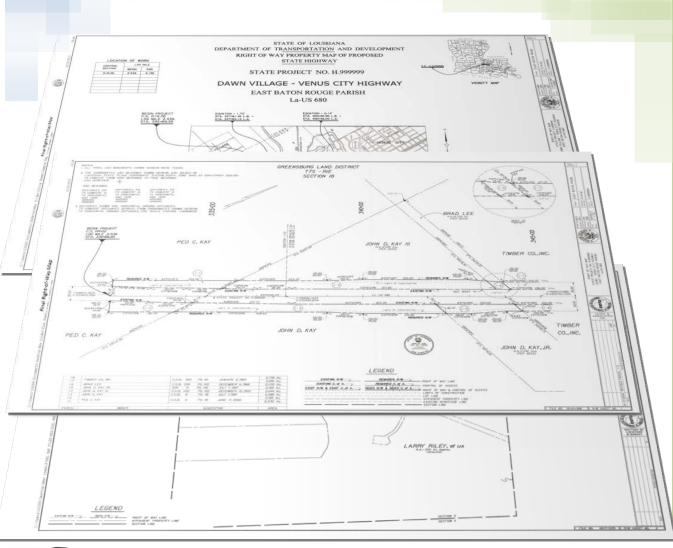


ADDENDUM "A" TO THE LOCATION & SURVEY MANUAL

PROPERTY SURVEYS & RIGHT OF WAY MAPS



January **2014**







IN REPLY REFER TO FILE NO.

INTRADEPARTMENTAL **CORRESPONDENCE**

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MEMORANDUM

From: Eric Lanier

Location and Survey Administrator

Date: January 1, 2014

Addendum "A" to the Location and Survey Manual Subject:

This memorandum serves as notice that Addendum "A" to the Location and Survey Manual has been produced and shall govern procedures for Property Surveys and Right of Way Map development.

Addendum "A" was designed to assist DOTD HQ employees and Consultants to create in-house Right of Way Maps in accordance with La DOTD CAD Standards. Certain portions of the manual's instructions reference specific directories within the DOTD HQ filing database. These said directories do not reflect the filing structure of Consultant's databases.

RECOMMENDED FOR APPROVAL

DATE

RECOMMENDED FOR APPROVAL

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APPROVED

REVISION HISTORY

01/31/2014

- Revised the Bridge Structure No. command (cell name: Centerline 6). Page 5-9
- Revised screenshot graphics to reflect nearest second on bearing display. Pages 5-35, 5-36, 5-40, 5-41, 5-43, 5-44, 5-48, 5-49 & 5-50.
- Updated Sample Map

02/10/2014

Revised sheet 3 on Sample Map

05/06/2014

- Revised sheets 4 & 7 on Sample Map
- Added CADconform command Extension Dimension Leader to Page 5-71.

04/28/2015

- Added Property Survey Sample Map
- Edited Property Survey Map Checklist to include Existing R/W Disclaimer and Geometry column format
- Revised 2-3.11 d) to correct the reference section numbers to 2-7.1 thru 2-7.7
- Revised the web address where parish maps can be downloaded for consultants. The new maps are available in PDF format.
- Added the Property Survey Phase design script to the plotting directions.

05/14/2015

Added Section 8-4.4 to page 8-1 regarding Title Reports in PDF format.

05/02/2017

- Edited 1-3.1 to include the word "Occasionally".
- Revised 1-3.4 to update the Real Estate Section website.
- Edited 1-5.2 to read "assured" instead of "positive".
- Revised 2-3.6 to include area shown for parcel to include square feet shown to 0.1.
- Edited 2-7.6 to change "accuracy" to "precision".
- Added additional graphic to 2-8.4.
- Revised 2-11.4 to change from "mylars" to "matte film set" & included parcel designation on cover sheet.

05/25/2017

- Revised 2-11.4 to add the "1 paper copy" and a DGN CAD file.
- Revised references of "Section 1-6.1 thru 1-6.7" into "Section 2-7.1 thru 2-7.7".

06/02/2017

 Updated the web address where parish maps can be downloaded for consultants. The new maps are available in PDF format.

06/28/2017

- Added a Note to the BRIDGE STRUCTURE NO. label on sheet 5-9.
- Added a Note to the Begin State Project Label regarding C.S., Log Mile, and Construction.
- Added a Note to the CURVE DATA regarding further describing the alignment that the curve data goes with on sheet 5-10.

06/29/2017

- Added a Note to the CENTERLINE TIC STATIONING LABEL regarding Station Label placement protocol.
- Added a Note to the CIRCLE AT P.I. label about where it is actually expected to be used.

■ Added a Note to the "CENTERLINE OR BASELINE BEARING & DISTANCE ALONG LINE" about the precision being shown to 0.1". Section 5-21.

07/07/2017

- Added Notes about the orientation and proper placement of BEARING AND DISTANCE labels on a parcel. Section 5-23.
- Added a picture to the BEARING AND DISTANCE along Property line within Right of Way. Section 5-24.

7/10/2017

- Added Note to Acquired Right of Way Label, Section 5-34.
- Added Note to PROPERTY LINE BEARING & DISTANCE ALONG LINE, Section 5-49.

7/11/2017

- Updated Acquisition Block Cell to add square feet section, Section 5-83.
- Updated Preliminary Cell. Section 5-82.
- Modified the Plan Sheet Border file to enlarge the Acquisition Block needed for the new Acquisition Block Cell.

7/12/2017

Added the required margins to Section 7-3.

9/25/2017

- Revised the Active Drawing Scale from 0.083333 to 1.000000. Section 4-4.
- Added note about active linestyle scale and plot scale for the title sheet. Section 7-3.
- Added Section 10 Right of Way Monument Maps and Sample Monument Maps.

6/9/2021

 Revised Milestone Submittals during the development of the Right of Way Map by Consultants (Section 2-11).

2/15/2023

 Revised Milestone Submittals during the development of the Right of Way Map by Consultants (Section 2-11).

3/14/2024

- Revised Milestone Submittals during the development of the Right of Way Map by Consultants (Section 2-11).
- Revised monumentation materials, assembly, and certification note on the Right of Way Monument Map (Section 10).

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SECTION 1

Property Survey Requirements

PROPERTY SURVEY REQUIREMENTS

La DOTD Location & Survey Manual

Overview

- **1-1.1** This chapter will be devoted to the discussion, very generally, of the method used by the Location and Survey Section in making Property Surveys and determining existing right of way.
- **1-1.2** An attempt will not be made to go into details of how to survey. The Professional Land Surveyor in responsible charge will be obligated to use due diligence in the practice of land surveying and comply with all applicable laws and rules pertaining to the practice of land surveying for the preparation of a right of way property map.
- **1-1.3** Property Surveys are generally required on those highway improvement projects that require acquisition of property.
- **1-1.4** Apparent property line surveys are to be used only for showing location of property lines determined as part of the Location (Topographic) Survey.
- **1-1.5** Right of Way property maps will not be made based on apparent property lines.

