

# Right of Way Manual Vol. 1 - Preliminary Procedures for the Authority to Proceed



Revised August 2016

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## **Manual Notice 2016-1**

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**Manual:** *R/W Manual Vol. 1 - Preliminary Procedures for the Authority to Proceed*

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### **Purpose**

This revision is intended to update the manual with new requirements for right of way mapping.

### **Changes**

Revised Chapter 4, Section 1, [Surveying for ROW Acquisition](#), and added subsections titled “Elimination of the Requirement for a Traditional Right of Way Map” and “Requirements for Right of Way Mapping Deliverables”.

Revised Chapter 4, Section 8, [Requirements for Submission of ArcGIS Files](#), and added subsections titled “Feature Attributes or Fields” and “Rename Geo-Database Template to ROW CSJ Prior to Submission”.

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### **Archives**

Past manual notices are available in a [pdf archive](#).

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# Chapter 1 — Project Development Overview

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## Section 1 — Overview

### Right of Way (ROW) Parcel Acquisition Process Flowchart

A downloadable [flowchart](#) of the ROW Parcel Acquisition Process is available in PDF format.

### Definitions

Terms, hyperlinked to the [TxDOT Glossary](#), are included in the first section of each manual where the term is used. Click on an underlined term to connect to its definition. Use your browser's Back button to return to your place in the *Right of Way Manual*.

### Example and Sample Forms

The names of persons found on the example forms in this manual are fictional. Any resemblance to any person or persons, living or dead, is purely coincidental.

### Blank ROW Form Templates

All TxDOT [right of way forms](#) mentioned in this manual are accessible to both TxDOT Intranet and public Internet users as templates. Click on a form number or title wherever a link appears in this manual to open or save it.

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## Section 2 — General ROW Project Development

### Funding

The following steps are involved in ROW funding:

- ◆ Determine ROW acreage needed.
- ◆ Determine the approximate cost of acquiring needed ROW. A ROW CSJ Request Form for Total Project Cost (Form [ROW-RM-CSJTPC](#)) is available.
- ◆ Determine the availability of funding at the local, State, and Federal level. For more information on funding sources, refer to the TxDOT [TPP Planning Guide](#).

ROW cost is a significant factor in TxDOT's project development process. To clearly state ROW funding needs in this process, prepare a reasonably accurate ROW cost estimate that addresses the following elements:

- ◆ Consider local land use, which has a major impact on ROW funding and generally includes one or more of the following types of use.
  - **Agricultural.** May include farm or ranch land and related improvements, including single-family residential.
  - **Urban residential.** May include single-family or multi-family structures and associated improvements, such as landscaping or privacy fencing.
  - **Commercial.** May include wholesale and retail businesses, or professional office buildings.
  - **Industrial.** May include manufacturing plants, product assembly plants, and heavy equipment associated with these activities.
  - **Public.** May include parks, cemeteries, greenbelts, educational facilities, vacant land, or any of the uses in A through D above when the land is owned by a public agency.
- ◆ Consider the value of land and improvements to be taken and make allowance for damages, if any, to remainders. Make reasonable allowances for acquiring some parcels in condemnation.
- ◆ Estimate relocation assistance including the number of individuals, families and/or businesses being displaced. Consider the cost to move individuals, families and businesses, as well as supplemental payments for replacement housing and anticipated last resort housing.
- ◆ Identify types of utilities to be moved and estimate the eligible costs. See the TxDOT Utility Manual.
- ◆ Consider the cost to dispose of improvements acquired. Note that the disposition cost of commercial or industrial structures can be significant.

- ◆ Consider other costs such as outsource contract fees, disposition of hazardous materials, clean up of contaminated land, or wetland mitigation.
- ◆ Consider other State costs such as for appraiser fees, title, and court costs.

A ROW CSJ number may be obtained from the ROW Division after the Texas Transportation Commission approves the project as a Priority 2 project. Typically, a CSJ number for ROW activities is obtained after obtaining a CSJ number for construction. A ROW CSJ Request Form for Total Project Cost (Form [ROW-RM-CSJTPC](#)) should be filled out and forwarded to ROW Division for any right of way cost including any proposed utility adjustments.

For information on programming and scheduling funds for a project, including ROW acquisition, refer to the TxDOT Transportation Systems Manual, [Programming and Scheduling Volume](#).

### **Obtaining Relocation Funding for State Projects and Local Government Acquisitions with State Reimbursement**

Costs for relocation payments and services will be paid by the State for (1) projects wholly financed with State funds and for (2) ROW projects involving local government acquisitions with State reimbursement.

If an overrun occurs or is anticipated, the overrun must be handled according to established overrun procedures.

Costs for relocation payments and services must be included in the total estimated ROW cost. Relocation costs incurred before project programming by the State are not eligible for State financing.

### **Local Government Project Set Up and Funding**

Submit a request to the ROW Division with the following information:

- ◆ Identify Texas Transportation Commission approval of the project. The project will be approved either by inclusion in the Unified Transportation Program or through a project specific minute order.
- ◆ Identify date of environmental clearance.
- ◆ Include the ROW Map, property descriptions, and parcel plats approved by the District prior to acquisition of right of way.

When [Requesting Funds](#) for a project involving local government participation, be aware that local governments may participate in all of the right of way costs.

## State Program Authorization

Projects programmed by the Texas Transportation Commission for **construction** are approved for development up to construction. If ROW is needed, there will be Commission program allotment for ROW cost **separate** from the program authorization for construction.

Projects programmed by the Commission for **ROW acquisition but not construction** are approved for development through schematic layout and ROW acquisition.

## Statutory Authority For ROW Acquisition

*Section 24, Article XVI, Texas Constitution*, provides that:

"The Legislature shall make provisions for laying out and working public roads, for the building of bridges...." Under this constitutional authority:

The State Highway Department (now TxDOT) was established in 1917 by appropriate legislation (*Acts 1917, 35th Legislature, p.416, Ch. 190, §1*). The Highway Commission (now Texas Transportation Commission) was given responsibility to "...plan and make policies for the location, construction and maintenance of a comprehensive system of state highways and public roads." (*Transportation Code, §201.103*)

In 1957, the 55th Legislature, regular session, passed H.B. 179, Chapter 300, (refer to *Transportation Code, §203.051*), expressly granting the Highway Commission (now Texas Transportation Commission) authority to purchase or acquire through eminent domain proceedings land needed for highway purposes in the name of the State of Texas. The 55th Legislature, regular session, also passed H.B. 620 (Chapter 301) directing the Commission to handle the acquisition of ROW on the National System of Interstate and Defense Highways and to participate under certain conditions in the cost of ROW acquired by local political subdivisions for certain other highways (refer to *Transportation Code, §224.001*).

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## Section 3 — Planning and Sequence of Project Development

### Actions Preliminary to the ROW Acquisition Process

TxDOT's project development process is a joint effort of many team members. A flowchart showing the process is available. Reducing project delay can be accomplished by integrating ROW personnel into early stages of the project development process. This is important for:

- ◆ identifying potential design/construction [funding](#) related to the current Unified Transportation Program (UTP);
- ◆ placing a project in the [Transportation Improvement Plan](#) (TIP);
- ◆ developing the [Statewide Transportation Improvement Plan](#) Plan (STIP).

The ROW region staff should be consulted by the project planners and designers to determine the best project location and design with consideration given to:

- ◆ local land usage;
- ◆ potential disturbances to individual property owners; and
- ◆ impact on area development and ROW costs, for example, effects of possible hazardous material and possible need for wetland mitigation.

ROW cost is a significant part of overall project cost and should receive due consideration with **all** engineering factors.

When studying proposed project locations, the designer should consult with ROW region staff regarding ROW impacts that **may have high costs** for:

- ◆ acquisition of improvements;
- ◆ major utility relocation;
- ◆ severance damages;
- ◆ wetland mitigation;
- ◆ hazardous material site clean up; and
- ◆ relocation assistance.

Minor changes in design, such as change in alignment or adjustment of ROW width, may be made without a reduction in the integrity of the design or a disproportionate increase in construction costs in relation to ROW costs.

Refer to the TxDOT [Project Development Process](#) Manual for information on the following project development tasks.

ROW acquisition requirements and information for [obtaining Priority 1 authorization](#) are discussed in the *TxDOT Project Development Process Manual*. There is a targeted percentage of ROW acquisition that should be complete for priority status, but the percentage may vary depending on the size of the ROW project. To verify that a project can be constructed as a Priority 1 Status project, evaluate the project's amount of ROW acquired to date. This evaluation minimizes the possibility of ROW acquisition delaying a letting and demonstrates the importance of involving ROW region staff in project development.

Initial ROW acquisition is authorized when [Priority 2 authorization](#) is obtained. Priority 2 status is required for ROW acquisition authorization.

