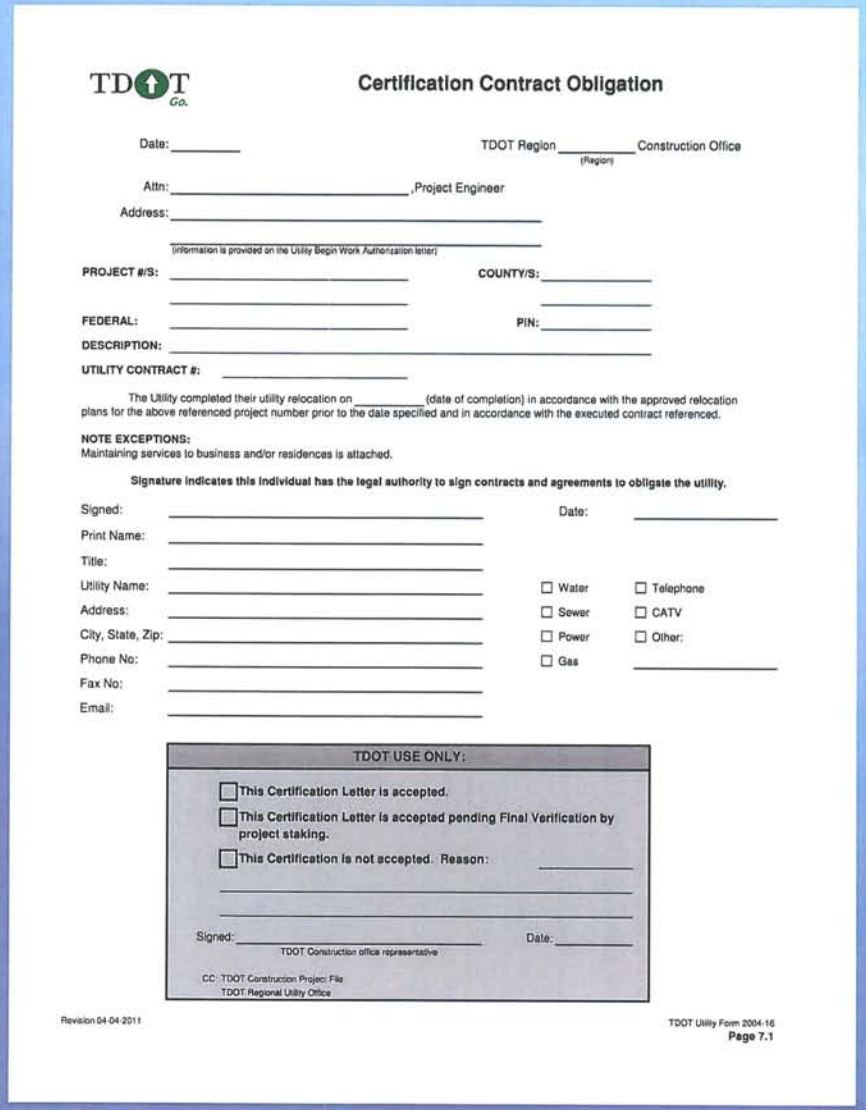
The Chapter 86 Certification page must be filled out and signed by the Utility requesting relocation reimbursement.

Check the appropriate boxes that apply to the utility that is requesting reimbursement. What the Utility is listed as in #4 (Municipally Owned, Utility District, Utility Cooperative) will determine if they fall within the 100% or 75% reimbursement category for their relocation, which will determine how much (if any) additional funds need to be paid by the Utility to TDOT as a "deposit".

Once the sheet is filled out, it must be signed and dated by the appropriate individual at the Utility requesting reimbursement.

Note: If the Utility is using a consultant for Engineering services, the consultant must have this form signed by the utility. They cannot sign this form as a representative of the utility.

Sheet 7.1, Move Prior Certification Obligation



TDOT Go.

Certification Contract Obligation

Date: _____ TDOT Region _____ (Region) Construction Office

Attn: _____ ,Project Engineer

Address: _____

_____
(information is provided on the Utility Begin Work Authorization letter)

PROJECT #/S: _____ **COUNTY/S:** _____

_____ _____

FEDERAL: _____ **PIN:** _____

DESCRIPTION: _____

UTILITY CONTRACT #: _____

The Utility completed their utility relocation on _____ (date of completion) in accordance with the approved relocation plans for the above referenced project number prior to the date specified and in accordance with the executed contract referenced.

NOTE EXCEPTIONS:
Maintaining services to business and/or residences is attached.

Signature indicates this individual has the legal authority to sign contracts and agreements to obligate the utility.

Signed: _____ Date: _____

Print Name: _____

Title: _____

Utility Name: _____ ☐ Water ☐ Telephone

Address: _____ ☐ Sewer ☐ CATV

City, State, Zip: _____ ☐ Power ☐ Other:

Phone No: _____ ☐ Gas _____

Fax No: _____

Email: _____

TDOT USE ONLY:

☐ This Certification Letter is accepted.

☐ This Certification Letter is accepted pending Final Verification by project staking.

☐ This Certification is not accepted. Reason: _____

_____

_____

Signed: _____ Date: _____
TDOT Construction office representative

CC: TDOT Construction Project File
TDOT Regional Utility Office

Revision 04-04-2011

TDOT Utility Form 2004-16
Page 7.1

The Certification Contract Obligation does not need to be submitted to TDOT with the "A" date package. This sheet is to be used for utilities that are relocating their facilities "prior to" the letting date of the project.

If a utility decides to relocate their facilities prior to the letting, they will be responsible for the following:

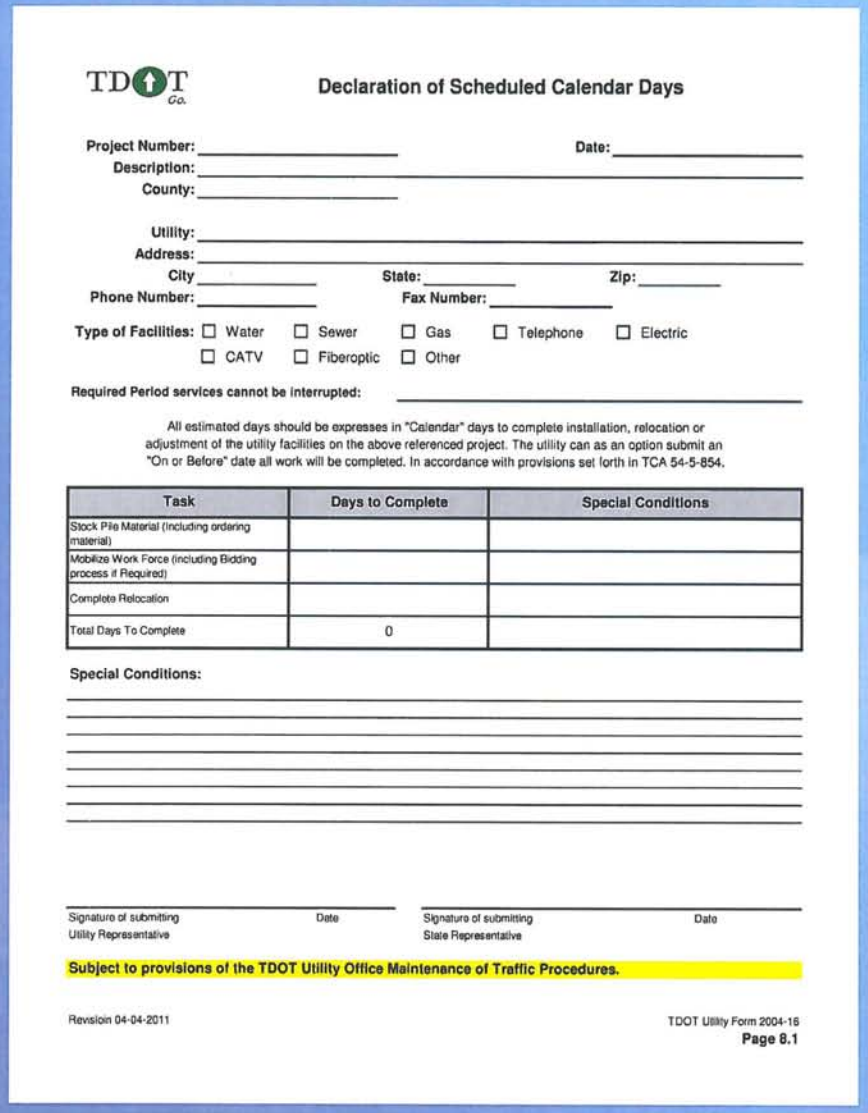
- Easements needed if proposed ROW has not been acquired
- Providing environmental permits
- Coordination of the relocation of their facilities
- Construction of the relocation
- Providing Erosion Control
- Providing all necessary clearing and grubbing
- Disposal of waste
- Providing Traffic Control
- Provide any surveying necessary to complete the relocation

Once the relocation of their facilities is complete, the Utility must complete this sheet and return to TDOT Construction Supervisor for approval and confirmation that the relocation of their facilities is complete.