Assemble Data

- **1-2.1** The surveyor must assemble all data that might possibly help him determine the correct position for each property line along the project. This data may consist of, but not be limited to, U.S. Government township plats, U.S. Government field notes, past highway department plans, individual private survey plats, subdivision maps, and title take-offs.
- **1-2.2** The term "Take-Off" is defined as a report of the deed of ownership of the current property owner, and all survey documents, (plats, maps, etc.) associated with the current ownership deed. One take-off may be obtained for each parcel, if necessary, to expedite commencement of field work.
- **1-2.3** Title Take-Offs are not considered a part of the title work and may be obtained by the surveyor even if he is not listed on the LADOTD Real Estate Section's approved Title Work Panel List.

Title Work

- **1-3.1** Occasionally title work shall be performed by a consultant listed on the LADOTD Real Estate Section's approved Title Work Panel List and shall consist of obtaining the necessary Title Research Reports. Most often the LADOTD Real Estate Section provides the necessary title research reports.
- **1-3.2** The term "Title Research Report" is defined as a report of the ownership of the current property owner(s) with addresses, acquisition data, assessment and tax information, description of the property, conveyances of full ownership, conveyances of other rights (servitudes, leases, restrictions, etc.), existing R/W, recorded plats, and copy of the last acquisition. One Title Research Report shall be obtained for each parcel.

- **1-3.3** Title Updates shall consist of obtaining updates of the originally acquired Title Research Reports, if the Reports are more than six months old. These updates shall be used in the preparation of the final Right of Way Maps and also by the DOTD's Real Estate Section in acquiring title to the property required for the construction project.
- **1-3.4** Additional information on title work can be found at the Department's Real Estate Section website: http://wwwsp.dotd.la.gov/Inside LaDOTD/Divisions/Engineering/Real Estate/

Property Survey

- **1-4.1** The Property Survey should be done at 60% completion of Preliminary Plans where a realistic location of taking lines has been determined and likely not to change.
- **1-4.2** The Property Survey shall consist of all investigations, studies, and field Property Surveys required for the preparation of the Base Right of Way Map.
- **1-4.3** The survey control for the Property Survey shall be consistent with the survey control for the topographical survey and shall be based on latest established Louisiana State Plane Coordinates at the time of the topographic survey.
- **1-4.4** The surveyor shall accurately show all required improvements on the Base and Final Right of Way Map. Where a substantial period of time has passed between the actual ground Property Survey and completion of the final map, the surveyor shall perform a visual inspection of the project for changes and certify the map accurately depicts all required improvements as of the date of the maps completion. The surveyor should not rely solely on any topographic survey that was previously performed for design purposes unless the location of all improvements is confirmed.
- **1-4.5** Upon completion of the Property Survey, the consultant shall notify the Location and Survey Administrator, in writing, and provide an electronic copy of field notes, text file listing coordinates and descriptions of all found monuments, a "PDF" copy of all documents (plats, maps, etc) used to determine property line locations and a "PDF" copy of title take-offs or title research reports used to determine property line locations. The consultant shall also provide a sketch in MicroStation and "PDF" formats showing all surveyed property lines and existing right of way with ties to the project centerline.
- **1-4.6** Where a consultant is performing the Property Survey, they must submit a progress schedule bar chart with their monthly invoices.
- **1-4.7** The surveyor is to tie any and all evidence of property corners into the project survey line. He is to decide as to the most correct position of each property line. In rare instances it may be necessary to do more extensive title work before determining the correct position of a property line. When these conditions occur, the surveyor may then make the decision as to location of the property line based on gathered field information and additional title information furnished.

Determining Existing Right of Way

- **1-5.1** The existing right of way may be determined by any one of several different methods although it is most probable that a combination of all methods will be used.
- **1-5.2** The surveyor should first check with the Department's General Files Section to determine if archived right of way plans are available. These plans would indicate the amount of right of way that may have been acquired and from whom it may have been acquired from. This existing right of way will typically be shown in relation to the centerline of the construction project for which it was acquired. CAUTION the surveyor must be assured he has done sufficient surveying to furnish the correct relationship between the existing right of way and the surveyed line for the current project. He must not automatically assume the centerline of the old construction project from which the existing right of way was acquired and the survey line for the current project to be in the same position.
- **1-5.3** There may be right of way deeds executed in favor of the Department of Transportation and Development for existing right of way which have not been archived at the Department. Copies of these deeds should be available from the conveyance records of the parish in which the right of way is located and should be made a part of the Title Research Report.
- **1-5.4** In some areas, the existing right of way is based on subdivision dedications. Under these conditions the surveyor must locate a sufficient number of lot corners of the subdivision to enable him to property define the dedicated right of way.
- 1-5.5 The last method by which existing right of way may be determined is to use an average line established 1 ½ feet beyond the rear or outside slope of the roadside ditch or toe of the roadway fill. This method is to be used only if it has been proven that right of way has not been formally acquired in any other manner and is based on "Louisiana Revised Statute 48:220.1 Width of Right of Way Acquired Informally" which states:

Whenever the department of highways, under its statutory authority takes over an existing road from a parish or municipality, unless there is an agreement between the two agencies to the contrary, the department shall acquire all of the rights which the ceding agency possessed with regard to the ceded road or street. In those instances where the highway was constructed by the parish or municipality without a recorded conveyance or dedication of the right of way by the landowner, and in those instances where the department has constructed a highway without a recorded conveyance or dedication by the landowner, the width of the right of way servitude for the said highway shall include the roadway, shoulder, roadside ditch and an area extending one and one-half feet beyond the rear or outside slope of the roadside ditch. Nothing herein shall affect title to any buildings or fences, nor require their removal without payment of just compensation therefor, nor shall anything herein affect title to the soil beneath the highway right of way nor to any minerals thereunder. The existence of the highways for a period in excess of three years shall vest title to the right of way servitude in the Department of Highways.

SECTION 2
Right of Way Map Requirements

RIGHT OF WAY MAP REQUIREMENTS

La DOTD Location & Survey Manual

Overview

- **2-1.1** Some type of right of way map is required on most projects where additional right of way is required or where a project is to be constructed within the limits of the existing right of way. Right of way shall be prepared according to generally accepted practice for making maps for right of way acquisition either through negotiation or expropriation. Sufficient data must be shown on the maps so that "metes and bounds" description may be prepared for each parcel of right of way required. A Registered Land Surveyor must sign the maps.
- **2-1.2** When two consulting firms are on a project with one firm making the Property Survey and the other firm preparing the R/W map, each will have their Registered Land Surveyor sign and seal the maps. Should it become necessary to go to court on these maps, one consultant will testify as to the accuracy of the survey and the other as to the accuracy of the computations and drawing of the final map.