Long Range Project (LRP) [status](#) is obtained as the last and lowest level of project development.

### Sequence of ROW Project Development

To initiate a ROW project:

- ◆ the work must receive program approval by the Commission;
- ◆ schematics must be approved (refer to *Project Development Process Manual* for information on [schematic](#) approval);
- ◆ public involvement requirements must be met. (See the *Environmental Procedures in Project Development Manual*; and
- ◆ environmental clearance requirements must be met. (See the *Environmental Procedures in Project Development Manual*)

The full release from the ROW Division and issuance of the General Expenditure Authorization, to cover the project costs, must be deferred until these preliminary requirements are complete.

After the project is authorized, the Region is responsible to plan project development to completion. The region should undertake the following actions in a coordinated work plan:

- ◆ establish early coordination with utilities and railroads;
- ◆ acquire ROW;
- ◆ relocate displaced persons or businesses;
- ◆ remove improvements; and
- ◆ coordinate required utility adjustments.

Eminent domain (ED) proceedings should occur only when negotiation is unsuccessful. Once legal proceedings begin, they should be given priority handling, at least through deposit of the Commissioners' Award, which provides possession of the ROW. The ROW Division will assist with eminent domain proceedings. However, under the Constitution of the State of Texas, the Attorney

General's Office (OAG) must act as counsel for TxDOT in Commissioners' Hearings and **all** court proceedings.

Area Engineer staff should consult with the Region Right of Way staff regarding special design and construction issues that may relate to ROW negotiations.

## Overview of Project Development Meetings

Refer to the TxDOT *Project Development Process Manual* for more information on the following meetings and activities. The first step in beginning a project is to identify project [need and scope](#).

Preparing a [programming assessment](#) may be needed to obtain approval of [Long Range Project Status](#) for some projects.

The two meetings required for most projects are the [Preliminary Design Conference](#) and the [Design Conference](#). Each of these meetings should allow for sharing information and discussing ROW issues.

## Contractual Agreements with Local Governments

**Statutory Authorization.** *Transportation Code*, §203.051, authorizes TxDOT to acquire whatever interest in any property that is needed for highway ROW purposes. Usually, TxDOT will enter into an agreement with a local government (LG) that established responsibilities of each agency in the acquisition process. *Transportation Code*, §224.002 (a) states that an LG must acquire highway ROW as requested by TxDOT. The statutory authority allowing LG's to contract with TxDOT for acquiring needed ROW is found in *Transportation Code*, §224.005. Terms and conditions of any agreement entered into by and between TxDOT and an LG is determined between the parties. *Transportation Code*, §224.005 (a) provides that TxDOT must reimburse an LG not less than 90% of the cost of the ROW.

## Chapter 2 — Contractual Agreements

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## Section 1 — Forms

### Overview

To establish acquisition and funding responsibilities and requirements of TxDOT and a local government (LG), an agreement must be entered into before a project is released for ROW acquisition. These agreements are discussed more fully in the following [Chapter 3](#)- Acquisition Coordination.

Below is a list of agreements most Districts use with the LGs.

**Table 1-1: Agreements Used with LPAs**

Title	Form Number
<a href="#">ROW-RM-37</a>	Contractual Agreement for Right of Way Procurement (Local Government)
<a href="#">ROW-RM-37C</a>	Cancellation of Contractual Agreement for Right of Way Procurement - Local Government
<a href="#">ROW-RM-37S</a>	Supplemental Contractual Agreement for Right of Way Procurement - Local Government
<a href="#">ROW-RM-129</a>	Agreement to Contribute Funds (Local Government)
<a href="#">ROW-RM-129C</a>	Cancellation of Agreement to Contribute fund - Local Government
<a href="#">ROW-RM-129D</a>	Agreement to Contribute Funds - Local Government (Donated Property in Lieu of Monetary Payment)
<a href="#">ROW-RM-129S</a>	Supplemental Agreement to Contribute Funds - Local Government
<a href="#">ROW-RM-IP</a>	Agreement to Contribute Funds (Local Government - Incremental Payments)
<a href="#">ROW-RM-EDC</a>	Agreement to Contribute Funds (Local Government - Economically Disadvantaged)

TxDOT's Contract Services Office has implemented a new agreement procedure, which is used in conjunction with the ROW agreements listed above. The new procedure consists of two agreements. These are:

- ◆ a Master Agreement Governing Local Transportation Project Advance Funding Agreements (**MAFA**), and
- ◆ a Local Project Advance Funding Agreement (**LPFAFA**).

By these agreements, regardless of the type of agreement signed, TxDOT authorizes and requests the local government to proceed with ROW acquisition and agrees to reimburse the LG for its share of costs incurred according to the agreement's provisions. The agreement provides LG acceptance of responsibility to acquire all needed ROW and to obtain good title in the name of the State of Texas. Terms of the agreement apply to:

- 
- ◆ new ROW authorized and requested by TxDOT which is needed and not yet dedicated, in use, or previously acquired in the name of the State or LG for highway, street, or road purposes; and
  - ◆ needed outstanding property interests in existing ROW and eligible utility adjustments not previously made, as authorized and requested by TxDOT.

The contractual agreement establishes that:

- ◆ TxDOT's reimbursement to the LG for negotiated parcels will be the percent of TxDOT's funding participation of TxDOT's predetermined value of each parcel, or the parcel's net cost, whichever is the lesser amount; and
- ◆ on condemned parcels, TxDOT's funding participation percent reimbursement will be based on the final judgment provided that TxDOT is given proper notice of all action taken therein.

TxDOT typically participates in costs of:

- ◆ Special Commissioners' Hearings,
- ◆ appraisal expenses for the State's fee appraisers used in condemnation cases,
- ◆ utility relocations, and
- ◆ fencing and property adjustments.

The contractual agreement provides for division of other responsibilities for project development. The LG typically assumes entire responsibility for:

- ◆ costs incurred in arriving at values to recommend for State approval,
- ◆ costs relative to negotiation,
- ◆ its attorney fees for condemnation proceedings, and
- ◆ costs of recording instruments of conveyance.

TxDOT typically assumes the responsibility and costs of:

- ◆ land surveys,
- ◆ property descriptions,
- ◆ title information,
- ◆ preparation of instruments, ROW maps, supplemental investigations or appraisals necessary to determine the appropriateness of submitted values and fees for title services,
- ◆ appraisals where the State is to determine values as a result of the LG's use of the waiver provision of the contractual agreement,
- ◆ relocation assistance, and
- ◆ removal of improvements.

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The Region prepares the necessary contractual agreements. [Examples](#) of completed forms are available. Project limits should agree with project limits covered by minute order or program authorization. The Commission will offer the entire project to the LG for ROW acquisition. Execution of contracts providing for acquisition of parcels on a **proportional basis should be avoided** because this could violate program intent. If the LG executing the contract and acquiring all ROW is a county and a portion of the project enters a city, explain this fact and show the entire limits established by the minute order in the contract. If the city and county will each acquire ROW within their jurisdictions, show the limits breakdown in each contract. The preparation of all these agreements should be handled at the Region level, with execution of all agreements handled through the ROW Division.

Submission of contracts involves the following:

- ◆ Along with the contract, submit a copy of the ordinance or resolution containing authority for their designated official(s) to enter into contracts with the State (for procurement of ROW, utility adjustments and fencing work) for each project.
- ◆ Submit three copies of each contractual agreement executed by the LG to the ROW Division for approval.
- ◆ If a county and one or more cities are involved, submit companion agreements, as required, covering the entire project.

Detailed submission requirements for contractual agreements with the LG are described in the following [Chapter 3](#)- Acquisition Coordination.

## Section 2 — The Acquiring Agency

### Procedure

In ROW acquisition projects, it is acceptable for either TxDOT or the LG to be the acquiring agency. Regardless of which is the acquiring agency, an agreement must be executed on each ROW project.

If the LG is the acquiring agency, the LG will be responsible for all aspects of the acquisition process as detailed in agreements between the parties. All property must be acquired in the name of the State of Texas. The LG must follow all acquisition procedures described in this manual. When the LG is the acquiring agency, TxDOT will provide approvals for procedures carried out by the LG and will provide reimbursement of ROW costs to the LG in accordance with State law and in accordance with the terms of the contractual agreement between TxDOT and the LG.

If TxDOT is the acquiring agency, TxDOT will be responsible for all acquisition activities, with the LG contributing a set percentage of the ROW costs. The authorization for this procedure is found in *43TAC §§15.50 - 15.56*. Procedures for this are described more fully in the following [Chapter 3-Acquisition Coordination](#).

### Section 3 — Cost Participation

43TAC §§15.50 - 15.56 also describes procedures governing the implementation of cost participation between TxDOT, an LG and/or the Federal government. Section 15.55 contains a chart that shows participation percentages of an LG, Federal government and/or TxDOT for all aspects of a highway improvement project, up to and including ROW acquisition. The participation percentages are divided by the category of funding for the project as provided in the Unified Transportation Program. A summary of categories of the Unified Transportation Program can be found in TxDOT's Transportation, Planning and Programming Manual.