Make sure to reference the TDOT Contract No. which you will find in the Upper Right Corner of the Utility Relocation Contract between TDOT and the utility relocating on the project.

Once the Certification is approved, TDOT Construction will return the certification to the Utility with copies to the TDOT Headquarters in Nashville and also to the Regional Utility Office. Only then will the Utility be able to submit their invoice for reimbursement along with the approved certification to TDOT for payment.

Sheet 8.1, Declaration of Calendar Days



TDOT Go.

Declaration of Scheduled Calendar Days

Project Number: _____ **Date:** _____
Description: _____
County: _____

Utility: _____
Address: _____
City _____ **State:** _____ **Zip:** _____
Phone Number: _____ **Fax Number:** _____

Type of Facilities: ☐ Water ☐ Sewer ☐ Gas ☐ Telephone ☐ Electric
☐ CATV ☐ Fiberoptic ☐ Other

Required Period services cannot be interrupted: _____

All estimated days should be expresses in "Calendar" days to complete installation, relocation or adjustment of the utility facilities on the above relerenced project. The utility can as an option submit an "On or Before" date all work will be completed. In accordance with provisions set forth in TCA 54-5-854.

Task	Days to Complete	Special Conditions
Stock Pile Material (Including ordering material)		
Mobilize Work Force (including Bidding process if Required)		
Complete Relocation		
Total Days To Complete	0	

Special Conditions:

_____
_____
_____
_____
_____
_____
_____
_____

_____ _____ _____ _____
Signature of submitting Utility Representative | Date | Signature of submitting State Representative | Date

Subject to provisions of the TDOT Utility Office Maintenance of Traffic Procedures.

Revision 04-04-2011

TDOT Utility Form 2004-16
Page 8.1

The Declaration of Scheduled Calendar Days must be filled out and signed by the Utility for both "move prior" and "move in" relocation projects.

Note that all estimated days are to be expressed in "calendar" days, not "business or work" days. The "Total Days To Complete" will automatically be filled in as the other three tasks are assigned days for completion.

If there are any special conditions to the relocation of the facilities, number the conditions in the lines provided, and note the number in the appropriate block of the table above.

When putting together an estimate for calendar days, take into consideration days in which TDOT will not allow traffic restrictions or lane closures. These days are as follows:

- **Good Friday**
- **Easter** - After 6:00 pm on the Thursday preceding Good Friday through and including Easter Sunday
- **Memorial Day** - After 12:00 noon on the preceding Friday through Memorial Day
- **July 4** - The observed holiday and preceding day plus weekend days either preceding or following these two days
- **Labor Day** - After 12:00 noon on the preceding Friday through Labor Day
- **Thanksgiving** - After 12:00 noon on Wednesday before Thanksgiving through Sunday following Thanksgiving
- **Christmas/New year's Day** - December 24 through January 1 and any preceding and/or following days that fall on a weekend

Off-road work will be allowed but only to the extent that NO impact will be caused to the highway users.

"B" Date Requirements, Utility Items and Mylar Drawings (In State Contract)

Once the requirements have been met to satisfy the "A" date for a project, the next submission for relocation will be at the "B" date submittal.

The "B" date submittal consists of completed utility relocation design, construction specifications and an updated construction estimate using the Utility Item Spreadsheet provided to the utility by TDOT to be filled out and included with the "B" date submittal.

Utility relocation design must be completed in Microstation (.dgn format) or other CAD program as approved by TDOT. When the final submittal is sent in for the relocation, the Utility (or Consultant working for the utility) will be required to submit, along with all of the other required information, electronic CAD files of the final relocation design.

The Utility Item spreadsheet cannot be modified by the Utility or the Consultant. It must be filled out "as-is" in order to be processed properly when submitted to TDOT. Once a utility or consultant has prepared an accurate listing of Unit Items required for the successful relocation of the facilities owned by the utility, that information will be listed on the Utility Item spreadsheet and submitted to TDOT for the assignment of Item Numbers. Item numbers can take up to a week to get assigned, so utilities and consultants need to prepare accordingly to allow enough time to receive their numbers and still meet their deadline for turning in their materials.

Completed pdf format of drawings are to be 22"x34" in size and must follow the guidelines set forth by TDOT for approved layout and information. Each utility will be assigned a "U-series" number by TDOT to use for their specific utility (ex. U2-X, U3-X, etc.). This number is to be used when numbering the sheets for the relocation design.

The Cover sheet (sheet UX-1) must contain the following information:

- Index of drawings in the upper left corner
- Estimated Quantities table for the project
- Utility Information (Utility Name, Address, Contact Name, Phone, Fax and Email) in the lower left corner
- A legend may also be included, and if so, must be placed in the lower right corner of the sheet

The Plan sheets are to be laid out as close to the TDOT Present Layout sheets as possible, including match lines. Plan View sheets do **not** need to include the following information:

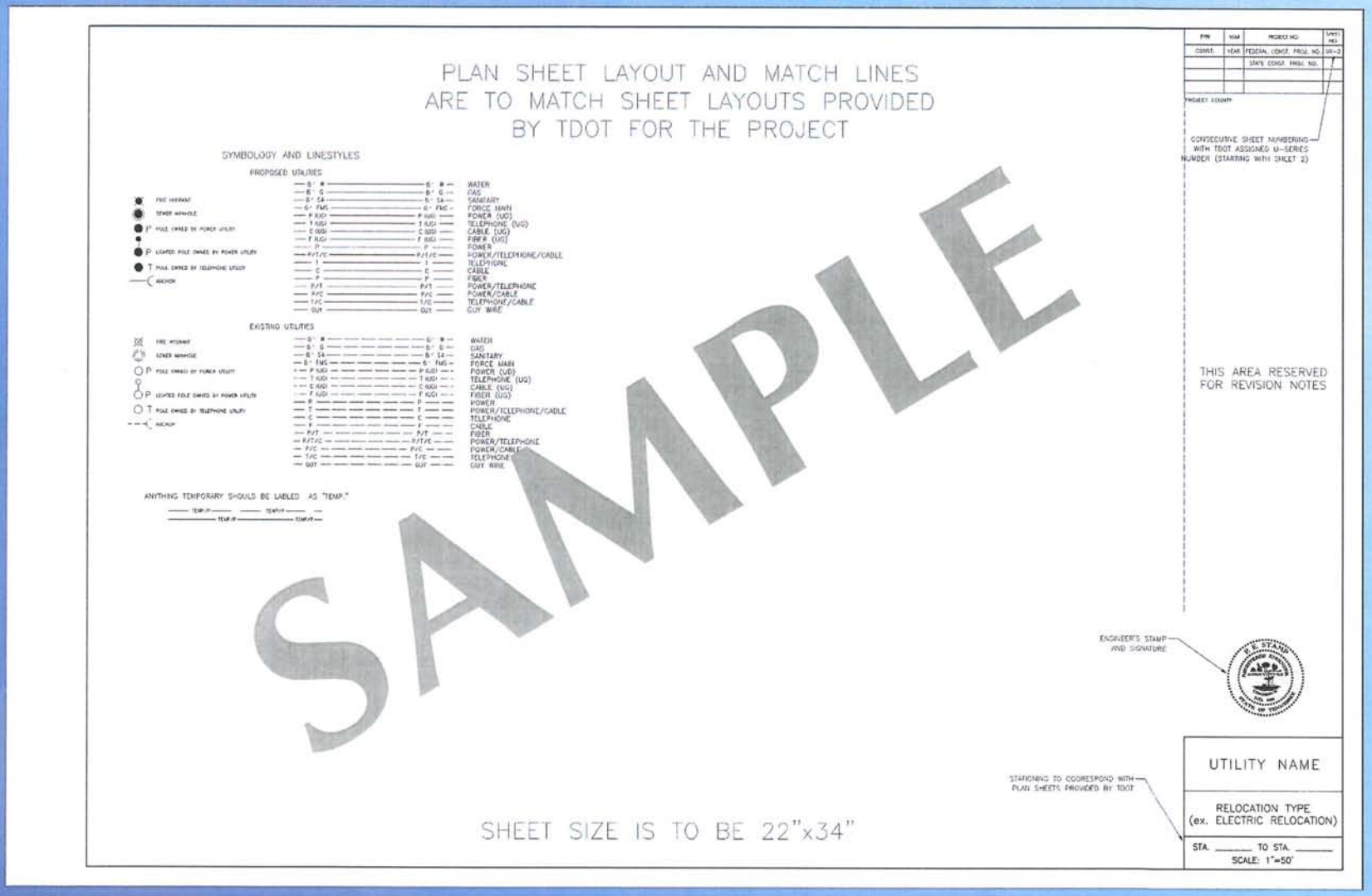
- Curve Data
- Property Owner Information
- Bearing and Distances
- Track Numbers

Misc. Sheets should follow directly behind the Plan sheets, and may include the following information:

- General Notes
- Location Information (station & offsets, northing & easting, etc.)
- Misc. Details

Cover Sheet Layout

Plan Sheet Layout



Utility Item Spreadsheet

ESTIMATED UTILITY QUANTITIES															
ITEM NO.	DESCRIPTION	UNIT	UNIT PRICE	Project No. 1: QUANTITY	% Utility	%Project	Extension $0.00	Project No. 2: QUANTITY	% Utility	%Project	Extension $0.00	Project No. 3: QUANTITY	% Utility	%Project	Extension $0.00
							$0.00				$0.00				$0.00
							$0.00				$0.00				$0.00
							$0.00				$0.00				$0.00
							$0.00				$0.00				$0.00
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Item No.: The Utility Item Number that has been assigned by TDOT for the specific Unit listed.