Consultant Engineers Service

- **2-2.1** The Consulting Engineer will request appropriate sample right of way maps from the Department's Location and Survey Section before starting any Property Surveys or right of way map preparation. Consulting engineer's personnel shall be experienced, qualified, and familiar with the geometrics of the highway location, surveying, surveying calculations and standard engineering and surveying practice.
- **2-2.2** When the right of way map is prepared by a consultant, it is reviewed by the Department at the base right of way map and final right of way map stages. This review is a cursory review for format only. No effort will be made to check the map for mathematical correctness. It is the responsibility of the consulting firm to provide us with a complete and accurate right of way map.
- **2-2.3** At the base right of way map stage, the right of way map shall show all information that is required on the final map, except the bearings and distances for each required parcel need not be shown (refer to the base and final map checklists). Any review comments found in the right of way maps will be addressed by the consultant at no charge to the Department.
- **2-2.4** Where electronic submittals are required, the bond copies will be replaced with PDF copies and delivered via ProjectWise with certification of compliance with CADconform.

Map Requirements When Additional Right of Way Required

On projects where additional right of way will be required, right of way map will show the following:

- **2-3.1** Centerline of proposed highway, including station numbers shown every 500 feet, and at all event points, P.C.'s and P.T.'s of curves, bearing of said centerline and all curve data pertaining thereto. Where there are large areas along the route with no taking, break lines may be used to show the centerline. It will not be necessary to locate property lines in these areas.
- **2-3.2** All major improvements within 50 feet of the required right of way line must be tied to the centerline, dimensioned, and described. All major improvements between 50 feet and 500 feet of the right of way line will be shown on the body of the map or on the residual map. The position for these may be estimated. Dimensions and ties to centerline will not be required. Symbols may be used if shown on the residual map.
- **2-3.3** Where properties abut the project but not extend 500 feet and the next property in the back of it is not involved in the required right of way or is not affected by the required right of way, then it will not be necessary to take topography on the back property. If an aerial photography background is used and covers the areas from 50 to 500 feet from the right of way, it is not necessary to label these major improvements.
- **2-3.4** Distances and Lambert Grid bearings shall be shown on every line enclosing each parcel of separate ownership. In subdivisions, all subdivision names, square numbers, lot numbers, and street names with their proper dimensions will be shown. Bearings and station numbers will be shown on all intersecting street right of way lines.
- **2-3.5** Parcel numbers of each separate ownership. Parcel as used herein shall be deemed to mean a contiguous tract of land in the same ownership whether or not such tract consists of one or more plotted lots or tracts or a fractional part thereof. (See "Parcel Identification")
- **2-3.6** Area of each parcel required showing area to the nearest 0.001 acres **and** 0.1 square feet.
- **2-3.7** Acquisition data in tabular form showing parcel number, present owner, conveyance data (book/page & date recorded), and area of each parcel should be shown on each sheet covering parcels on that particular sheet. Where the sheet is too congested to show acquisition data for all parcels, the tabular data may be shown on a separate sheet. Proper references should be made on the sheets which carry the parcels as to the sheet number on which the acquisition data may be found.
- **2-3.8** All such physical markers (iron pipes, concrete monuments, iron rods, etc.) both found or reestablished should be shown, noted whether found or reset, and described (size and material). Additionally, all parcels in which a railroad company is involved must be tied into a railroad station number in addition to the project centerline station number.
- **2-3.9** Each sheet shall also carry a revision block, which will indicate the date the revision was made, a brief description of the revision, and the person by whom it was made.
- 2-3.10 Title abstract data for each ownership will be furnished. (See "Title Work" in Section 1)

- **2-3.11** As a part of above referenced map or set of maps, a map, hereto referred to as the "Residual Map", will be prepared showing the entire limits of each ownership traversed by the project whenever any additional right of way is required. Said map shall be drawn to an adequate scale to utilize the limits of that sheet and shall show the following:
 - a) Centerline and required right of way lines of the project.
 - b) All property lines/lot lines of properties traversed by the project.
 - c) Correct ownership of above said properties as shown in conveyance records.
 - d) Approximate area of each parent tract remaining on either or both sides of required right of way for the project. (See Sections 2-7.1 thru 2-7.7).
 - e) Station numbers shown every 500 to 5000 feet along project centerline based on length of project, map clarity and drawing scale.
 - f) Section, township, range, and parish lines.
 - g) Said map will be of standard size sheets of 22" X 34".
 - h) If major improvements lying between fifty and five hundred feet of the required right of way line are not shown on the main body of the map then they will be shown on the residual map.

Map Requirements When No Additional Right of Way Required

Where no additional right of way will be required, it may be necessary to prepare an existing right of way map and shall show the following:

- **2-4.1** Centerline of proposed highway, including station numbers shown every 500 feet, and at all P.C.'s and P.T.'s of curves, bearing of said centerline and all curve data pertaining thereto.
- **2-4.2** All major improvements located wholly or partially within the limits of existing right of way shall be shown, tied to the centerline, dimensioned, and described.
- **2-4.3** Distances and Lambert Grid bearings will be shown where needed. In subdivisions, all subdivision names, square numbers, lot numbers, and street names with their proper dimensions will be shown where said streets or lots border on project.
- **2-4.4** Sufficient data relative to the determination of the existing right of way will be shown on the map. This data may be the recordation of formal right of way deeds, a recorded subdivision plat, or in the absence of all other evidence a line 1.5 feet from the back of the existing ditch or toe of the existing fill. Where duly recorded subdivision plats are the authority for establishing the existing right of way, sufficient field ties will be made to property corners and these ties with descriptions of said property corners will be shown on the map.
- **2-4.5** All survey markers shown will be tied to the project centerline, described, and marked either found in place or set by surveyor.

Parcel Identification

The parcel numbering system will be in accordance with the following:

- **2-5.1** A parcel denoting required right of way should be designed first by the sheet number of the plans on which it is situated followed by a dash and then the parcel number enumerating from left to right on the sheet insofar as practicable. The first parcel is to be number one and the remainder numerically progressing until the last parcel on the sheet is reached. The first parcel on Sheet 1 would be 1-1; the third parcel on Sheet 6 would be 6-3; etc. The parcel will be shown by sheet number dash then parcel number all encircled.
- **2-5.2** A parcel which is on several sheets of the plans will be shown on the first sheet on which it falls where practicable insofar as space is concerned. If it is not feasible to place it on the first sheet, then the sheet that is most practicable shall be selected. The acquisition data shall be shown on the sheet selected and the parcel number will bear this sheet number and be placed on all sheets which indicate any portion of the parcel.
- **2-5.3** Drainage parcels will carry the number of the required right of way parcel to which they are attached and should be designated further by a dash, a "D" and a dash and one for the first drainage parcel. The second, third, and successive parcels attached to required right of way parcel will carry the same designation followed by 2, 3, and so on according to the number of drainage parcels attached to the required right of way parcel. The 2nd and 3rd drainage parcels and so on being substituted for the last numeral one shown in the first drainage parcel. (i.e. 4-2-D-1, 4-2-D-2, etc.)
- **2-5.4** The same procedure will be followed in designation construction servitude parcels except the letter "C" will be substituted for the letter "D". Example (4-2-C-1)
- **2-5.5** On railroad crossings, the required parcel will be designated RR-6-1 for the first of such parcels on Sheet 6 of the right of way map. If there are two such parcels on Sheet 6, the second parcel would be RR-6-2, etc.; such a parcel on Sheet 2 would be RR-2-1. All other parcels involving railroads that are not crossing will be designated as described in the second and third paragraphs of this section.
- **2-5.6** Where, within a single ownership, a portion of the taking area is subjected to controlled access and the other portion is not, as would be the case with the improvement of an intersecting non-controlled highway, the following numbering system will be used:

The master parcel, which would be the one with controlled access, instead of being given the number of 2-4 as previously done, will be given the number 2-4-1. The parcel without controlled access will be denoted as 2-4-2. The boundary line separating the parcels designated as 2-4-1 and 2-4-2 will be calculated based on the stationing at which the existing/required control of access begins/ends being perpendicular or radial to the project centerline. In situations where the controlled access may have multiple beginnings and endings through a single ownership, separate parcels are needed for each occasion and shall be numbered as 2-4-3, 2-4-4 Etc. Where these parcels have been broken down in this manner also carry drainage and/or construction servitudes, they will be numbered exactly as they have in the past by reverting to the master number. As an example, drainage servitude on parcel 2-4-1 will carry the number of 2-4-D-1 and so on, and the drainage parcel will carry the same numbering system irrespective of the parcel to which it is attached in regards to controlled access. In other words, the first drainage parcel will carry the number 2-4-D-1 whether or not the same is attached to parcel 2-4-1, 2-4-2 or 2-4-3, and they will progress from 2-4-D-1 to 2-4-D-2 and so on.

A separate parcel number need not be used to indicate that access is permissible to a frontage road since there is embodied in the deed form used on Interstate Projects a general clause to the effect that access is limited to such service roads as may be built.

- **2-5.7** Should the right of way be widened subsequent to the acquisition of a parcel, a duplicate sheet will be made for the revision. The additional area will be designated by the letter "A" preceded by the original parcel number and followed by the number one for the first such parcel and proceeding thence in sequence, i.e. 2-4-A-1; 2-4-A-2, etc. A note shall be placed on the original sheet that states "See Sheet 2-A for additional revisions". The duplicate sheet that will now carry additional revisions shall be numbered 2-A. In such instances, the acquisition data by which the original parcel was acquired by the Department will be shown in the acquisition schedule. In the event of such widening prior to the acquisition, the parcel may be revised; and the revision need be indicated only by an appropriate notation in the revision schedule.
- **2-5.8** Where expropriations have been filed, the parcel shall be considered "Acquired" and revisions shall be treated as such.
- **2-5.9** Subsequent to the acquisition of a given parcel, should the map be found to be erroneous as to metes and bounds and/or area of such parcel thereby requiring re-negotiations, then the map should be corrected and an asterisk placed in the acquisition schedule left of the parcel number. An explanatory note should also be shown above the acquisition block stating "* Denotes Corrected Parcel". The letter "R" preceded by the original parcel number and followed by one, two, etc. shall designate a revised parcel. (2-4-R-1, 2-4-R-2)
- **2-5.10** In the event it is necessary to acquire a parcel or parcels before the right of way map is complete, they will be acquired by an advanced parcel acquisition map and designated on the final right of way maps as ADV-1, ADV-2, etc.
- **2-5.11** The prefix "AR" will denote the required purchase of access rights only, and the parceling will otherwise conform to the aforesaid provisions (AR-2-4, etc.). The Parcel balloon will show a leader pointing to the Control of Access Line. For the purpose of the map the areas of such parcels will be considered as coincident with those shown on the residual map.
- **2-5.12** Each sheet, where practicable, will have an acquisition block denoting parcel number, the name of owner, acquisition data by owner, area, and a blank space the identical size as the "acquisition data by owner" for future use. The above recited data progresses form left to right as enumerated herein. The first line in the acquisition block is always left vacant in the first assembly of the block. This is for the purpose of possible future beneficial notes and comments.
- **2-5.13** Cover letters will be written on all transmittals of right of way maps. When revisions have been made, such letters will explain the reasons, or authority for the revisions, and site the original map date as well as the date of the revision.

Existing Servitudes

- **2-6.1** Existing servitudes, or right of way for pipe lines, power lines, canals, or any other such facility will be shown on the right of way map. These will not be shown as separate parcels unless the company owns fee simple title.
- **2-6.2** Pipe lines or other such facilities will be tied into the project centerline and the limits of the easement or servitude for the facility will be dimensioned from the facility. Bearings and distances around the servitude will not be shown however; area of the servitude will be shown. A "no property line" hook will be shown across the servitude or easement. (See Dawn Village Venus City map sheet 6).

Remaining Area After Right of Way Acquisition

After a partial acquisition of right of way for highway purposes, the property owner is left with the remainder of his property, which is shown as the "R.A." on DOTD right of way maps. It is important to determine the acreage or square foot amount of R.A., for compensation purposes as well as for other issues such as appraising, zoning, and access management.

Although DOTD currently acquires right of way in full ownership, in past years the right of way was acquired in servitude only. The property owner (or successor in title) from whom the servitude was acquired still owns the property to the centerline of the road, but he has no practical use of it as long as the road is used for highway purposes; therefore is never included in the R.A.

The servitude presumably was acquired by use, or a legal document properly filed and recorded in the public records. As long as the road is being used for highway purposes, the underlying fee owner cannot disturb this use. If additional right of way is acquired, for example, to widen the road, the property owner cannot use that property either. Acquisition of the additional right of way is accomplished with a new legal document, and is acquired in fee title, not servitude.

How Is the Remaining Area Calculated?

- **2-7.1** Since the underlying fee owner cannot use the property subject to the original servitude, nor can he use the property currently being acquired in fee, as additional right of way, the R.A. should be calculated as follows: Total area of property (per the owner's deed, scaled, or measured), minus the area originally acquired in servitude, if included in the total area of property (per use, or the servitude acquisition document), minus the area currently being acquired for road or drainage improvements (per the right of way map). In other words, the stated remaining area on the right of way plat should not include the areas under the roadbed.
- **2-7.2** Area currently being acquired for a construction servitude (per the right of way map) is not subtracted from the total area of property (per the owner's deed, scaled, or measured) and should be included in the remaining area.

How Is it Displayed on the Map?