State statutes provide that when acquiring right of way to be used for Commission approved transportation projects and in cooperation with the LG, TxDOT will pay to the LG not less than 90 percent of the value of the ROW or the net cost of the ROW, whichever amount is less. Minute Order No. 80312 states that the participation percentage on ROW acquisition projects will be a State contribution of 90% and a 10% contribution by the LG. Any change to the percentage must be approved by the Commission.

If the acquisition is by eminent domain, the [participation by TxDOT](#) will be based on the final judgment if TxDOT has been notified in writing before the filing of the suit and given prompt notice as to all action taken in the suit.

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## Section 4 — Payment Procedures

If the contractual agreement between TxDOT and an LG requires the LG to be the acquiring agency, TxDOT will reimburse costs of the ROW to the LG upon acquisition of title acceptable to TxDOT. Title to each parcel must be in the name of the State of Texas. If the parcel is acquired through ED, payment to the LG will be made upon entry of a final judgment vesting title in the State of Texas. The procedures for reimbursement by TxDOT to the LG must be described in any contractual agreement executed between the parties. Any changes in this procedure must be approved by the ROW Division and an amended contractual agreement should be prepared and executed by the parties detailing the change. The procedures for payment to the LG should follow standard payment procedures described in *Volume 2 - Right of Way Acquisition*, [Payment Policies](#) and Procedures for State and LG.

If the contractual agreement requires TxDOT to be the acquiring agency, the preferred procedure is for the LG to contribute its' estimated share of the costs of the ROW at the time of execution of the contractual agreement. There may be instances when it may create an undue burden on the LG to contribute all the required funds at the time of execution of the contract. In those instances, any incremental payment arrangement must be approved by the Executive Director of TxDOT (see Special Approval Transmittal Form, per *43TAC §15.52*, General Services Division's Contract Services Office for form) and included in the contractual agreement. Payment of the LG's estimated share should be given to the applicable Region and immediately transmitted to the Finance Division using the Department's Rapid Deposit Account for deposit in the proper account.

Upon delivery to TxDOT of acceptable instruments conveying to the State the required ROW, a voucher for the reimbursement to the LG will be prepared and transmitted to the Comptroller of Public Accounts.

## Chapter 3 — Acquisition Coordination

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## Section 1 — TxDOT - The Acquiring Agency

### Overview

Local governments (LGs) are responsible for ROW acquisition, with exception of interstate highways; however, an LG may request that TxDOT assume the ROW acquisition function. TxDOT's role as the acquiring agency is subject to the following conditions:

- ◆ the LG offers to make a voluntary contribution equal to the applicable percentage of the actual cost of the ROW;
- ◆ the Commission has authorized the project; and
- ◆ ROW costs are eligible for State participation reimbursement.

**A city ordinance or Commissioners' Court Order must be submitted along with the LG's request for TxDOT to assume the acquisition responsibilities.**

Typically, LG contribution is 10% unless otherwise stated in the contract agreement. Any change in LG percentage must be approved by the Commission. The initial LG contribution is based upon current estimates of the cost of the ROW to be acquired. The cost of ROW is defined as the total value of compensation to owners, including utilities, for their property interests. Additional contributions will be made if the **actual** costs of ROW exceed the amount estimated. If the amount contributed by the LG is greater than the final actual ROW costs, the excess amount will be refunded to the LG. Since it is possible that some projects could financially burden an LG if the entire contribution is required with the submittal of the contractual agreement, the LG can make incremental payments. Any agreement with an incremental payment schedule has to be approved by the Executive Director of TxDOT in accordance with *43TAC, §15.52, Subsection 6(B)*.

### Contractual Agreements

An agreement must be executed by and between TxDOT and the applicable MPO or LG on all projects. This will customarily be executed early on in project development, prior to a project being released for ROW acquisition. The agreement will give details about the project and will state who is responsible for the acquisition of the ROW. If TxDOT is to be the acquiring agent, the participation amount required by the LG and the method of payment by the LG, either in full with the execution of the agreement or in incremental payments as approved by the Executive Director, will be detailed in the agreement.

### Amendments to Contractual Agreements

An amendment or amendments to the agreement may be necessary if certain acquisition responsibilities or participation requirements change during the course of an ongoing project. If the

agreement originally called for the LG to be the acquiring agency and it desires to transfer all or a portion of the remaining acquisition responsibilities to TxDOT, an amendment to the agreement should be used. The amendment should describe by parcel number any outstanding ROW that is being transferred to TxDOT for acquisition. It should also identify any utility adjustment or other outstanding obligation that is to be transferred to TxDOT. If only portions of the acquisition responsibilities are being transferred to TxDOT, the amendment should also set forth the LG's remaining acquisition responsibilities. The amendment would also be used if the participation ratio changes, for example pursuant to a Minute Order designated an LG as an [economically disadvantaged county](#).

### Submission of Contractual Agreements

The Region submits three executed originals of the standard form to the ROW Division for approval. The transmittal memo must state the method of funding utilized by the LG. If the LG desires to pay the required amount in incremental payments, the memo must also set forth the requirements for incremental payment approval set forth in *43TAC, §15.52, Subsection 6(B)*. Accompanying this memo should also be

- ◆ a copy of the LG's check,
- ◆ a copy of the deposit transmittal evidencing deposit of funds in the appropriate rapid deposit account,
- ◆ a copy of the LG's grant of signature authority for the person signing the agreement,
- ◆ a copy of the resolution, and
- ◆ special Approval Transmittal Form (per *43TAC §15.52*) from GSD's Contract Services Office, executed by the Executive Director of TxDOT, for incremental payments, if applicable.

If there are **any** changes proposed to the agreement, an unexecuted copy of the proposed agreement must be transmitted by the Region to the ROW Division. Also, any proposed amendment to an existing agreement must be submitted in the same manner. The ROW Division will review these submissions and inform the Region in writing of approval or disapproval of the proposed changes or of the proposed amendment. In this situation, the LG must not sign the contract or amendment prior to approval by the ROW Division.

**Once an approved agreement (executed by the LG) and other requirements have been submitted to the ROW Division, the approval of TxDOT of these documents will be evidenced by execution by the Director of the ROW Division. One original will be retained by the ROW Division for their records and the remaining two originals will be returned to the Region for retention in the Region files and for the LG.**

## Section 2 — Acquisition Procedures for Economically Disadvantaged Counties

### Overview

Acquisition procedures for counties designated as economically disadvantaged are the same as for non-designated counties, or are as stipulated in the agreement, except that the amount of local funds to be contributed may be adjusted by the Texas Transportation Commission. Note that all cities situated in a county that has been designated as "economically disadvantaged" are also eligible for adjustment of their participation ratio. The Transportation Planning and Programming Division is responsible for implementation of the economically disadvantaged county program, including preparation of any necessary minute orders.

At the beginning of each fiscal year, as determined by data provided to TxDOT by the Texas Comptroller of Public Accounts, the designation "economically disadvantaged county" will be applied to a county that has, in comparison to other counties in the State:

- ◆ below average per capita taxable property value;
- ◆ below average per capita income; and
- ◆ above average unemployment.

The city council, commissioners' court or similar governing body of a local government that consists of all or part of an economically disadvantaged county shall submit a request for adjustment to the local District. The request will include, at a minimum:

- ◆ the proposed project scope;
- ◆ the estimated total project cost;
- ◆ a breakdown of the anticipated total cost of ROW and utility adjustments;
- ◆ the proposed participation rate;
- ◆ the nature of any in-kind resources to be provided by the local government;
- ◆ the rationale for adjusting the minimum local matching funds requirement; and
- ◆ any other information considered necessary to support a request.

In evaluating a request for an adjustment to the local matching funds requirement, the commission will consider an LG's:

- ◆ population level;
- ◆ bonded indebtedness;
- ◆ tax base;
- ◆ tax rate;

- ◆ access to available in-kind resources; and
- ◆ economic development sales tax.

The Commission will enter a minute order based on the above criteria, which may or may not adjust the participation ratio of the LG. If the ratio is adjusted, the applicable agreement or agreements will be prepared as detailed above.

# Chapter 4 — Surveying, Maps, and Parcels

## Contents:

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## Section 1 — Surveying for ROW Acquisition

### Necessity for Correct Property Descriptions

Property descriptions prepared with the intent to convey title to the State must clearly define the location of the property. State law stipulates that any property description prepared with the intent to convey title to the State constitutes a boundary survey, falling under the jurisdiction of the Texas Board of Professional Land Surveying (TBPLS).

### Surveying for ROW Acquisition

Before performing any type of field surveying on private property, right of entry must be obtained from each landowner to include a range of dates the services shall be performed.