Description: Simple Description of the Unit that is being Installed or Removed (should include "Install" or "Remove" in the description.

Unit: The type of Unit for which the Item shall be priced and paid (ex. EA, LF, LS, CY, etc.)

Unit Price: Combined Labor and Material Price for the Unit described.

Quantity: Total quantity of Units required for the entire project

% Utility: Percentage of the cost of relocation that is the responsibility of the Utility.

% Project: Percentage of the cost of relocation that is the responsibility of the State.

Extension: Total Cost of the Units listed for the relocation of the facilities for the project.

Utility Requirements – Move In State Contract

When a Utility decides to MOVE IN the state contract, there is certain information that the utility needs to provide to TDOT and the General Contractor to assist in the relocation of their facilities. The information needed is as follows:

TDOT

- Detailed Relocation Plans
- Detailed Construction Specifications

Contractor – Specify to the contractor exactly what the utility wants concerning...

- Time periods of acceptable service outages
- Requirements for License, Certification, Drug testing of workers doing the relocation
- Liability Insurance requirements
- Approval of material submitted to the utility
- Approval of shop drawings submitted to the utility
- Approval of field changes submitted to the utility
- Approval of substitution materials or methods submitted to the utility
- Clearing and trimming of overhead lines inside/outside public ROW
- Locating utility lines during construction that are not identified by utility locate services
- Industry standards, safety standards and materials standards that are required by the utility
- Name, address, phone number, email, fax and cell phone of approved utility contact personnel

Utility Requirements – Utility Diaries and Inspections

When the Utility Relocation is included in the State Contract, the Utility is responsible for providing inspection services on all phases of the relocation, per TCA 54-5-804, 2003 Public Chapter 86. A portion of inspection services may be reimbursable under Chapter 86 if a portion of the relocation is on existing Private ROW.

The inspector for the Utility will be provided a Project Utility Diary (TDOT Form DT-0667), along with Form DT-1716 (Utility Item Certification/Final Acceptance) and Form DT-1716A (Summary of Installed Utility Items). The responsibilities of the inspector provided by the utility company are as follows:

- Complete TDOT Form DT-0667 and submit it each estimate period, as directed by the TDOT Project Supervisor. Along with the item descriptions, the inspector will include the quantities and stations of installed items.
- Complete "Installed Item Certification" portion of TDOT Form DT-1716 (UTILITY ITEM CERTIFICATION/FINAL ACCEPTANCE) and submit it each estimate period, as directed by the TDOT Project Supervisor. This form will be signed to certify that the items installed during that estimate period met all applicable specifications.
- Complete and attach TDOT Form DT-1716A (SUMMARY OF INSTALLED UTILITY ITEMS) to DT-1716 and submit it each estimate period, as directed by the TDOT Project Supervisor. This form will be used to summarize, by project number, the utility items installed during that estimate period.
- Complete "Final Acceptance of Work" portion of TDOT Form DT-1716 and submit it to the TDOT Project Supervisor's office when the utility relocation work is complete.

When a Utility is relocating at its own expense or under a lump sum reimbursement contract, the "Description of Work Performed" section of TDOT Form DT-0667 will be the only notation required. The notation shall indicate if the relocation is a non-reimbursable or lump sum reimbursement contract.

TDOT Form DT-0667 (Project Utility Diary)

PROJECT UTILITY DIARY

CONTRACT NO:_____ RECORDED BY:_____ UTILITY COMPANY:_____

PROJECT NO:_____ PROJECT ENGINEER:_____ UTILITY CONTRACT NO:_____

REF. NO:_____ UTILITY REPRESENTATIVE:_____

DATE:_____

DESCRIPTION OF WORK PERFORMED

LABOR

NAME	CLASSIFICATOIN	HOURS

LABOR USED TO RESTORE RECOVERED MATERIAL TO SUITABLE CONDITION FOR REUSE SHOULD BE INCLUDED ON THIS REPORT.

MATERIALS REMOVED

ITEM	U.S.	QUANTITY

IF BOTH PARTIES AGREE THAT MATERIAL IS NOT SALVAGEABLE, A CHECK IS TO BE ENTERED IN THE U.S. COLUMN

MATERIAL USED

ITEM	QUANTITY

TRANSPORTATION AND EQUIPMENT

TYPE	HOURS	MILES

Distribution of copies:
White: Reg. Eng.
Yellow: Utility Co.
Pink: Field

DT-0667
Rev. 4-90

SAMPLE

TDOT Forms DT-1716 and DT-1716A

UTILITY ITEM CERTIFICATION/FINAL ACCEPTANCE

Contract Number: _____ **Utility Company:** _____

Project Number(s): _____ **Utility Inspector:** _____
Print

_____

County(ies): _____

_____

Instructions: Please check appropriate box (or boxes) and fill out required information. For **Installed Item Certification**, attach **Summary of Installed Utility Items** sheet(s) for each project number and submit each estimate period as directed by the TDOT Project Supervisor.

☐ **Installed Item Certification**

On behalf of the above utility company, I certify that the materials used for the item(s) listed on the following page(s) meet and were installed in accordance with all applicable specifications. Any pertinent shop drawings or engineering changes have been approved.

Estimate Period: _____ **to** _____

_____ _____
Utility Inspector Signature **Date**

☐ **Final Acceptance of Work**

I certify that the utility relocation work is complete and is accepted by the above utility company.