- **2-7.3** On all right of way maps being prepared for the Department of Transportation and Development, **DO NOT** include dimensions (bearings and distances) on remaining area depictions on individual right of way sheets, (especially rear property lines), unless you have performed a specific detailed Property Survey of the entire parcel.
- **2-7.4** If the parcel has the front and back corners monumented, you are to show the bearing and measured distance between the monuments on the side lines of the remainder. **DO NOT** show the back property line unless it has been surveyed and you are intentionally locating for record on the map.
- **2-7.5** If the parcel has its front corners monumented and no back corners, or if there are no property monuments at all, you are to show the side property lines of the remainder as projections of the bearings of the side lines of the parcel being purchased. Unless the parcel has been surveyed, **DO NOT** show bearings and distances on these lines and **DO NOT** show a rear property line.
- **2-7.6** Unless a specific detailed property survey has been made of the entire parcel, the remaining area shown, (either on the individual right of way sheets or on the residual maps), should reflect the method used to derive the area, (per deed or scaled) the area will be expressed to the precision of the deed call, or if scaled, shown as approximate, i.e.: R.A.= 2.4 Ac. (per deed) or R.A.= 23 Ac. Approx. (scaled).
- **2-7.7** If a Property Survey has been made of the entire parcel, the remaining area shown shall be shown to the precision of the taking parcel.

General Notes

- **2-8.1** The survey control for the right of way map shall be consistent with the survey control for the topographical survey and shall be based on latest established Louisiana State Plane Coordinates at the time of the topographic survey.
- **2-8.2** A note identifying "(datum (adjustment) epoch)" must be shown on each sheet.

Example:

The coordinates and bearings shown hereon are based on Louisiana State Plane Coordinate System, (North or South) Zone (NAD 83 (2011) EPOCH 2010.00).

2-8.3 Controlling monuments shall be listed and published coordinates shown.

BASE STATIONS:

Station PID,	Station PID,	Station PID,
Designation	Designation	Designation
LAT=N51°20′04.21501″	LAT=N51°20′04.20601″	LAT=N51°20′04.25501″
LONG=W094°17′15.94145″	LONG=W094°17′15.41145″	LONG=W094°17′15.17945′
Y=356156.27	Y=356156.87	Y=356156.27
X=3456563.19	X=3456563.15	X=3456563.89

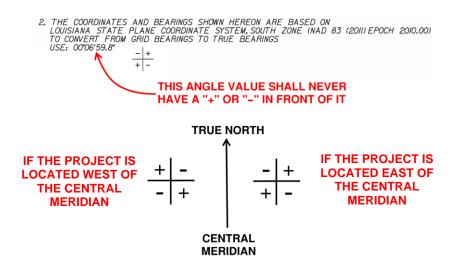
2-8.4 A conversion factor from grid to true bearings shall be given on each sheet and will be computed at a point that is the approximate middle of the sheet.

Example:

To convert from grid bearings to true bearings, use (give correct theta angle)



NOTE: The signs shown for the various quadrants are used as an illustration only and are not necessarily correct for every situation. Note also that the theta angle should be computed for a point that is in the center of each sheet. The theta angles will in most cases differ from sheet to sheet. (See graphic below for more information.)



2-8.5 A conversion factor from grid to ground distances shall be given on each sheet and will be computed at a point that is the approximate middle of the sheet.

Example:

To convert distances derived from coordinates shown hereon to horizontal ground distances use scale factor: (give correct scale factor)

60% Base Right of Way Map

2-9.1 At approximately 60% completion of the Right of Way Map, work will stop, 60% Base Maps will be submitted to the Location and Survey Section, and a Joint Plan Review meeting will be conducted to review the maps taking lines and determine if changes will be necessary. After completion of the review and 100% Preliminary Plans are received, work toward the Final Map can resume.

Final Right of Way Map

2-10.1 The final map or set of maps will be a matte film reproducible on a convenient scale such as 1'' = 100', 1'' = 50', 1'' = 30', 1'' = 20'. The scale 1'' = 40' will <u>never</u> be used.

2-10.2 The final matte film submittals will be department's standard size which is 22" x 34". The only exception to this standard map size is in those isolated conditions when a special map may have to be made prior to the completion of the right of way map. This is sometimes necessary so that a particular hardship case may be settled before completion of the entire right of way map. Special maps will include all data required to be on completed right of way map. The size of these special maps may be 8 ½" x 14" or multiples of the 8 ½ "dimension. Minimum lettering size on all right of way maps must be large enough so that all lettering can be clearly read when the drawing has been reduced 50%. Said map or set of maps are to be referred to as Right of Way Map and as such will be separate from construction plans and identified as a separate map or set of maps.

Milestone Submittals during the development of the Right of Way Map by Consultants

- **2-11.1** There are 4 milestone submittals throughout the development of the Right of Way Map.
- 1. **Property Survey Map**, which deliverables include:
 - a. An ASCII file listing coordinates and descriptions of all found monuments.
 - b. A PDF copy of all documents (plats, maps, etc.) used to determine property line locations.
 - c. A PDF copy of title take-offs or title research reports used to determine property line locations.
 - d. A MicroStation DGN file of each sheet of the property Survey Map named "H.xxxxxx_PS_nn_yymmdd.dgn" (nn = Sheet Number)
 - e. A composite MicroStation DGN file containing all line work named "H.xxxxxx_PS_yymmdd.dgn"
 - f. A PDF copy of the Property Survey Map named "H.xxxxxx_PS_yymmdd.pdf"
- 2. **60% Base Right of Way Map**, which deliverables include:
 - a. A digital PDF copy of the map, named "H.xxxxxx_60% BASE ROW MAP_yymmdd.pdf"
- 3. **Final Right of Way Map Checkprints**, which deliverables include:
 - a. A digital PDF copy of the map, named "H.xxxxxx_FINAL ROW MAP_yymmdd.pdf"
- 4. Final Right of Way map Matte Films, which deliverables include:
 - a. Full-size (22' x 34") print of the map on Matte Film, stamped and hand-signed with date on which it was printed.
 - b. A digital or scanned PDF copy of the signed and dated Map, with a DPI of 600 or more, named "H.xxxxxxx_FINAL ROW MAP_yymmdd.pdf"
 - c. A PDF copy of each required Full Title Research Report, with affected Parcel Numbers listed in the upper right-hand corner, named "H.xxxxxx_PARCEL n-n_yymmdd" (the date of Abstractor's certification.)
 - d. ASCII file containing the DOTD COGO program input commands for creating parcel descriptions suitable for use by the DOTD's Real Estate Section, named "H.xxxxxx_yymmdd.IN"
 - e. A MicroStation DGN file for each sheet of the Right of Way Map, CADconform certified, and named "H.xxxxxx_nn_yymmdd" (nn = Right of Way Map sheet number), in addition to any design files used in the production of the map.

NOTE: Final map deliverables will change to conform to DOTD electronic submittal processes when established.