All surveying necessary for ROW acquisition must be performed under the supervision of a Registered Professional Land Surveyor (RPLS). All surveying must conform to all applicable surveying laws and the Professional Land Surveying Practices Act and the *General Rules of Procedures and Practices* of the Texas Board of Professional Land Surveying.

### Texas Coordinate System of 1983

All projects must be based upon the Texas Coordinate System of 1983 in U.S. Survey feet and be relative to the published values of the National Geodetic Survey (NGS) Continuously Operating Reference Station (CORS) network. The *TxDOT Surveying Guide* is an additional reference about the Texas Coordinate System.

### Elimination of the Requirement for a Traditional Right of Way Map

The right of way map is an administrative document containing all parcel information for a project. It contains a complete duplication of all the survey data found in the property description and information on the project or each parcel that is in the TxDOT ROWIS and/or DCIS databases.

The following is an excerpt from the "New Requirements for Right of Way Mapping" policy memorandum dated May 3, 2016:

"In an effort to reduce the amount of time to deliver a ROW projects, effective the date of this memorandum, the ROW

Division will no longer require the creation or submission of a ROW map sheets (paper and MicroStation files) as a requirement for the 'Authority to Proceed'.

The Right of Way maps as currently used are being replaced by the a web based mapping application known as the "[TxDOT Real Property Asset Map](#)" that is available to internal users and the public on ROW Division's txdot.gov webpage.

The two main requirements to start the acquisition process for a project will be an ArcGIS geo-database populated with parcel features and a signed and sealed Property Description. The geo-database template and submission standards are presently available on txdot.gov for internal users and Consultants.

Some parts of the acquisition process (title and appraisal) can proceed with only the ArcGIS geo-database populated with schematic footprint. The final signed and sealed Property Description will be needed in the later stages of acquisition for the title policy, certified appraisal and as part of the deed.

Under the new standards, the ArcGIS geo-database and Property Descriptions can be submitted as they are completed, instead of waiting for the submission of a complete ROW map."

The right of way map sheet submittals outlined in 'Section 2- ROW Mapping (For State and Local Government); 'Section 4 - Submission and Approval of ROW Maps' and the map sheet portions of Section 7 - Requirements for Submission of Graphics Files' are being eliminated as a required deliverable and will no longer be a requirement by the ROW Division for the 'Authority to Proceed' and/or for the acquisition of right of way. These sections will temporarily remain in the manual as a guide for completion of older projects started prior to October 1, 2014.

The parcel numbering system for the types of parcels outlined in 'Section 2- ROW Mapping (For State and Local Government) will remain the same. Since parcels will be submitted as they are completed, the first parcel submitted will be parcel 1.

ROW staff will coordinate with District ROW mapping staff to set the priority of submission of parcels.

## Requirements for Right of Way Mapping Deliverables

The following is an outline in chronological order of the ROW Division's requirements for mapping deliverables. Detailed revisions to the sections in Chapter 4 will be forthcoming.

- ◆ ROW (ArcGIS) geo-database template populated with the schematic ROW footprint parcels and schematic alignment. (See Section 8 - Requirements for Submission of ArcGIS Files). The current submission standards and current geo-database template can be found on the ROW Division's webpages on [txdot.gov](http://txdot.gov).
- ◆ Spreadsheets and/or Word documents containing the information on the cover map sheet (project limits, beginning and ending stationing, utility stations, etc.) and control/alignment map sheets (coordinates/descriptions of control monuments and coordinates/stationing/curve data of alignment);
- ◆ Preliminary property descriptions in PDF format to facilitate the early stages of the acquisition process (title and appraisal). See General Rules of Procedures and Practices (Professional Land Surveying) §663.18. Certification (c) for requirements for preliminary documents.
- ◆ Concurrent with preliminary property descriptions, ROW (ArcGIS) geo-database template populated with the current surveyed and/or preliminary parcels for each submission, current alignment and project control points.
- ◆ Signed and sealed property descriptions (See Section 3 - Property Descriptions) and their associated electronic files (signed and sealed copy in PDF format; Word documents; MicroStation parcel plat files; and MicroStation master reference [MRF] files);
- ◆ Concurrent with signed and sealed property descriptions, ROW (ArcGIS) geo-database template populated with the current final (signed and sealed) parcels for each submission and final alignment.
- ◆ Spreadsheets and/or Word documents containing the information on the acquisition (ownership tabulation) map sheets.

## Section 2 — ROW Mapping (For State and Local Government)

### General ROW Map Requirements

Note: Per Section 1, projects started on or after October 1, 2014 will no longer require the creation or submission of ROW map sheets (paper and MicroStation files) as a requirement for the 'Authority to Proceed'.

A ROW map is a compilation of internal TxDOT data, property descriptions (which includes field notes and parcel plats), appraisal information, and improvements related to a transportation project. All property descriptions must be prepared, signed, and sealed under the supervision of an RPLS. In an agreement between TxDOT and the State Board of Land Surveying, ROW maps do not have to be signed and sealed by an RPLS. ROW maps are recognized as internal plans and management documents.

- ◆ Preparation of ROW maps normally begins after obtaining schematic design approval.
- ◆ During schematic design, the design engineer determines the amount of ROW required to accommodate the proposed transportation facility.
- ◆ The surveyor is responsible for the boundary analysis of the proposed ROW parcels and preparation of the property descriptions, and surveyor's reports.
- ◆ Expansion of the right of way over a navigable stream requires a permit from the General Land Office.

All property descriptions will be received by Division in PDF format via the Electronic Document Management System (EDMS). Notification of submission shall be emailed to ROW-Incoming-Map-PKG@txdot.gov which prompts the ROW Division review. Signed and sealed paper originals are still required and shall be sent with a transmittal memo detailing the submitted items and purpose. The mapping package will be reviewed by the District for technical completeness, compliance with TxDOT guidelines and adherence to the Professional Land Surveying Practices Act. The ROW Division will conduct an administrative review of all right of way maps, electronic files, and property descriptions, and advise the District and Right of Way Project Delivery Section of any identified deficiencies found. Sample ROW map sheets and title sheets are available as guides for preparing maps.

ROW Division will identify the parcels in the Right of Way Information System (ROWIS) as ready for acquisition upon the review and receipt of the paper original property descriptions. To expedite projects authority to proceed, parcels may be submitted and reviewed individually. Individual parcel submissions will require the Title Sheet and Index Sheet along with the parcel property description.

All ROW map pages for a project must be uniform in size, form, and arrangement. The uniformity must conform to TxDOT standards and guidelines and include similar font styles and sizes for each map sheet, as well as a neat, readable arrangement of data on each sheet. The entire ROW map will be submitted as a PDF via the Electronic Document Management System (EDMS) for administrative review. PDFs of the map sheets shall be created in TxDOT's current version of MicroStation for a more legible file.

The file naming convention for the map PDF is "District Abbreviation ROW CSJ.PDF". An example is "AUS212104065.PDF". In the example, the first three (3) characters are the district abbreviation, the following nine (9) numbers "212104065" are the right of way CSJ for the project.

The file naming convention for the property description PDF is the same except additional characters will be added to signify the parcel number. The naming convention is "District Abbreviation ROW CSJ\_Parcel Number.PDF". An example is "AUS212104065\_01.PDF". In the example, the first three (3) characters are the district abbreviation, the following nine (9) numbers "212104065" are the right of way CSJ for the project, and the final characters will describe the parcel number "01".

All ROW projects are authorized by the Texas Transportation Commission and include defined limits. If the Commission authorization for a project does not cover continuous procurement of new ROW, then the map must show all existing and proposed ROW.

All ROW Mapping Packages shall contain the following (22-inch by 34-inch) PDF map sheets.

- ◆ [Title Sheet](#) – This sheet identifies the project. In addition to standard title sheet items, the following shall be included on the Title Sheet. Districts will provide electronic copies of a standard title sheet for use as a template.
  - all known utility facilities with U numbers, within the project, and
  - a statement containing this text: “This map is an internal TxDOT document. Its contents shall not be used for any other purpose. Inaccuracies shall be reported to the district and Right of Way Project Delivery Section for corrections.”
- ◆ [Parcel Index Sheet](#) - This sheet shows an overall view of project parcels and plan sheet layout.
- ◆ [Control Sheet](#) - This sheet shows an overall view of the project and the relationship of [primary monumentation and control](#). Or, if space permits, this information may be included on the Parcel Index sheet.
- ◆ Parcel Acquisition Table - This sheet shows record, acquisition and conveyance information for each parcel affected by the ROW proposal.
- ◆ [Plan Sheets](#).