_____ _____
Utility Inspector Signature **Date**

DT-1716
7-1-04

SUMMARY OF INSTALLED UTILITY ITEMS

Contract Number: _____ **Utility Company:** _____

Project Number: _____ **Utility Inspector:** _____
Print

County: _____

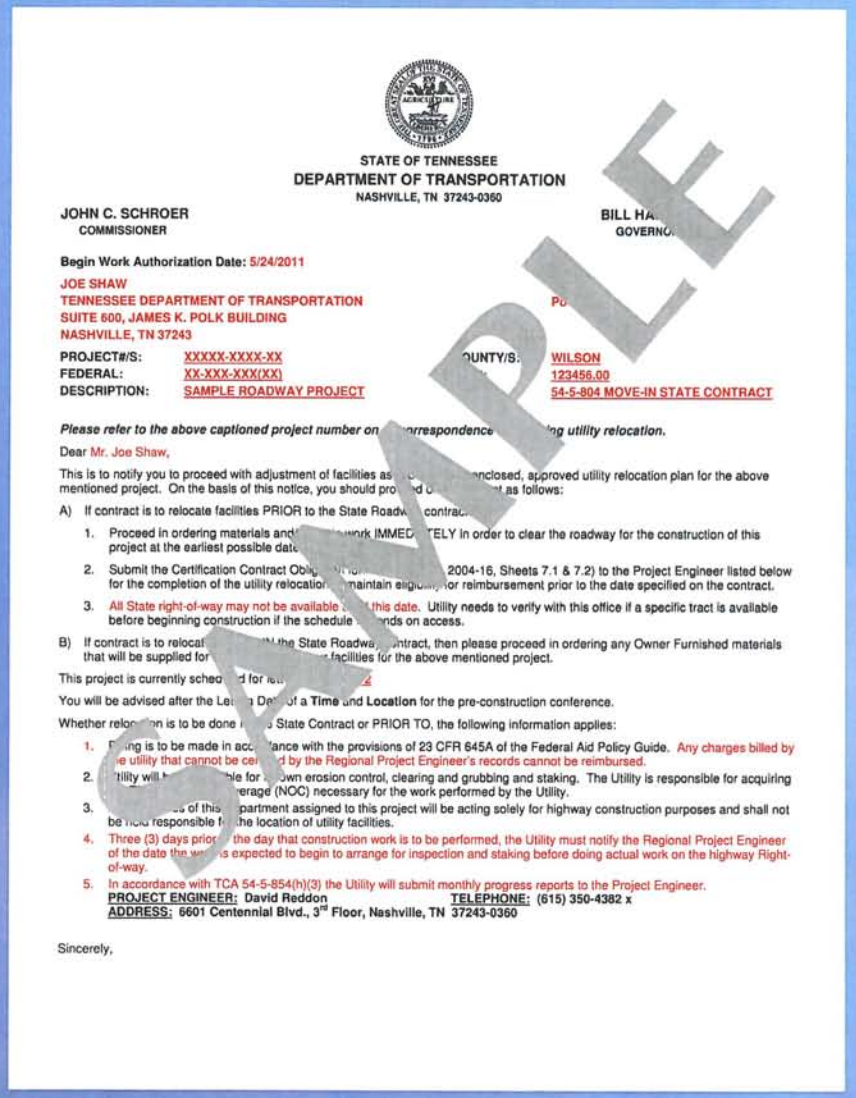
Estimate Period: _____ **to** _____

Item Number	Description	Unit	Installed Quantity

Page ____ of ____

DT-1716A
7-1-04

TDOT "Go To Work" Letters



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
NASHVILLE, TN 37243-0360

JOHN C. SCHROER
COMMISSIONER

BILL HA
GOVERNO

Begin Work Authorization Date: 5/24/2011

JOE SHAW
TENNESSEE DEPARTMENT OF TRANSPORTATION
SUITE 600, JAMES K. POLK BUILDING
NASHVILLE, TN 37243

PROJECT#/S: XXXXX-XXXX-XX
FEDERAL: XX-XXX-XXX(XX)
DESCRIPTION: SAMPLE ROADWAY PROJECT

COUNTY/S: WILSON
123456.00
54-5-804 MOVE-IN STATE CONTRACT

Please refer to the above captioned project number on correspondence ng utility relocation.

Dear Mr. Joe Shaw,

This is to notify you to proceed with adjustment of facilities as enclosed, approved utility relocation plan for the above mentioned project. On the basis of this notice, you should pro d as follows:

A) If contract is to relocate facilities PRIOR to the State Roadw contrac

1. Proceed in ordering materials and work IMMED TELY in order to clear the roadway for the construction of this project at the earliest possible dat
2. Submit the Certification Contract Obli 2004-16, Sheets 7.1 & 7.2) to the Project Engineer listed below for the completion of the utility relocatio maintain eligi or reimbursement prior to the date specified on the contract.
3. All State right-of-way may not be available this date. Utility needs to verify with this office if a specific tract is available before beginning construction if the schedule nds on access.

B) If contract is to relocat the State Roadwa ntract, then please proceed in ordering any Owner Furnished materials that will be supplied for facilities for the above mentioned project.

This project is currently sched d for le

You will be advised after the Le Da of a **Time** and **Location** for the pre-construction conference.

Whether relo n is to be done State Contract or PRIOR TO, the following information applies:

1. ng is to be made in acc ance with the provisions of 23 CFR 645A of the Federal Aid Policy Guide. Any charges billed by e utility that cannot be ce d by the Regional Project Engineer's records cannot be reimbursed.
2. tility will ble for own erosion control, clearing and grubbing and staking. The Utility is responsible for acquiring erage (NOC) necessary for the work performed by the Utility.
3. s of this partment assigned to this project will be acting solely for highway construction purposes and shall not be held responsible f he location of utility facilities.
4. Three (3) days prior the day that construction work is to be performed, the Utility must notify the Regional Project Engineer of the date the w s expected to begin to arrange for inspection and staking before doing actual work on the highway Right-of-way.
5. In accordance with TCA 54-5-854(h)(3) the Utility will submit monthly progress reports to the Project Engineer.

PROJECT ENGINEER: David Reddon TELEPHONE: (615) 350-4382 x
ADDRESS: 6601 Centennial Blvd., 3rd Floor, Nashville, TN 37243-0360

Sincerely,

SAMPLE

When the final contracts are signed by both the Utility and TDOT, TDOT will prepare a "Go To Work" letter that will be sent to the Utility along with a copy of the Final Contract for the project. This letter, although it is worded fairly generally, means different things to the Utility depending on the type of Contract the Utility has with TDOT for the relocation of their facilities. The differences are as follows:

Chapter 86 or Private/Public "Move In" Contracts

- If the Utility is moving their facilities in the state contract, and the State Contractor is supplying ALL of the Labor and Materials for the relocation of their facilities, then the Utility does not need to do anything.

- If the Utility is moving their facilities in the state contract, and they are supplying the materials, but the Contractor is supplying the Labor, then the Utility has authorization with the letter to start ordering and stockpiling the materials needed for the relocation once they receive the Go To Work letter.

Chapter 86 or Private/Public "Move Prior" Contracts or NO-COST Relocation

- If the Utility is moving their facilities prior to construction of the state contract, or if a Utility is relocating their facilities at NO-COST to the State, then the Utility has authorization with this letter to start the relocation of their facilities so that they are out of the way prior to the Letting Date for the project.

Invoicing

When invoicing TDOT for reimbursement of expense (whether for Engineering or for Relocation), the following information will assist you in correctly submitting your invoices.

Process:

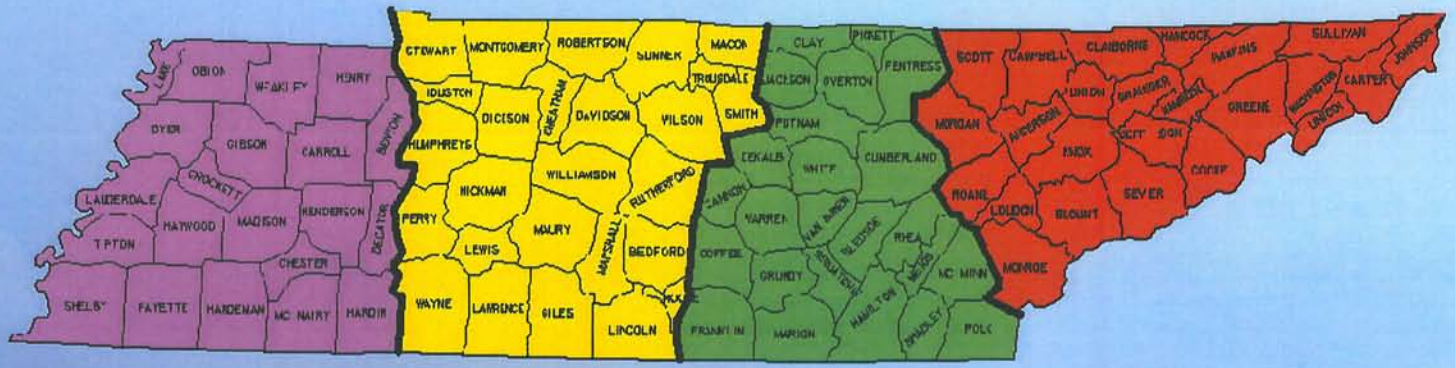
- Submit all invoices to the Regional Utility Office for review
- Invoices are then submitted to the Construction office for review and approval
- Once approved by the Construction office and the Regional Utility Office, invoices are then coded and submitted to accounts for payment.

In order to expedite payment, follow the following guidelines...

- Submit invoices in the same format as the estimate
- Invoices MUST cite which sequential bill is being submitted (Progressive #1, #2, #3, etc.), and should list the total accumulated cost to date of the last bill
- Remember that progressive payments are capped at 80%
- Remember that if the final bill exceeds the contract amount, justification must be submitted for the excess amount
- Be sure to submit the final bill within one (1) year of the completion of the project

Region Map and Contact Information

Below is a map showing the (4) regions of TDOT and how they are divided across the state.



REGION IV **REGION III** **REGION II** **REGION I**

Contact Information for the Regional Utility Offices

Charles Green
300 Benchmark Place
Jackson, TN 38301
Phone: 901-935-0101
Charles.green@tn.gov

Jim Nikahd
6601 Centennial Blvd.
Nashville, TN 37243
Phone: 615-350-4233
jim.nikahd@tn.gov

Steve Langford
4005 Cromwell Road
Chattanooga, TN 37421
Phone: 423-510-1243
steve.langford@tn.gov

Tom Foley
7345 Region Lane
Knoxville, TN 37914
Phone: 865-594-2680
tom.foley@tn.gov

Appendix D3. Example Engineering Authorization Letter with 'A' and 'B' Dates

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
NASHVILLE, TN 37243-0360

JOHN C. SCHROER
COMMISSIONER

BILL HASLAM
GOVERNOR

Engineering Authorization Date: 5/24/2011 **Federal Funds:** 3/15/2011

JOE SHAW
TENNESSEE DEPARTMENT OF TRANSPORTATION **Power**
SUITE 600, JAMES K. POLK BUILDING
NASHVILLE, TN 37243

PROJECT#/S:	XXXXX-XXXX-XX	**COUNTY/S:**	WILSON	**Project Eligible For Chapter 86 Reimbursement:**
FEDERAL:	XX-XXX-XXX(XX)	**PIN #:**	123456.00	
DESCRIPTION:	SAMPLE ROADWAY PROJECT			YES X NO

Please refer to the above captioned project number on all correspondence concerning utility relocation.