SECTION 3

CADconform Layout

- Overview
- Setup Basics



CADCONFORM LAYOUT

Overview

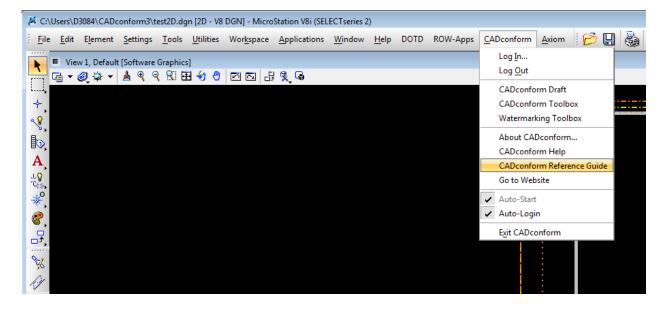
CADconform is used to ensure that LaDOTD designers and consultant partners produce plans that conform to LaDOTD CAD standards. Drawings fall into two basic categories:

- Drawings that are manually drafted using MicroStation. CADconform provides a "Draft" tool used to select features that comprise drawing contents, as well as a "Conform" tool used to interactively check drawings for standard conformance.
- Drawings that are produced using automated processes, such as survey graphics and road design drawings produced by InRoads.

LaDOTD provides CADconform feature tables that are used to ensure conformance to standards and ultimate drawing certification. Evidence of drawing standards conformance is provided by the "LaDOTD CAD Standard" stamp affixed outside the left borderline of drawings during the certification process. This stamp is tested for authenticity by DOTD.

LaDOTD provides CADconform **Feature Tables**, which will be discussed later, for the various DOTD disciplines, which are included in the respective "resources" download for MicroStation. Standard drawing files are "branded" to ensure that standard feature tables are used.

This CADconform guide focuses specifically on assisting consultant partners to generate and produce Right of Way Maps. Additional information regarding CADconform can be found in the CADconform Reference Guide located in the CADconform tab, as shown below.



Setup Basics

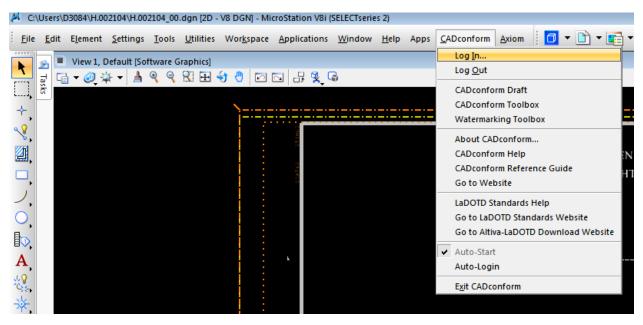
After loading and licensing the CADconform software, please note the following important information:

- The default Project Configuration Files (PCF), are files that include customized settings for CADconform to operate under LaDOTD CAD standards. Any manipulation of these files would alter the settings and unintended results could occur.
- Two LaDOTD seed users, "dotd admin" and "dotd user" are provided in User Manager. The passwords are "admin" and "user" respectively. First, open these profiles and change the passwords so that the defaults can be preserved. Use the "New" command to create the new user & administrator profiles for your site. Highlight the dotd user and dotd admin profiles so that the default settings will be copied for the new profiles. Multiple user and admin profiles are not normally needed unless there is a reason to vary permissions. The delivered settings are preconfigured to be appropriate for LaDOTD projects and should not be changed. Some examples of permissible changes are as follows:
 - Allow trusted users to brand drawings.
 - Allow draft to load on startup.
 - Lock feature tables

Log-in & Feature Tables

1) Load CADconform by selecting from the Microstation Main Menu pulldown "CADconform"

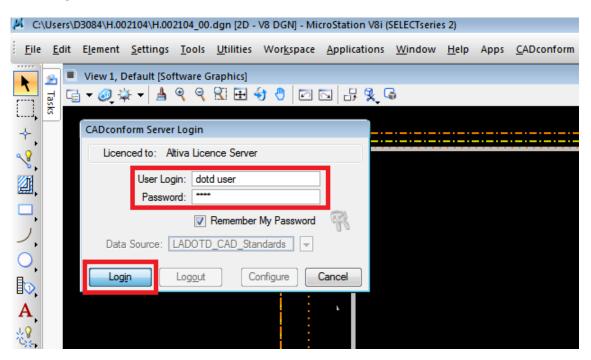
Select Log In...



2) Key-in "dotd user" for the user login and "user" for the password, as shown below.

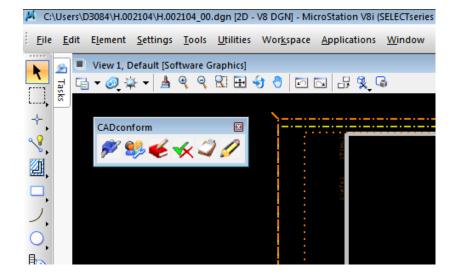
(Note: Fields are case sensitive and must be entered in lower-case.)

Select Login



This will bring up the CADconform Pallet. You may leave it floating or dock it as you would any other Microstation Pallet.

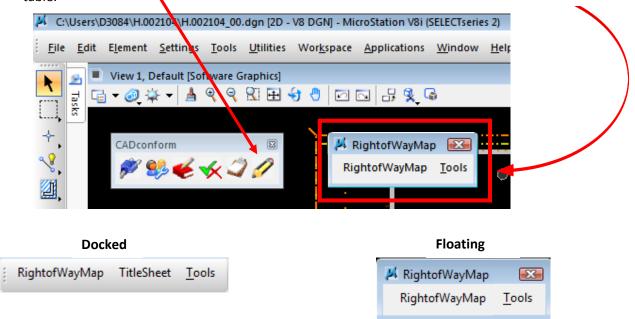




Floating

Docked

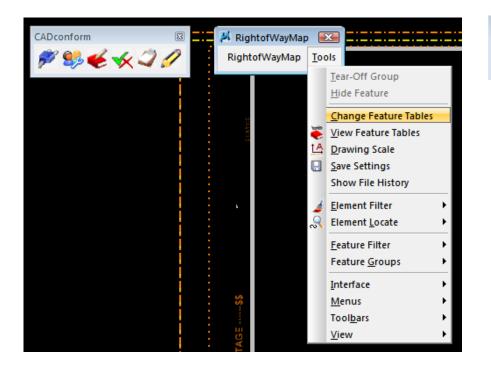
3) Next, Select the **Pencil** icon (Draft) to the right of the pallet. This will bring up the **RightofWayMap** feature table.



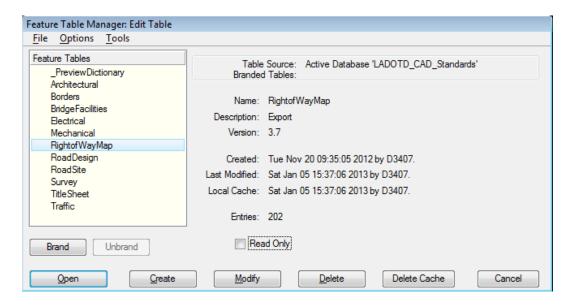
Note: If the **RightofWayMap** feature table does not appear, go to **Tools** in the toolbar, and select "Change Feature Tables," as shown below.

CADconform

4) Go to Tools, and select "Change Feature Tables" or select the Manage Feature Tables icon.