Once the ROW map has been reviewed, and is final, and all ROW activities are complete:

- ◆ all utility “U” numbers shall be shown on the Title Sheet of the final map;

- ◆ the District or Right of Way Project Delivery Section shall send via EDMS the approved final map to the ROW Division. See Section 5 of this chapter for requirements of submitting a final ROW map; and
- ◆ Parcel Index, Control and Acquisition sheets may be combined if space permits.

In addition to the full size PDF map, DGN drafting files of the ROW map must be submitted to Division.

For additional references for preparation of ROW maps and general surveying, see the following publications:

#### Reference Publications for ROW Map Preparation

Publication	Author
<i>TxDOT Surveying Guide</i>	Committee on Geomatics & Surveying
<i>TxDOT Metrication Guide</i>	Design Division
<i>TSPS Manual of Practice</i>	Texas Society of Professional Surveyors
<i>Professional Land Surveying Practices Act Rules and Regulations</i>	Texas Board of Professional Land Surveying

### Metric Requirements for Existing Projects

On August 26, 1998, the TxDOT Executive Director issued a memorandum to District Engineers concerning the reversion from the federally mandated metric units of measurement back to English units. The memorandum stated that under TEA-21, the conversion to metric on projects is optional.

Projects started in metric that cannot be economically converted to English units may be completed in metric.

Common conversions from English to metric units are:

- ◆ 1 meter (m) = 39.37÷12 (U.S. Survey Foot) or
- ◆ 1 meter (m) = 3.280833333333 feet (U.S. Survey Foot)
- ◆ 1 hectare (ha) = 10,000 m<sup>2</sup>
- ◆ 1 station = 1 km (Example: 5+000.000)
- ◆ Stationing intervals (to be shown on map) = 20 m.

## ROW Parcel Numbering

**General Objectives in Parcel Numbering.** The methodology of numbering ROW parcels must be correct and consistent to avoid issues in the appraisal process or with record maintenance through the right of way information system.

**Anyone preparing ROW maps must communicate regularly with the Right of Way Project Delivery Section and District for uniformity of methodology.**

There are many different scenarios to consider when numbering parcels. For example on an urban project, one or more contiguous lots may be under common ownership. If the preliminary data shows contiguous properties have a unity of use, then two or more lots may be combined into one marketable unit having one parcel number. If the appraisal data shows contiguous ownership, but do not have unity of use, then assign each lot a separate parcel number, and compute a separate value for each.

Rural projects are usually handled the same as urban projects, with focus placed on the parent tract. A parent tract is defined as a single property not divided by a public way or platted as a subdivision. However, a parent tract may be defined by several smaller purchases that compose one large tract of land under one owner. In addition, one parcel may be comprised of more than one part. For additional guidance, see the [examples](#).

Usually, properties divided by existing public ways or by separate ownership are considered separate parcels, although they may have common ownership. However, sometimes the unity of use supports combining parcels. In this case, assign the whole property one parcel number, with each divided tract being an associated part.

**Standard Numbering System for ROW Parcels.** Number ROW parcels from left to right on each ROW plan sheet. Parcel numbering should begin with number 1 and continue in sequence throughout the limits of the project.

This system is typically easier to use on rural projects than on urban projects, because rural parcels are often comprised mainly of larger tracts having the same owner.

Sometimes, variation of the number sequencing is acceptable due to hardship acquisitions or protective buying.

The following are examples and explanations to clarify the standard parcel numbering system:

**Parcel Numbering System**

Example	Parcel No.	Explanation
1.	1, 2, 3, 4, etc.	Normal parcel numbers. See Samples <a href="#">1</a> , <a href="#">2</a> , <a href="#">3</a> , <a href="#">4</a> , and <a href="#">5A</a> .
2.	58(E)	Usual outfall or channel easement only. Easements of this type are located outside of actual ROW. See <a href="#">Sample 1A</a> .

## Parcel Numbering System

Example	Parcel No.	Explanation
3.	2-Part 1 Part 2	One parcel composed of two parts with the same parent parcel. Both parts will be included in a single appraisal report, only one value will show on value forms, and only one deed and one title policy or title certificate is to be obtained. See <a href="#">Sample 5</a> .
4. -	3(E)-Part 1 Part 2	Two channel or outfall easements from one tract. Same as Example 3 except that a channel or outfall easement is being acquired rather than a ROW parcel. See <a href="#">Sample 2</a> .
5. -	2 2(E)	Normal parcel (2) with one outfall or channel easement as explained for example 2. See <a href="#">Sample 1</a> .
6.	3 3(E)-Part 1 Part 2	Normal parcel with two channel or outfall easements. Each appraiser will make one report setting out separate values for the ROW parcel and the easements. Values for both easements will be combined into one value on value forms. One deed and one title policy or title certificate will be obtained for the ROW parcel and only one instrument of conveyance and one title policy or title certificate (State Acquisition Projects) will be secured for the channel easements. See <a href="#">Sample 2</a> .
7.	2A 2B	Beginning with a normal Parcel No. 2 that is divided into two parcels. Could be caused by error in original numbering or due to part of original parcel having been sold since ROW map was prepared. See <a href="#">Sample 6</a> . The original Parcel No. 2 <b>cannot</b> be used alone again.
8.	2A(E) 2B(E)	Usual outfall or channel multi-part easement is divided when the parent parcel is also divided as in Example 6. See <a href="#">Sample 6</a> .
9.	2A 2A(E) 2B 2B(E)-Part 1 Part 2	Beginning with a divided parcel divided (2A & 2B) with one easement [2A(E)] then the other parcel (2B) with two easements [2B(E)-Part 1 and 2B(E) - Part 2]. See <a href="#">Sample 7</a> .
10.	26-Part 1 Part 2	<a href="#">Sample 8</a> is when a parent tract resides in two counties with one parcel number divided into parts at the county line. Only one appraisal but division of values. This is applicable to both State and Local Government (LG) acquisition projects and also to a combination involving both State and LG acquisition on a project.
11.	33(RR)	Railroad crossings held in joint use with a railroad (operating railroad ROW) by joint use agreement, license, or permit should be numbered in the same manner as a regular parcel of land with the addition of the designator "RR" (e.g., parcel 1RR). <b>To be used for crossings only!</b>
12.	34(JUA)	Joint Use Agreement – Joint use of TxDOT right of way with others.
13.	57(W)	Wetlands - used for property that is acquired for wetland mitigation.
14.	30(X)	Overlooked Improvement - used when a parcel has been acquired and an overlooked improvement (e.g., private water, water well, root cellar, etc.) found on the parcel that still needs to be removed).

### Parcel Numbering System

Example	Parcel No.	Explanation
15.	16(TE)	Temporary easements acquired through the normal acquisition process.
16.	28(M)	Mitigation: Environmental mitigation except wetlands.
17.	1(AC)	Access rights only. <b>NO ROW TO BE ACQUIRED!</b> See <a href="#">Sample 9</a> .
18.	71(OAS)	Outdoor Advertising Sign Only – <b>NO LAND ACQUISITION!</b>
19.	1AAQ	Advance Acquisition Parcel – acquired in advance of ROW project release.
20.	Tract 4UR	An uneconomic remainder parcel.
21.	U10000	A number assigned (by ROW Division) to uniquely identify a utility facility; may <b>not</b> involve property interest.

### ROW Map Components

**Title Sheet.** On the title sheet (see [example](#)), include:

- ◆ Area map large enough to show project location and nearest [major collectors](#) in the area
- ◆ Highway numbers
- ◆ County or counties
- ◆ Federal project number (if applicable)
- ◆ Construction CSJ number(s). If there is more than one CSJ, tabulate the numbers in the heading with the lowest number shown first, and show CSJ and station numbers at break points with arrow indicators.
- ◆ ROW CSJ number(s) corresponding to each CCSJ
- ◆ Authorized ROW project limits as setup in DCIS
- ◆ Project length (shall match DCIS)
- ◆ Scale of the area map (with bar scale)
- ◆ North arrow
- ◆ Station numbers for the beginning and ending of the project, and station equations.
- ◆ Reference to previous ROW projects in the same location if applicable.
- ◆ A listing of all known utility facilities, including U numbers.
- ◆ Datum Statement including metadata, the state plane zone in which the project resides, basis of bearings and coordinates, adjustment factor used for converting from grid coordinates to surface coordinates including the origin for the scale, rotation angle (if applicable), and original monument description.

- ◆ Signatures of appropriate signing authorities.
  - For initial submission: The District Surveyor or Right of Way Project Delivery Manager will recommend acquisition after a technical review for compliance with TxDOT procedures and Texas Board of Professional Land Surveying rules and regulations is completed.
  - For initial submission: The Area Engineer or Design Engineer will recommend acquisition after a review for conformance with the design schematic and verifying the proposed acquisition is adequate to build the proposed transportation facility.
  - For final ROW map submission in PDF via EDMS: The District Engineer or designee will sign for final approval verifying ROW activities are complete as shown on the final ROW map.