Dear Mr. Joe Shaw,

This letter will serve as authority for the Utility to proceed with ALL engineering that is necessary to prepare plans, schedule of working days, and estimates of cost for the adjustment of your facilities which may be in conflict with this project. This is done in accordance with the provisions of TCA 54-5-854.

If a consultant is needed, see paragraph "A" on page 2. Consultant package must be submitted and approved by this office before consultant engineering will be eligible for reimbursement.

Estimates of cost prepared in response to this authorization are confidential and shall not be released or made available to anyone other than the Utility, the approved consultant, and TDOT.

Reimbursement will be in accordance with TCA 54-5-804 and as amended by Public Chapter No. 86 of the Public Acts of 2003. The cost of any work done prior to the authorization date of this letter will not be eligible for reimbursement.

This notice is not to be construed as authority to actually relocate any of your facilities. Any relocation work done prior to written approval from the State Utility Coordinator will not be eligible for reimbursement.

This project is currently scheduled for letting: **06/12/2012**

To be eligible for reimbursement, if the project is qualified for Chapter 86 reimbursement as noted above, the Utility MUST submit to this office for Location Approval by the revised due date (A): 10/14/2011

1) (5) half-sized, color coded relocation plans.
2) Completed TDOT Form 2004-16, including signed Schedule of Working Days and Chapter 86 Eligibility.
3) Utility declaration for reimbursement.

In addition, to be eligible for inclusion of the utility relocation work in the State Construction contract, the following must be submitted by due date (B): 04/01/2012

1) PDF files of detailed Utility relocation plans.
2) PDF file of detailed Utility Specifications.
3) Completed Utility Item Spreadsheet in Excel format, including estimated construction costs.
4) Completed Utility individual permit sketches, if required.

The following will be provided to assist you in responding to the Department request:

A) If a consultant is needed to perform the necessary engineering, please request approval **immediately** by submitting:

TDOT Form 2003-13:

1) Certification of Consultant.
2) Memorandum of Understanding.

TDOT Form 2004-16:

1) Sheet 1.1, Estimate of Engineering.

Any work done by a consultant prior to written approval from this office will NOT be eligible for reimbursement.

B) The following must be submitted for **Location Approval** by the date **(A)** specified above:

1) Enclosed are two (2) sets of project plans for the above mentioned project for your use in designating the location of facilities affected by the construction of this project. Submit (5) copies of color-coded relocation plans to show the correct location of existing, proposed and/or relocated utility facilities color-coded as follows:

Green	removal or retire-in-place
Orange/Yellow	existing to remain
Red	new installation
Blue	temporary relocation

Please submit your relocation on half-size TDOT present layout sheets, unless directed otherwise by this office.

2) The Utility cost estimate must contain:
   a) A statement of how relocation costs will be accumulated in accordance with Federal Aid Policy Guide 23 CFR 645A.
   b) An estimate of costs for the replacement of any private easements needed for utility relocation along with the estimated time required to acquire easements. The utility is responsible for the acquisition of all utility easements required.
   c) An estimate of cost for any engineering needed for utility relocation.
   d) An estimate of cost for any betterment of utility facilities included as part of this project.

   This information is to be provided on TDOT Form 2004-16 or comparable format containing the same information as approved by TDOT.

3) The Utility Estimate of Working Days stating the amount of time (number of Calendar Days) required for completion of the relocation as documented in a Declaration of Scheduled Calendar Days (TDOT Form 2004-16, Sheet 8.1).

4) A Declaration by the Utility for reimbursement is requested based on:
   a) Statement indicating percentage of existing facilities on private utility right-of-way.
   b) A request that all existing facilities that are in conflict with proposed construction will be relocated by the utility prior to the project letting date.
   c) A request that all existing facilities that are in conflict with construction will be included in the State highway construction contract for relocation.

5) If **No Conflict** is anticipated, the Utility must furnish a letter stating that no conflict is anticipated.

C) This office will review and, if appropriate, provide **Location Approval** of the utility plans submitted.

D) The Utility will prepare detailed utility relocation plans:

1) If the Utility declaration for reimbursement, under provisions of Chapter 86, is to relocate utilities prior to the letting date **06/12/2012** a contract will be submitted to the Utility for signature. The contract must be returned to the Department office specified for execution. The **Begin Work** authorization letter must be issued before the utility can begin relocation of facilities and to be eligible for reimbursement.
2) If the Utility declaration is to relocate utilities in the **State Construction Contract** the following must be submitted by the due date **(B)** specified above:
   a) Complete, detailed Utility relocation plans to be included in the State highway construction plans. Plans must be sufficient for the State contractor to construct. Plans are to be 22"x34" in size, and submitted in PDF format with the specified TDOT sheet block on each sheet.
   b) Complete, detailed Utility specifications to be included in the State highway construction contract. Specifications must be sufficient to meet utility specifications as preformed by the State contractor. Specifications are to be in PDF format.
   c) Complete Utility Item Spreadsheet file. Item numbers (assigned by the Department), item descriptions, unit of measure, quantity and estimated construction costs, submitted in Excel format provided by the Department.
   d) Complete Utility individual permit sketches, including wetlands and stream crossings, as requested by the Department.

If we can be of assistance or you have any questions concerning this project, please let us know. We will be glad to assist you in any way we can.

Sincerely,

Appendix D4. Estimated Utility Quantities Plan Sheet with Descriptions Included

ESTIMATED UTILITY QUANTITIES

Description: Item Number Assigned by TDOT

Description: Unit Descriptions cannot be longer than 40 Characters

Description: Unit of Measure for listed Item (ex. LF, EA, LS, CY, etc.)

Description: Unit Price for the Item listed (Labor & Material)

Description: Total Quantity of the Item listed

Description: State Assigned Construction Number for the project

Description: Percentage of Relocatoin Cost to be paid by the Utility

Description: Percentage of Relocation Cost to be paid by the State

Description: Total Estimated Cost of Utility Relocation

Description: Used for State Assigned Construction Number when project includes more than one county

ITEM NO.	DESCRIPTION	UNIT	UNIT PRICE	Project No. 1: QUANTITY	% Utility	%Project	Extension	Project No. 2: QUANTITY	% Utility	%Project	Extension	Project No. 3: QUANTITY	% Utility	%Project	Extension
							$0.00				$0.00				$0.00
							$0.00				$0.00				$0.00
							$0.00								$0.00
							$0.00								$0.00
							$0.00								$0.00
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							$0.00				$0.00				$0.00

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Appendix D5.
Example Utility Plan Sheets

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	YEAR	FEDERAL CONST. PROJ. NO.	UX−1
		STATE CONST. PROJ. NO.	

PROJECT COUNTY

UTILITY WILL BE ASSIGNED A U−SERIES NUMBER BY THE TDOT UTILITY COORDINATOR FOR THE SPECIFIC PROJECT

INDEX OF DRAWINGS

SHT NO. SHEET DESCRIPTION
SHT NO. SHEET DESCRIPTION
SHT NO. SHEET DESCRIPTION

ITEM	DESCRIPTION	UNIT	TOTAL QUANTITY	PERCENT UTILITY	PERCENT PROJECT
(1)					

(1) ANY NECESSARY FOOTNOTES TO CLARIFY THE DESCRIPTION OF THE UTILITY ITEM THAT THE NOTE IS REFERENCING.

ITEM	DESCRIPTION	UNIT	TOTAL QUANTITY	PERCENT UTILITY	PERCENT PROJECT

THIS AREA RESERVED FOR REVISION NOTES

ENGINEER'S STAMP AND SIGNATURE

UTILITY INFORMATION

UTILITY NAME
UTILITY ADDRESS
CITY, STATE, ZIP
CONTACT NAME
CONTACT PHONE
CONTACT FAX
CONTACT EMAIL

SHEET SIZE IS TO BE 22"x34"

UTILITY NAME

RELOCATION TYPE
(ex. ELECTRIC RELOCATION)

SHEET DESCRIPTION

SAMPLE

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PLAN SHEET LAYOUT AND MATCH LINES ARE TO MATCH SHEET LAYOUTS PROVIDED BY TDOT FOR THE PROJECT

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	YEAR	FEDERAL CONST. PROJ. NO.	UX-2
		STATE CONST. PROJ. NO.	