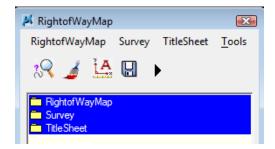


5) The **Feature Table Manager** window appears. Select the **RightofWayMap** feature table and click "Brand." Then, select "Open."

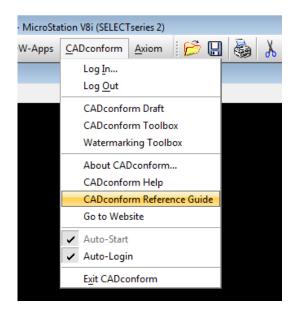


The **RightofWayMap** feature table is now branded.

You may also select and brand multiple Feature Tables when holding <Ctrl>, then click "Brand" & "Open." It is recommended to brand the RightofWayMap, Title Sheet, & Survey feature tables. All commands necessary to create a Right of Way Map reside in these three feature tables.



For more information on Feature Tables, refer to the CADconform Reference Guide in the CADconform tab.



You can change the appearance of the **RightofWayMap** feature table by clicking on the black arrows and by clicking and dragging the window.

Collapsed View

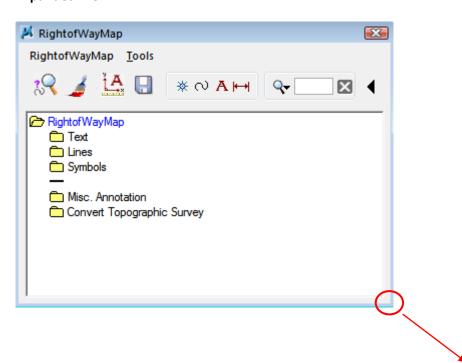


Default View





Expanded View



SECTION 4

Creating a Right of Way Map

- Title Sheet
- Plan Sheet
- Residual Map

CREATING A RIGHT OF WAY MAP

This section will cover the basics of using CADconform while creating the three types of sheets in a Right of Way Map: The **Title Sheet**, **Plan Sheets** and the **Residual Map**.

Title Sheet

IMPORTANT: Copy the Title Sheet named "border_right-of-way_plan_Title Sheet.dgn" to your local directory and place it in your current design file folder. This file can be found by following the path below. It will be used as a reference later on. This path is for DOTD HQ employees. **Consultant's path will vary**.

\\H00001ms016\Workspace\Projects\LaDOTD_CAD_Standards\border\right-of-way_plan_Title Sheet

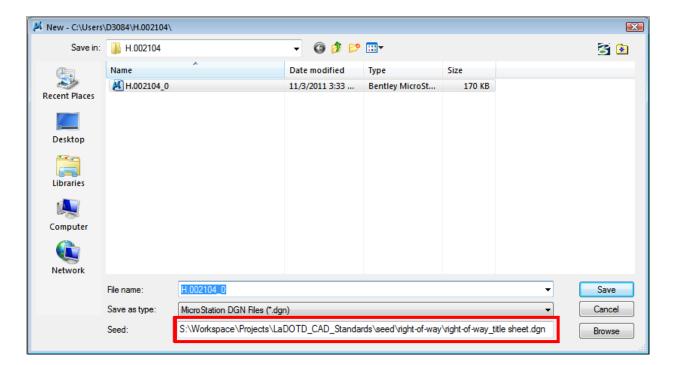
1) Run MicroStation. From the MicroStation Manager, under **Projects**, click on "LADOTD_Right-of-Way_Map" to ensure the correct Right of Way features are used.

2) Click the "New File" icon to create a new drawing. File Open - C:\Users\D3084\H.002104\ 8 3D - V8 DGN Name Date modified Type MH.002104_0 11/3/2011 3:33 ... Bentley MicroSt... Recent Places Desktop Libraries Computer Network User: d3084 H.002104_00 Open LADOTD_Right-of-Way_ Files of type: CAD Files (*.dgn;*.dwg;*.dxf) Cancel Project: No Project Open as read-only Interface: Options Bridge
Bridge_V7
LADOTD_Bridge-Facilities LaDOTD_Road-Site LaDOTD_Survey Road

Traffic

3) Click **Browse** and select the following seed file:

\\H0000MS016\Workspace\Projects\LaDOTD_CAD_Standards\Seed\right-of-way\right-of-way_title sheet.dgn

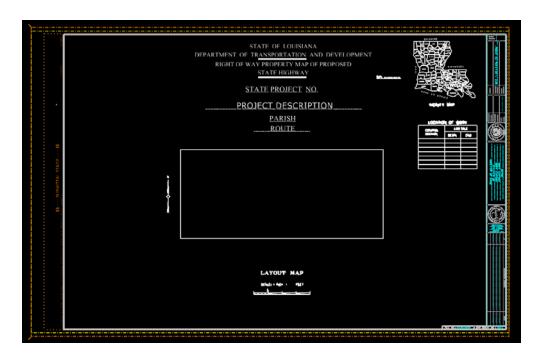


- 3) Click Open.
- 4) Name the file, and click **Save**.
- 5) Click on the .dgn you just saved, and click **Open**.

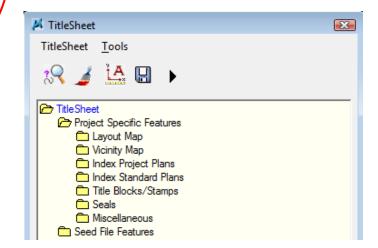
CADconform

6) **Fit** the workspace view. If the correct seed file and title Sheet reference is being used, the workspace should match the image below.

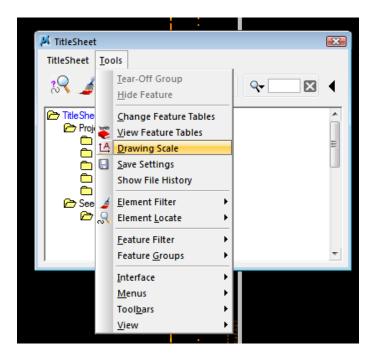
IMPORTANT: The Title Sheet/Plan Sheet reference must be set to scale before running CADconform.



7) Log-in to CADconform and select the **Draft** icon. Make sure that the **Title Sheet** feature table is active. (Refer to **Log-in & Feature Tables** on **Page 3-3** for help)



8) The scale of the Title Sheet will be set manually. Select **Tools** ⇒ **Drawing Scale.**

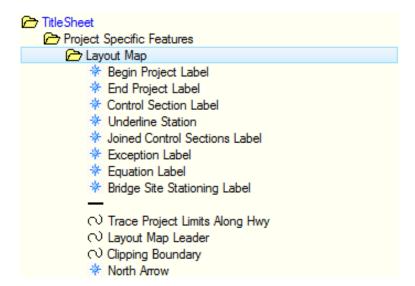


9) Key-in the scale of **1.000000** and select **Save**.