Standard TxDOT symbols should be used to the greatest extent possible. Any variation from these standardized symbols should be approved by the District. The advent of graphics software for preparing construction plans and ROW maps now makes it necessary to utilize the TxDOT2K downloadable cell library for symbol standardization.

Differences between an English title sheet and a metric sheet are stationing and presence of dual units on the metric sheets. For example, show an English unit station as 276+13.70, and show a metric station as 4+754.880. When using dual units, show project length in meters and kilometers, with the equivalent feet and miles shown in parentheses. An example of dual units follows:

NET LENGTH OF PROJECT = 1,981 Meters (6,500 feet) = 1.981 Kilometers(1.231 miles)

At the bottom center of the title sheet, directly under the note on station equations, include a statement labeled "**NO EXCEPTIONS**". Normally, there will be no exceptions on a ROW project. If there are areas where no new ROW will be purchased, insert a note on the title sheet stating that "**NO ADDITIONAL ROW WILL BE REQUIRED FROM STATION \_\_\_\_\_ TO STATION \_\_\_\_\_.**"

**Parcel Index Sheet.** See [example](#). For projects containing four or more plan sheets, show plan sheets and parcels on a large-scale view of the entire project.

**Parcel Acquisition Sheet.** This sheet shows parcel numbers, parcel descriptions, corresponding map sheet page number, record acreage, ownership information, parcel stationing location, acquisition acreage, remaining acreage and conveyance information (grantor, type, date and document reference number).

**Control Sheet.** See [example](#). The control sheet shall identify and list coordinate values for the primary control used in preparation of the project. Include the following: the basis of datum, any monuments set or existing used for control, the baseline data throughout the project, including the datum statement and any other relevant metadata (i.e., history data).

**Plan Sheets.** See [example](#). An important factor in preparing a plan sheet is to place data on the sheets so it is easy to read and understand, even by a person with limited surveying or engineering experience.

Draw plan sheets at a scale of 1"=100' or 1"=50' for ease in scaling half-size drawings. Usually, the base map for a ROW plan sheet is the aerial planimetrics. Plan sheets need to show information on existing ROW, adjacent properties, and proposed parcels.

All plan sheets shall contain a minimum of four points labeled with their associated grid coordinates, one in each quadrant of the sheet. These points will be in the State Plane Coordinate System of 1983 (NAD 83 HARN) in the appropriate zone and labeled as grid on each map plan sheet.

**Existing Information.** On each plan sheet, show the following:

- ◆ existing ROW (bearing and distance) through the entire project length, even in areas where no new ROW is needed. In areas where new ROW is only needed on one side, the ROW on both sides of the new facility needs to be delineated and monumented (include recorded plat or deed reference).
- ◆ existing ROW monuments;
- ◆ existing access control areas;
- ◆ record ownership data of adjacent properties;
- ◆ ROW PCs, PTs and PIs (show and label);
- ◆ existing centerline information including incremental stationing, PC, PT and PI data;
- ◆ existing utility lines and easements (deed reference, if available);
- ◆ existing improvements such as buildings and fences, etc.;
- ◆ potential obstructions and/or encroachments. (Locate any improvements bisected by or within 50 feet of the new ROW line. This will assist appraisers in determining damages to the remainders of properties.)
- ◆ survey lines (show and label);
- ◆ city limit lines (show and label);
- ◆ county lines (show and label);
- ◆ existing public roads, streets and alleyways (include recorded plat or deed reference);
- ◆ existing drainage or channel easements (include recorded plat or deed reference);
- ◆ the whole property relative to existing and proposed ROW. If the whole property is too large to fit on the map sheet at the sheet scale, an inset may be used with the differing scale, or lack of scale, noted.

**Proposed Information.** On each plan sheet, show the following:

- ◆ new ROW lines
- ◆ new ROW markers
- ◆ proposed centerline information including incremental stationing, PC, PT and PI data;
- ◆ portions of the proposed design. Although a ROW map is not to be used to construct a highway, you should show, by a single line, the following proposed items or additional topography information:
  - frontage roads
  - main lanes
  - connecting ramps

When [control of access](#) is used, it should be described in a recorded deed, and shown on the right of way maps and property descriptions. See parcel [example 9](#) for a visual depiction. Limits of denied access should be staked on the ground, and shown on the property description and field notes. Access control descriptions must be signed and sealed by an RPLS.

**Parcel Information.** For each ROW parcel acquired, show the following information:

- ◆ property owner name;
- ◆ parcel number;
- ◆ parent tract;
- ◆ type of conveyance (e.g., deed, judgment) - for final ROW map;
- ◆ recording information (after acquisition) - for final ROW map;
- ◆ station to station limits and offset to project centerline;
- ◆ area in acres and/or square feet (utilize the Texas Society Manual of Practice to determine the accuracy used for calculating square footing based on the category and condition of survey you are completing);
- ◆ area of remainder in relation to right and left of project centerline (calculated from deed reference only);
- ◆ property lines, (show and define by bearing and distance relative to existing and new ROW lines);
- ◆ a bearing and distance to a monumented corner outside the area to be acquired. If the corner is defined as a point of commencement (POC) in a property description, show the letters P.O.C. on the map with reference of the parcel to which it is tied.

A metric project map must contain the same detailed existing and proposed information as an English project map. Use the following information when preparing a metric map:

- ◆ For urban projects, use a scale of 1:200 or 1:500.

- ◆ For rural projects, use a scale of 1:1000.
- ◆ Survey stationing increasing from west to east and south to north. The 100-foot station will be replaced with the 1-kilometer station.  
1 station = 1,000 m = 1 km  
Example: 1+000.000 (1+00.00 English)  
Normal station intervals are 20 meters; however, 50-meter intervals are acceptable if more practical.
- ◆ Show dimensions and areas on metric ROW maps in dual units. Show the metric unit first, followed by the English equivalent in parentheses. If the recorded English equivalent is different from the survey-analyzed English dimension, then show the recorded dimension in brackets. This means that some property lines or existing ROW lines may need to show as many as three distances for one line.
- ◆ Show area tabulations in dual units, with the metric unit first followed by the English equivalent in parentheses. Insert a note on the map sheet stating that English units are provided for information only.

Chapter 4 of the TxDOT Metrication Guide gives detailed instructions for metric projects and examples for preparing ROW maps.

### **ROW Projects for Utility Accommodations Exclusively**

Projects that require only utility relocations without parcel or easement acquisition may be submitted with only a ROW map title sheet as shown on the [example](#), and should include the following:

- ◆ ROW CSJ Number
- ◆ A distinct label stating “For Utilities Only”
- ◆ Project limits with beginning and ending stationing.
- ◆ Plan sheets showing utility facilities (optional)
- ◆ All known utility facilities listed **by name and U number**.

## Section 3 — Property Descriptions

### Overview

In contrast to ROW maps being internal TxDOT documents, property descriptions are prepared as exhibits for the conveyance of a property interest. The property descriptions reflect a boundary survey and must be signed and sealed by an RPLS. Property descriptions prepared for ROW projects consist of a heading with TxDOT identification items, along with a regular metes and bounds description and parcel plats prepared on letter size sheets numbered (1 of 4, etc) successively for unification. Letter size sheets allow the descriptions and plats to be filed with the County Clerk's office without reducing copies. Examples of [property descriptions](#) are available. Below is an example of a typical TxDOT heading.

NOTE: Use a one-inch border on all sides.

Page __ of __
County Highway Limits CSJ Account No. (where applicable)
Property Description for Parcel _____
_____ _____  _____ _____

Figure 4-1.

Items to be included on property descriptions, in addition to TBPLS standards, include:

- ◆ All property descriptions must be tied to the Texas State Plane Coordinate System, and reference metadata (history data) used in preparing the survey.
- ◆ Parcel plats are included in all property descriptions.
- ◆ For all partial acquisitions, at least one reference tie must be made to an established corner outside the parcel area. It is preferable to use a found back corner of the remainder. It is acceptable to use a set corner on the remainder or adjoiner in cases where no found corners exist, although the surveyor may be assuming liability for the remainder as well as for the adjoiner tract. This

outside tie should be made to a monumented boundary corner that will remain after construction.

- ◆ Centerline station ties may, or may not, be of value to the property description, and may be a convenient reference. A station and offset tie at the beginning and end of each parcel is a value to engineers and designers for the construction of a centerline or survey baseline. Station and offset ties in a parcel description, ROW map, and parcel data should identify the source of the stationing.
- ◆ If the parcel is located in more than one county or land grant survey, show the land area in each county or land grant area.
- ◆ Access denial lines shown on the right of way/property line to designate the property interest being conveyed. See [parcel example 9](#) for a visual depiction.