*PROJECT COUNTY

CONSECUTIVE SHEET NUMBERING WITH TDOT ASSIGNED U-SERIES NUMBER (STARTING WITH SHEET 2)

SYMBOLOGY AND LINESTYLES

PROPOSED UTILITIES

- FIRE HYDRANT
- SEWER MANHOLE
- P POLE OWNED BY POWER UTILITY
- P LIGHTED POLE OWNED BY POWER UTILITY
- T POLE OWNED BY TELEPHONE UTILITY
- ANCHOR

6" W	WATER
6" G	GAS
6" SA	SANITARY
6" FMS	FORCE MAIN
P (UG)	POWER (UD)
T (UG)	TELEPHONE (UG)
C (UG)	CABLE (UG)
F (UG)	FIBER (UG)
P	POWER
P/T/C	POWER/TELEPHONE/CABLE
T	TELEPHONE
C	CABLE
F	FIBER
P/T	POWER/TELEPHONE
P/C	POWER/CABLE
T/C	TELEPHONE/CABLE
GUY	GUY WIRE

EXISTING UTILITIES

- FIRE HYDRANT
- SEWER MANHOLE
- P POLE OWNED BY POWER UTILITY
- P LIGHTED POLE OWNED BY POWER UTILITY
- T POLE OWNED BY TELEPHONE UTILITY
- ANCHOR

6" W	WATER
6" G	GAS
6" SA	SANITARY
6" FMS	FORCE MAIN
P (UG)	POWER (UD)
T (UG)	TELEPHONE (UG)
C (UG)	CABLE (UG)
F (UG)	FIBER (UG)
P	POWER
T	POWER/TELEPHONE/CABLE
C	TELEPHONE
F	CABLE
P/T	FIBER
P/T/C	POWER/TELEPHONE
P/C	POWER/CABLE
T/C	TELEPHONE/CABLE
GUY	GUY WIRE

ANYTHING TEMPORARY SHOULD BE LABLED AS "TEMP."

TEMP/P

THIS AREA RESERVED FOR REVISION NOTES

ENGINEER'S STAMP AND SIGNATURE

P.E. STAMP
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 000
STATE OF TENNESSEE

STATIONING TO COORESPOND WITH PLAN SHEETS PROVIDED BY TDOT

UTILITY NAME

RELOCATION TYPE
(ex. ELECTRIC RELOCATION)

STA. _____ TO STA. _____
SCALE: 1"=50'

SHEET SIZE IS TO BE 22"x34"

SAMPLE

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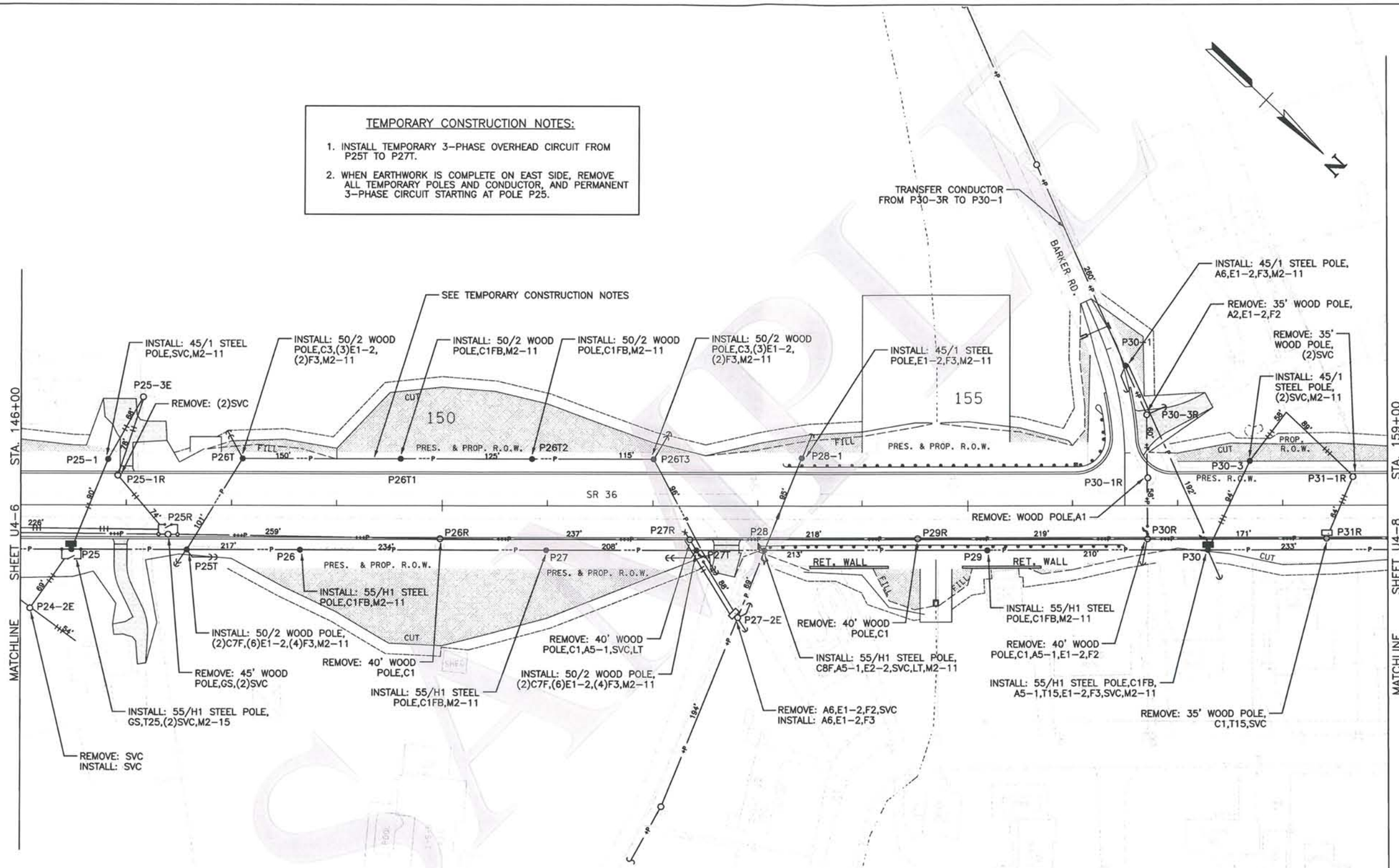
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2011	STP-36(43)	U4-7

WASHINGTON CO.

REV. 1.26.11: POLE HEIGHTS AND CLASSES REVISED DUE TO UPDATED POLE LOADING AND MATERIAL REQUIREMENTS.

TEMPORARY CONSTRUCTION NOTES:

1. INSTALL TEMPORARY 3-PHASE OVERHEAD CIRCUIT FROM P25T TO P27T.
2. WHEN EARTHWORK IS COMPLETE ON EAST SIDE, REMOVE ALL TEMPORARY POLES AND CONDUCTOR, AND PERMANENT 3-PHASE CIRCUIT STARTING AT POLE P25.



CONSTRUCTION NOTE:

1. NEUTRAL FOR 3-PHASE FRAMING TO BE LOCATED 7'-0" FROM TOP OF POLE FOR STRUCTURES P25T, P26T, P26T1, P26T2, P26T3, AND P27T.

JOB NUMBER:	8548
DESIGNED:	RAY
DRAWN:	RKW
CHECKED:	JNC
SCALE	1"=50'
DATE	05_15_2009

Allen&Hoshall since 1915
8331 E. WALKER SPRINGS LANE, SUITE 102
KNOXVILLE, TENNESSEE 37923
(865) 693-7881 (865) 693-7824

ELECTRIC UTILITY RELOCATION
STA. 146+00 TO STA. 159+00

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Appendix D6.
List of Common Errors

Common Errors

- Utility Sheets
  Ux-1 Index of Utility Sheets and UTILITY CONTACT information, name, address, phone, cell, fax, who will be responsible for responses from the utility.
  Ux-2 Utility Notes
  Ux-3 Utility Easements if applicable and statement conveying rights to the State Contractor to access those easements for the purpose of constructing the utility facilities shown on the plans.
  Ux-4 Utility Layout Sheets MUST MATCH the TDOT ROW Plan sheets / match lines.
- Follow TDOT requirements for sheet layout. Sheets must have room to add notes for revisions and have the Sheet Block and Title Blocks.
- There are a few metric jobs left which MUST have quantities in metric, and plans prepared in metric.
- Utility Item Numbers and Description once assigned CAN NOT BE CHANGED. If you need to change ANYTHING, change description, units, or additional items, then a revision request must be submitted to the TDOT Regional Utility Office. DO NOT include items with a quantity of "0". If it is not used / needed, exclude it from the list. If it is a contingency, it should be addressed as a footnote, and you MUST contact the Regional Utility Office to decide how to address your issue properly.
- Use TDOT web FTP site http://webftp.tdot.state.tn.us/ for submitting LARGE PDF files instead of dividing them into smaller files to email, or mail / FEDX a CD or DVD to the Regional Utility Office.
- Submit a "CHECK" PDF file to the Regional Utility Office BEFORE you submit final. They can make corrections before you spend time and effort signing, sealing, and scanning FINAL plans to submit. Saves everyone cost and aggravation.
- Use the State Project Number on sheet block. When in doubt what to put on the Sheet Blocks, contact the Regional Utility Office.
- DO NOT put ANY cost information on the Utility Plan Sheets. These sheets are included in the plans provided to potential bidders.
- CADD drawings must be produced as if you were to print them for bidding. The utility drawings MUST be on a separate level than the base / reference drawings provided by TDOT. This enables TDOT to assemble the utility drawings using only the utility drawn levels.
- If you have Betterment / Utility Costs included in the state contract, the Regional Utility Office will provide you an approved composite percentage to use for the items listed on the Utility Sheets. If you do not have an approved composite percentage for each item, contact the Regional Utility Office.
- Reimbursement Contracts are written for the current "estimate". Estimates change over the course of time and if the estimate has changed significantly, you should submit a revised estimate.
- Deposits for Betterment / Utility cost MUST BE received prior to the project being bid for letting. If TDOT does not have your deposit, the utility work WILL BE REMOVED from the state contract. This WILL make your utility ineligible for CH86 reimbursement.
- ALL Utility Sheets must be signed and sealed by a "living" professional engineer licensed in Tennessee.