Parcels consisting of more than one part must include a summary at the end of the property description as follows:

#### Summary

Part 1 = 4.333 Acres (188745 ± square feet)

Part 2 = 2.667 Acres (116174 ± square feet)

Total = 7.000 Acres (304919 ± square feet)

Property descriptions covering more than one page should read "**Page \_\_\_ of \_\_\_.**" Include the parcel plats as part of the entire document. For example, when there are three pages of a property description and three pages of a parcel plat, identify each as being one of six pages, and read "Page \_\_\_ of 6."

At the end of each property description, add a sentence stating "This property description is accompanied by a separate plat." All property descriptions must be signed and sealed by an RPLS, and must include a statement that the survey was performed on the ground under his supervision and must include the day, month and year of the survey.

Sequentially number each call on a property description beginning with Number 1. Calls are numbered for clarity and reference. Numbered calls also make it easier on a reviewer to designate problem areas. An example of this would be: "The bearing in call number 4 should read N 89° 59'00" E."

### Certification and Monuments

Refer to Section 663.11 of the *General Rules of Procedures and Practices of the Texas Board of Professional Land Surveying Act* for information on certification and monumentation of surveys.

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Each parcel corner on a ROW project **must** have a survey marker on the ground to represent that particular corner. A [Type II](#) (Brass Disk) should be placed in concrete flush with the ground at all PCs, PTs, angle points and at 1500 foot intervals along tangent sections, or at closer intervals. A 1/2" or 5/8" iron rod with aluminum cap stamped "TxDOT ROW" should be placed at the intersections of the new ROW line and individual property lines. If Type II monumentation is set **after highway construction**, the following phrase shall be included in the relevant property description and noted on the ROW map:

“The monument described and set in this call shall be replaced with a TxDOT Type II Right of Way Marker upon the completion of the highway construction project under the supervision of a Registered Professional Land Surveyor, either employed or retained by TxDOT.”

**All** monumentation must be completed under the supervision of a TxDOT contracted RPLS.

### **Public Roads and Alleys**

Existing public roads or alleys that abut or pass through a ROW parcel need to be examined closely to determine the record of title. Record title should be shown on the ROW map and parcel plats. If no record can be located, a note should be added stating the existing ROW shown was determined by occupation. If included in the adjacent landowner's deed, the existing ROW should be included in the parcel area but cannot be included for payment. For existing roadway areas which do not appear in any conveyance to a public entity or adjacent property owner, a quitclaim deed or a District Engineer affidavit from the public entity occupying the facility should be obtained and filed with the County Clerk.

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## Section 4 — Submission and Approval of ROW Maps

### Original Submission to Division

Note: Per Section 1, projects started on or after October 1, 2014 will no longer require the creation or submission of ROW map sheets (paper and MicroStation files) as a requirement for the 'Authority to Proceed'.

The surveyor should complete and submit preliminary maps, electronic files, property descriptions, surveyor reports, and closure sheets that include precision, to the District for review. The District will determine the size, type, and number of submittals to be used for review purposes. Mark these maps "PRELIMINARY." The District Surveyor or appropriate personnel must review the submission for compliance with TxDOT policy and TBPLS standards. The Design Engineer or appropriate personnel must review the map for compliance with the design schematic and to verify that the area to be acquired and all easements are adequate to build the transportation facility.

A submission to the ROW Division will include:

- ◆ a completed ROW Map Checklist submitted with the map package via EDMS (Form [ROW-MapCheck](#)). This checklist addresses major areas and topics of the ROW Map, and its use will assist the Districts in conforming with ROW procedures and the Texas State Board of Land Surveying Rules and Regulations.
- ◆ one full-size ANSI D - 22x34 inch original PDF, and the electronic drafting graphics files of the District's approved ROW map;
- ◆ a hard copy set of property descriptions (original) and the PDF file submitted with the mapping package;
- ◆ signatures of the appropriate District personnel recommending the project for acquisition; and
- ◆ cover memorandum requesting a release for acquisition and all relevant information.

**After an administrative review of the parcel property descriptions, the ROW Division will enter the parcels in ROWIS.**

### Revisions and Updates

On most projects, especially large urban projects, changes in ownership and revisions to parcels occur frequently even after approved appraisal values are obtained. When changes are necessary, the revised ROW map, electronic files, and property descriptions must be forwarded to the ROW Division, when applicable. All submissions must show a new survey date and a note on the ROW map regarding the nature of the changes. A cover memorandum stating that the changes have been

reviewed for environmental and design concerns should accompany the submittal. The District Design and Environmental Sections must provide the Right of Way Division with a memorandum stating that the changes have been reviewed for design and environmental concerns. The Right of Way Project Delivery Section must submit a copy of this memorandum along with the revisions.

## Section 5 — Requirements for Final ROW Maps

### Overview

Once ROW map revisions are complete, **all** new ROW is acquired, and **all** documents are recorded, send an original PDF of the ROW map marked "FINAL MAP" to ROW Division via EDMS with appropriate notification. A disk with complete electronic files, including all revised map sheets shall also be submitted to the ROW Division for the permanent file. For the final map to be complete, it must contain:

- ◆ all project numbers;
- ◆ grantors' names;
- ◆ areas of acquired parcels;
- ◆ recording information;
- ◆ a "U" number assigned for utility adjustments/accommodations;
- ◆ names of the utility owner(s) and recording data for recorded documents, when applicable;
- ◆ all signature blocks completed; and
- ◆ DGN graphics files including all revisions;
- ◆ Shape files, if available.

Completing this process will minimize district's time spent researching ROW maps.

## Section 6 — ROW Maps for Off-System Projects

### Overview

The need for ROW maps on off-system projects will be determined by the complexity of the project and will be at the Right of Way Project Delivery Section's discretion. Property descriptions must be prepared based on the Texas State Plane Coordinate System and as described in Section 3, [Property Descriptions](#) of this Chapter. Submission of ROW maps for off-system projects to the ROW Division is not required since they will not be added to the State highway system.

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## Section 7 — Requirements for Submission of Graphics Files

### Overview

The purpose of this section is to provide requirements for the graphics standards, and file management (structure and naming conventions) of ROW mapping electronic deliverables submitted to the ROW Division as an integral part of the ROW mapping package.

The software, file types and file formats must be compatible with those used by the district/division design for schematics and PS&E, example: native current version MicroStation for graphics, Microsoft Word and Adobe PDF for descriptions, etc.

### MicroStation

All graphic files for map sheet and parcel plats must be native DGN files created by the current version of MicroStation using the current TxDOT seed files in the TxDOT workspace environment, settings, and resource files.

All files shall contain at minimum, company name, company logo, company phone number, firm number, surveyors name, RCSJ#, date of survey, state plane zone, surface adjustment factor, and revision information.

### MicroStation Level Library Files

The current TxDOT level library files for ROW mapping will be provided by TxDOT. The file(s) contains all the predefined levels that will normally be needed for ROW mapping and to show existing utilities.

### Map Sheets

Note: Per Section 1, projects started on or after October 1, 2014 will no longer require the creation or submission of ROW map sheets (paper and MicroStation files) as a requirement for the 'Authority to Proceed'.

Each ROW map sheet shall be spatially correct (snapping on elements gives correct coordinate values), and there should be one (1) DGN file for each map sheet. All the map sheets will utilize the same master reference files.

The sheet file naming convention is "ROW CSJ\_Sheet Number.dgn", with an example as follows: "**212104065\_S01.dgn**". The format for the PDF is slightly different. Since the PDF will contain all

the sheets, there is no need for a sheet number. The ROW CSJ will be the file name for the ROW map in PDF format.

The first nine (9) numbers "212104065" are the ROW CSJ for the project and "S01" is the sheet number, beginning with number 1 as the cover sheet. The map sheet DGNs will reference the master ROW files below.

### **Naming Convention of the Master ROW Files (MRF) in DGN Format**

The master ROW file naming convention is "MRF ROW CSJ\_Logical Name.dgn", with examples as follows:

- ◆ MRF212104065\_Schematic100.dgn (schematic layout 100% submittal);
- ◆ MRF212104065\_SchemApprov.dgn (final approved [TxDOT & FHWA] schematic);
- ◆ MRF212104065\_PSEDesign.dgn (final PS&E design);
- ◆ MRF212104065\_ExROW.dgn (existing ROW determined by RPLS);
- ◆ MRF212104065\_PropROW.dgn (proposed ROW of final design);
- ◆ MRF212104065\_PropRW\_Parcel\_Polygons.dgn (proposed ROW parcels to be acquired);
- ◆ MRF212104065\_DeedPlot.dgn (deed record);
- ◆ MRF212104065\_Planimetric.dgn (aerial mapping topography);
- ◆ MRF212104065\_ROWTopo.dgn (improvements data collection);
- ◆ MRF212104065\_DesignTopo.dgn (design level data collection topography);
- ◆ MRF212104065\_ExUtil.dgn (existing utilities, etc.);
- ◆ MRF212104065\_Schematic90.dgn (schematic layout 90% submittal);
- ◆ MRF212104065\_ExROW\_Lines.dgn (existing ROW lines determined by RPLS);
- ◆ MRF212104065\_PropROW\_Lines.dgn (proposed ROW lines of final design);
- ◆ MRF212104065\_ExROW\_Centerline.dgn (as determined by RPLS).