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Appendix E. Frequently Asked Questions (FAQ's)

Frequently Asked Questions (FAQ's)

1. **If a Utility requests a Microstation file and signs the CADD disclaimer are they obligated to return their rainbows, mylars, etc. back in the same digital format?**

Answer: YES. It is permissible for the Utilities to convert the files to Autocad or some other digital format but they must convert them back to Microstation for submittal to TDOT and provide PDF format files of the utility plans sheets produced.

2. **If a Utility plans to do its work prior to the letting is it required to justify station and offsets in its submittals back to TDOT?**

Answer: YES. If the Utility is seeking Chapter 86 reimbursement on a qualified project. The Station and Offset provides a means by which TDOT field staff can verify the Utility has moved in accordance with approved TDOT utility relocation plans. The TDOT Construction Office can define the relative station, and measure the offset to establish that the Utility relocated facilities in relative accordance with the approved plans. If Station and Offsets are not provided, the Utility's reimbursement will be delayed until TDOT lets the contract, and the state stakes the ROW/slopes lines and TDOT Construction Office can then verify the utility relocation is in accordance with approved plans.

3. **When a bridge is being built near a Utility line how far is the Utility justified to relocate from the bridge?**

Answer: Generally, a safe distance for normal facilities would be 75-feet, however TDOT relies upon the judgment of the Utility as to what is an acceptable relocation according to applicable industry standards. The relocated facility must move far enough away from the construction area for the construction to take place, particularly regarding a crane's ability to maneuver. TDOT as well as the Utility wants to avoid any unnecessary relocation, but both as well want to be sure there is no damage to the facilities or outages as a result of construction activities. If special provisions, such as de-energizing facilities or temporization of facilities, would address the construction issues avoiding a permanent relocation, the Utility will document and seek TDOT approval of the proposed solution.

4. **Can a pole be set on the State right-of-way inside the fence on controlled access roadways?**

Answer: Generally no. Controlled access facilities usually have higher speeds, and the motoring public does not expect construction traffic entering and exiting the roadway to maintain utility facilities.

However, there could be a rare circumstance where there is no other way to cross the controlled access roadway than to place a facility in the controlled area. In that rare case, the situation must be reviewed and approved by the TDOT Region Utility Office before the relocation proceeds. The TDOT Region Utility Office would review how the facility would be accessed by the Utility and determine if there are any alternatives. If the facility presents a hazard for the motoring public or violates the clear zone for the highway, the request would be denied. Cost is generally not a consideration when making these decisions. For example, a pole placement in a wide median section of Interstate might be requested by the Utility because the span exceeds the design capacity if the poles were placed at the access control fence only. If there is ample room in the median such that maintenance of the facility is well outside the traveled way not presenting a roadside hazard nor distracting the motorists causing congestion, then the pole location might be acceptable. If not acceptable, then self supporting, engineered poles would have to be placed on both sides of the interstate at the ROW line to span the entire interstate right-of-way, or else an alternate route would need to be designed.

5. **Can a relocated pole or buried cable be relocated into a cut or fill area?**

Answer: Generally the answer would be no. Both TDOT and the Utility would be concerned with avoiding damages to the facility or possible disruptions. A temporary relocation would be the proper approach. However, unique situations may require special consideration and special notes or instructions to the contractor to avoid damages. In some cases, if this is done early enough in the TDOT plan development, the roadway plans could possibly be modified. For example, a gravity wall might be a viable option to be designed and constructed by TDOT to avoid relocation of a major utility facility or to accommodate a relocated facility. Or, in other cases, where the pole absolutely must be set in a particular location, then notes to that affect would be required and the pole would have to be either an extra height pole or a pole set at extra depth. An example would be where there is a 3' cut where a 50' pole is proposed. Normal setting depth for a 50' pole is 7 feet. In this case the pole would need to be set at 10' to allow for the 3' cut. Vertical clearances would also need to be considered. In the case of a 3' fill with a 50' pole requirement, a 55' pole would need to be placed to allow for the extra 3' of fill. In the case of a buried facility, the facility should be buried at a sufficient depth to be below the cut and/or sub-grade. In a fill scenario, the buried facility would be placed below existing grade with consideration to the depth at final grade. The Utility would have to make a judgment if it would be able to maintain the facility at the greater depth.

6. **If an error is found, what authority does the utility inspector have? Can they stop work? Can they authorize a change?**

Answer: Only the TDOT construction supervisor (or their CEI consultant) can actually stop the State contractor's work on a project, including utility relocation work. When an error is discovered, the utility inspector should notify the TDOT construction supervisor immediately, and inForm the State contractor in writing of the error and copy the TDOT Representative and the Utility. The error should be noted in the Project Utility Diary. Once properly informed, if the errant construction continues, the responsibility rests with the State contractor. Neither the utility inspector nor the contractor can authorize a change from the contract plans; they can request a change utilizing the Utility Additional Item/Work Request Form but have to obtain the concurrence of TDOT before implementing a change.

Appendix F.
Example Rainbow Plans

Appendix F contains examples of Rainbow Plans (Location Approval Plans) to be included in the Utility's 'A' Date Submittal Package (see Step 3I in Section 2 of the Guidebook). These 'Rainbow' Plans are color-coded as specified in the engineering authorization letter from TDOT (see example in Appendix D3).

The information provided by the Utility on the drawings can be drawn either by hand or electronically on the plans received from TDOT.

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
ROW	2009	19025-2226-94	
ROW	2009	ARRA-STP-M-4967	

GREEN-REMOVE/RETIRE IN PLACE
ORANGE-EXISTING TO REMAIN
BLUE-TEMPORARY
RED-PROPOSED

PHONE CO.

Construction Work Drawing

PROPRIETARY INFORMATION
Not for disclosure outside AT&T or any of its subsidiaries except under written agreement

State: TENNESSEE
District: MIDDLE TN
Exchange:
Wire Ctr:

A.A./Taper:
Tax District:
RZ/CZ:

Designer: Carl Cornfield
Phone: (615) XXX-XXXX

Not to Scale

Job Description:
TDOT Proj.# 19025-2226-94
PROPOSED TELEPHONE STRUCTURE LAYOUT

Job Number:

DWG UX-X OF UX-X

EXISTING (1976) 115'-4C DUCT-6
EXISTING (1963) 127'-4C DUCT-2
EXISTING (1960) 446'-4C DUCT-8
4C DUCT-6
4C DUCT-12
(1975) 104'-4X DUCT-4
REMOVE/RETIRE IN PLACE
(1978) (201'-4X) (DUCT-2) (BURIED CABLE)
REMOVE/RETIRE IN PLACE
(1978) (567'-4X) (DUCT-1) (BURIED CABLE)
TEMP
TEMP
TEMP
REMOVE (40-5)
REMOVE (30-4)
REMOVE (45-4)
REMOVE (40-5)
PLACE 1200'-4C DUCT-4
MARKER POST
EXISTING 4C (1975) MH A-19-A VOL:113 cu ft 4'Wx5-6'Lx5'H
(1975) 508'-4C DUCT-15
PROPOSED STRAIN POLE #3 STA. 122+00, 70.0' RT.
3'X3' COL.
BOLLARDS
BILLBOARD
SIGN (STONES RIVER PROFESSIONAL BLDG.)
2-B (STONES RIVER PROFESSIONAL BUILDING)
SLOPE ESMT.
10' CONST. ESMT. CUT
PRES. & PROP. R.O.W.
PROP. R.O.W.
CENTRAL PIKE
SEE SHEET NO. U3-3
MATCH LINE STA. 22+00
18" BRICK SIGN (RIVERVIEW BUSINESS CENTER)
1-BLOCK (KEVCO CARPETS & VINYL)
DRAIN EASM.
SILO
GATE

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00006 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

BEG. OF JOB TO STA. 22+00

SCALE: 1"= 50'

12/17/2012 8:6:00 AM
C:\2658805\1\Markup02example.SHT

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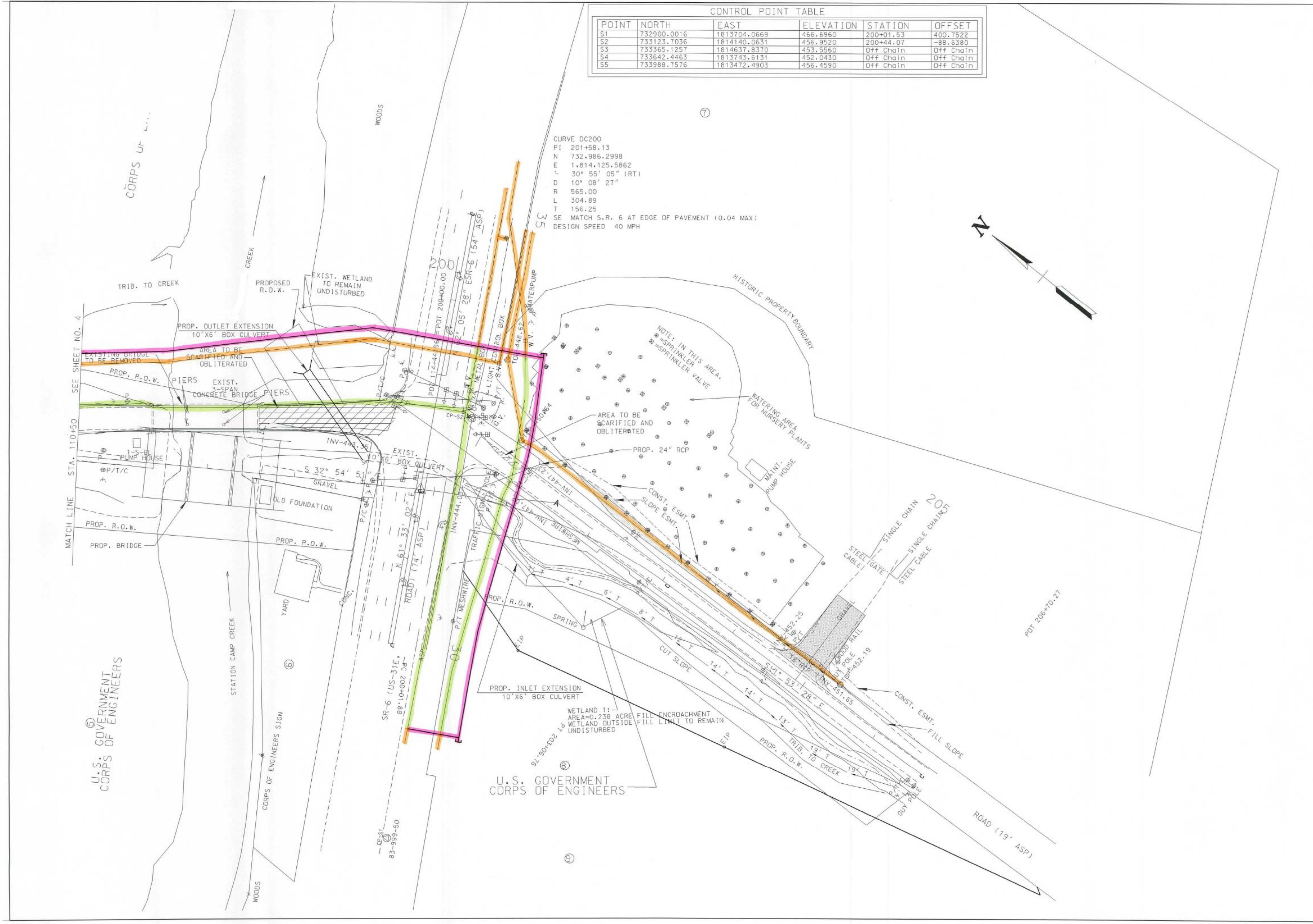
CONTROL POINT TABLE

POINT	NORTH	EAST	ELEVATION	STATION	OFFSET
S1	732900.0016	1813704.0669	466.6960	200+01.53	400.7522
S2	733123.7036	1814140.0631	456.9520	200+44.07	-88.6380
S3	733365.1257	1814637.8370	453.5560	Off Chain	Off Chain
S4	733642.4463	1813743.6131	452.0430	Off Chain	Off Chain
S5	733988.7576	1813472.4903	456.4590	Off Chain	Off Chain



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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	NO.
R.O.W.	2008	83950-2552-04	4

CONTROL POINT TABLE

POINT	NORTH	EAST	ELEVATION	STATION	OFFSET
S1	732900.0016	1813704.0669	466.6960	Off Chain	Off Chain
S2	733123.7036	1814140.0631	456.9520	Off Chain	Off Chain
S3	733365.1257	1814637.8370	453.5560	Off Chain	Off Chain
S4	733642.4463	1813743.6131	452.0430	108+44.70	-35.88
S5	733988.7576	1813472.4903	456.4590	Off Chain	Off Chain

U.S. GOVERNMENT
CORPS OF ENGINEERS ③

CORPS OF ENGINEERS SIGN

POT 105+80.99
N 733844.33
E 1813570.20

CITY LIMITS

DRIVE (18' ASP)

110

U.S. GOVERNMENT
CORPS OF ENGINEERS ④

Abandon 4" & 6" Gas Main

PRESENT R.O.W.

WOODS

AREA TO BE SCARIFIED AND SEEDED

100' PRESENT R.O.W.

PROP. R.O.W.

CUT SLOPE

VENT PIPES

GRAVEL ASP

EXIST. R.O.W.

CP-54

BOULEVARD (24' ASP)

SEE SHEET NO. 5

STA. 110+50

MATCH LINE

INV-455.99 NOT FOUND

INLET

ROAD

CP-55
83-999-54

INV-450.80'

PRESENT R.O.W.

P/T/C

INV-446.34 18" RCP

INV-446.48

GRAVEL

FILL SLOPE

PROP. R.O.W.

Tie into Existing 6" Gas Main

Tie 4" Gas Main to New 6" Gas Main

New 6" Steel Gas Main Approximately 10 From edge of R.O.W

PRESENT R.O.W.

U.S. GOVERNMENT
CORPS OF ENGINEERS ⑤

WOODS

FIELD

BEGIN PROJECT XXXXX-XXXX-XX
R.O.W. STA. 105+80.99
N 733844.33
E 1813570.20

GRAVEL

SOCCER COMPLEX

CITY LIMITS

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR L000029 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 105+81 TO STA. 110+50

SCALE: 1"=50'

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Appendix G. Line Styles and Designations for Utility Plans

Currently, as shown in Step 5C on Page 16 of the Guidebook, the utility is required to submit both color-coded and black & white PDF's of the relocation plans. Because the construction plans for bid lettings are printed in black and white (B&W), the color-coded designations do not show up on the printed bid plans. However, color-coded plans are helpful for the contractor and their utility subcontractor to clarify the utility's intentions.

In order to provide on B&W prints what is depicted by the color-coded designations, additional line designations are required to be shown on the Utility's relocation plans.

There are three cases of existing utilities with the two current color distinctions:

1. Existing to remain (orange)
2. Existing to be removed (green)
3. Existing to be retired-in-place (green)

For proposed utilities, there are two cases depicted in different colors:

1. New installation (red)
2. Temporary relocation (blue)

The following two pages show line styles that address all the cases above so that the lines shown on the plans can be understood when printed in either color or B&W. The examples shown are for gas and manholes, and these line styles can be applied similarly to all utility types and features. PDF's can be produced in both color and B&W from the color microstation files and shall be provided to TDOT by the Utility. Note that the line weight for proposed utilities (new and temporary) is shown heavier than existing. This makes it easier for the contractor to see the actual proposed utility work.

Example Color PDF

EXISTING GAS LINE TO REMAIN — 8" G —

EXISTING GAS LINE RETIRED IN PLACE — 8" G RIP —

EXISTING GAS LINE TO BE REMOVED — 8" G —

PROPOSED GAS LINE — **8" G** —

PROPOSED TEMPORARY GAS LINE — **8" G-TEMP** —

EXISTING MANHOLE TO BE REMOVED

PROP **PROPOSED MANHOLE**

TEMP **PROPOSED TEMPORARY MANHOLE**

EXISTING MANHOLE TO REMAIN

RIP EXISTING MANHOLE RETIRED IN PLACE

EXISTING GAS LINE TO REMAIN — 8" G — 8" G —

EXISTING GAS LINE RETIRED IN PLACE — 8" G RIP — 8" G RIP —

EXISTING GAS LINE TO BE REMOVED — 8" G — 8" G —

PROPOSED GAS LINE — **8" G** — **8" G** —

PROPOSED TEMPORARY GAS LINE — **8" G-TEMP** — **8" G-TEMP** —

EXISTING MANHOLE TO BE REMOVED

PROP **PROPOSED MANHOLE**

TEMP **PROPOSED TEMPORARY MANHOLE**

EXISTING MANHOLE TO REMAIN

RIP EXISTING MANHOLE RETIRED IN PLACE