All similar features must be on separate levels for easy separation from text.

Proposed ROW parcels shall be comprised of complex lines or as complex shapes.

All MRF dgn files shall be provided in surface and grid coordinate systems.

All sheet files with a plan view will have the MRF referenced to sheet files to allow more than one sheet file to be worked on at the same time.

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## File Structure of Master and Reference DGNs

Use few or no subfolders to allow better transfer of data to different PCs, server drive names, or CDs/DVDs without path problems to reference files when the sheet files are opened.

## Line Weights, Line Styles, Colors, Text Size, Text Fonts, Scale, and Annotations

Legibility is the primary concern when choosing the scale, line weights and text size. Sheets shall be legible at full scale sheet size (22" x 34") and at half scale size (11" X 17"). Even if the originals or first generation plots are legible, the reproductions (copies) must also be legible.

The normal scales for the full scale sheet size should be 1 inch = 50 feet (urban) and 1 inch = 100 feet (rural), which will be 1 inch = 100 feet and 1 inch = 200 feet when plotted.

Use the following standard files:

- ◆ Standard Cel file: TxdotSurv\_04.cel or current TxDOT cel files;
- ◆ Standard Font: 1 LEROY;
- ◆ Standard TxDOT color tables: V256COLR.ctb or Txgpk.ctb;
- ◆ Standard GEOPAK Survey SMD file: TxDOT\_2004.smd or current file that matches surveying feature codes;

Use "MicroStation Packager" for the submission of electronic deliverables. This will capture any non TxDOT standard rsc, cel, text, etc. files that were used in the mapping that look and plot differently in the TxDOT MicroStation workspace.

## Text and Line Colors when Using Color Digital Orthos in the Background

The predominate colors of the digital orthos (greens, browns, etc) will dictate the line and text colors that stand out and are legible. Use trial and error, as needed, to select legible text and line colors.

## Required Data in the Geopak ROW GPK File

The following are required data in the Geopak ROW GPK File (start with Schematic or Design GPK file):

- ◆ alignments;
- ◆ chains of proposed ROW lines;
- ◆ chains of existing ROW lines;
- ◆ shapes of whole tract parcels;
- ◆ taking parcels;

- ◆ all points collected in the field and all calculated points.

If the design GPK is too detailed for ROW use, input files can be created for just the information sought from the design GPK file to load into the ROW GPK file.

### **Surface Coordinates**

Surface adjustment factors and basis of datum shall be well documented in all electronic deliverables "file structure/deliverables read me" file.

## Section 8 — Requirements for Submission of ArcGIS Files

### Overview

The purpose of this section is to provide requirements for ArcGIS standards as an integral part of the ROW mapping package.

All current and future ROW mapping projects will be subject to these submission standards, eliminating the requirement for the submission of traditional paper ROW maps under the old standards.

The paper ROW maps are being replaced with geo-referenced parcel data in GIS format to be used in TxDOT's Online Real Property Asset Map (virtual ROW map).

The software, file types and file formats must be compatible with those used by the State. An example is the current version of ArcGIS used by the State.

### ROW Geo-Database Template

All ArcGIS data will be submitted in ArcGIS 10.2.2/10.3.1 format or the current version in use by the State and in the format of the ROW geo-database template.

The current TxDOT ROW geo-database template "ROW\_Parcels\_Edits" for the delineation of the right of way will be provided by the State. The template will also be available to download from the ROW Division's webpage on TxDOT's internet site (txdot.gov).

### Coordinate System of Template

The template's XY coordinate system is geographic coordinates (longitude and latitude), North American Datum of 1983 in Decimal Degrees (8 or more places after the decimal point).

### Features in the Template

The template contains a feature dataset named 'ROW\_Parcels\_Edits', and that dataset contains the following features:

- ◆ EXIST\_RT\_OF\_WAY\_PRCL\_PNT\_Edits (Existing Right of Way Monument/Points)
- ◆ EXIST\_RT\_OF\_WAY\_PRCL\_LN\_Edits (Existing Right of Way Lines)
- ◆ EXIST\_RT\_OF\_WAY\_PRCL\_POLY\_Edits (Existing Right of Way Parcel Polygons)

- ◆ RT\_OF\_WAY\_PROP\_DSPN\_POLY\_Edits (Property Disposition/Surplus Tract Polygons)
- ◆ RT\_OF\_WAY\_SCHEM\_POLY\_Edits (Schematic Footprint Proposed Parcel Polygons)
- ◆ RT\_OF\_WAY\_CL\_LN\_Edits (Schematic or Right of Way Centerline/Baseline)
- ◆ RT\_OF\_WAY\_CNTL\_PNT\_Edits (Primary GPS Control Points or Monuments)
- ◆ RT\_OF\_WAY\_WHL\_PRP\_POLY\_Edits (Whole Property prior to taking Polygons)
- ◆ UTIL\_PRCL\_LN\_Edits (Utility Lines)
- ◆ ACES\_CTRL\_PRCL\_LN\_Edits (Proposed and/or Existing Access Control Lines)
- ◆ RT\_OF\_WAY\_PRCL\_POLY\_Edits (Proposed Acquisition Parcel Polygons)

### Feature Attributes or Fields

Each feature has a table comprised of common attributes or fields. The fields for each record (point, line, or polygon) will be populated as follows:

- ◆ PRCL\_ID (Parcel ID Number) Unique identifier created by the ROWIS database for each feature. Populated by TxDOT ROW Division.
- ◆ PRCL\_NM (Parcel Name) Name of feature part (1, 1 Part 1, 1 Part 2, etc.) Populated by user and/or consultant.
- ◆ PRCL\_NBR (Parcel Number) Number of feature unit (1, 2, etc.) Populated by user and/or consultant.
- ◆ PROP\_DSCR (Link to PDF of Property Description or Deed) Populated by TxDOT ROW Division.
- ◆ RT\_OF\_WAY\_MAP (Link to PDF of R/W Map) Populated by TxDOT ROW Division.
- ◆ CREATE\_DT (Create Date) Populated by user and/or consultant.
- ◆ CREATE\_USER\_NM (Create User Name) Populated by user and/or consultant. Consultant should use firm name.
- ◆ EDIT\_DT (Edit Date) Populated by user and/or consultant.

- ◆ EDIT\_USER\_NM (Edit User Name) Populated by user and/or consultant. Consultant should use firm name.
- ◆ CMNT (Comment) Populated by user and/or consultant.
- ◆ SRC\_CMNT (Source Document) Populated by user and/or consultant.
- ◆ SHAPE\_AREA (Shape Area for polygons only) Auto populated.
- ◆ SHAPE\_LEN (Shape Length) Auto populated.
- ◆ OBJECTID (Shape ID Number) Auto populated.

### **Rename Geo-Database Template to ROW CSJ Prior to Submission**

Use ArcCatalog to rename the 'ROW\_Parcels\_Edits.gdb' template to the ROW CSJ (RCSJ) project number prior to submission.

For example: If RCSJ is 2552-04-041, rename the template 'ROW\_Parcels\_255204041.gdb'.

For revised or additional submissions of the same project, rename the template: 'ROW\_Parcels\_255204041a.gdb' for the 1st submission, 'ROW\_Parcels\_255204041b.gdb' for the 2nd submission, etc.

### **Conversion of Survey Data to ArcGIS and Template Format**

The attribute table of geo-referenced features created outside the template must be exactly the same as those in the template before you can append them into the features in the template.

The conversion from the native survey data, Geopak, MicroStation or CAD files used in the preparation of the property descriptions and parcel plats to the coordinate system and format of the geo-database template can be accomplished in a number of different ways in different programs and in ArcGIS depending on the origin and format of the survey data.

Since no one set of instructions will fit all the different variables of data collection, data processing, and/or data conversion software, the only requirement will be that the feature data is geospatially correct and submitted to the State in the exact format of the template.

### **Requirements for ArcGIS Deliverables**

ROW geo-database template shall be populated with all required ROW features of each stage of submission.

The following is an outline in chronological order of the requirements for ArcGIS mapping deliverables:

- ◆ ROW (ArcGIS) geo-database template populated with the schematic ROW footprint parcels and schematic alignment.
- ◆ ROW (ArcGIS) geo-database template populated with the current surveyed and/or preliminary parcels for each submission, current alignment and project control points. An updated geo-database will be submitted as the parcel submissions progress.
- ◆ Geo-database template populated with the current final (signed and sealed) parcels for each submission and final alignment.