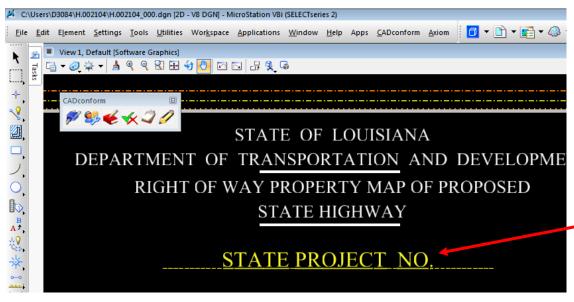
Note: The settings should match what is shown below.



Nearly all the information shown on the Title Sheet is located in the **Layout Map** folder:

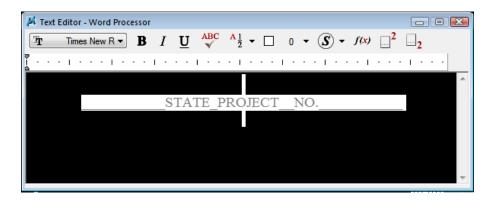


10) To edit the data fields in the Title Sheet, **double-click** on the text you want changed.

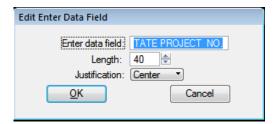


All project information shown on the Title Sheet shall be acquired from Project Systems and the construction plans.

11) The **Text Editor** window appears, as shown below. **Double-click** on the text again to edit.



12) Enter the data in the **Enter data field** box. The character length may need to change if data entered exceeds the length shown.



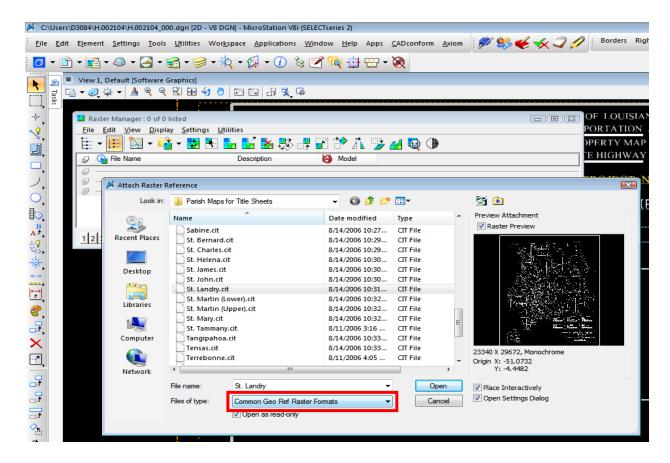
To attach the layout map. Select from the Microstation menu: File → Raster Manager

- 13) From the Raster Manager Pallet, Select: File → Attach → Raster
 - Navigate to: \\H00001ms017\30common\ROW_Map_Standards\Parish Maps for Title Sheets

NOTE: This file location is for DOTD HQ employees. Consultants can find similar PDF files at:

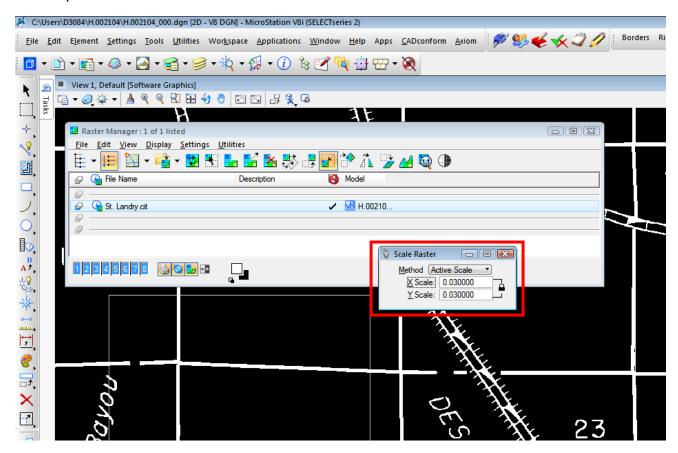
http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Multimodal/Data_Collection/Mapping/ Pages/State District Parish Maps.aspx

- Click Accept and scroll down to the Parish Maps section.
- Under the Files of type menu, Choose Common Geo Ref Raster Formats, as shown below.
- Select the Parish that your project is located in.



- 14) Be sure that the Place Interactively, Open Settings Dialog, & Open as read-only boxes are selected.
- 15) Click Open. Then, click Attach.
- 16) To insert the Raster, Select two data points in a clear spot away from your sheet. (We will correct the size in the next step.)

- 17) Zoom into the raster and find a square mile of sectionalized land. Measure the width of the section and note it somewhere.
- 18) From the raster manager select **Edit** → **Scale**
 - Divide 0.0833333 by the <u>previously measured width of the section</u> (from previous step).
 - Key in the results into the X and Y scales of the scale Pallet.

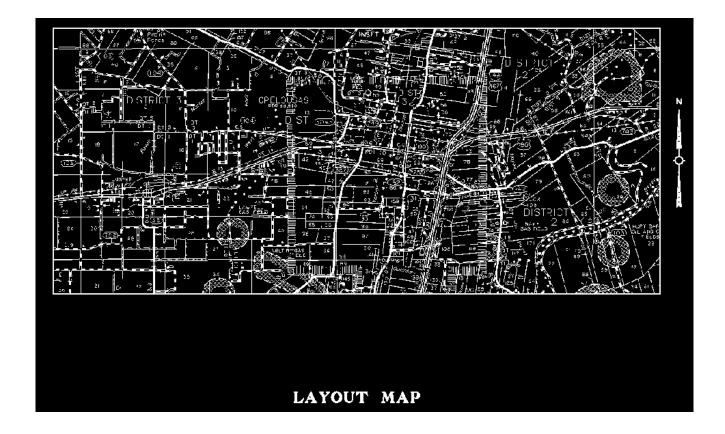


19) Select a DATA point somewhere in the screen.

Note: This will set the layout image to a scale of 1''=5280' or 1''=1 Mile. If your project does not fit within the layout map box at this scale, you must adjust accordingly.

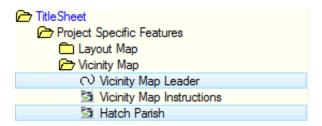
- 20) Copy the Layout map box, provided in the title sheet, and move the copy outside of the title block.
- 21) Next, move the image so the project limits will be located in the copied layout map box.
- 22) Next you will have to clip the raster to the limits of the predefined layout box.
 - From the Raster Manager select: Edit →Clip
 - Set the Method to "Block" and the Mode to "Clip Boundary"
 - Data point on the Lower Left then the Upper Right corners of the Layout Map Box.
 - Then, data point anywhere to accept. All of the raster image outside the box will disappear.
 - Move the copied layout box back to the original location.

Note: **<u>REMEMBER</u>** to rotate your raster accordingly to maintain a true North Arrow.



The Vicinity Map folder is where you will find two other commands that will be used on all Title Sheets:

- Vicinity Map Leader
- Hatch Parish



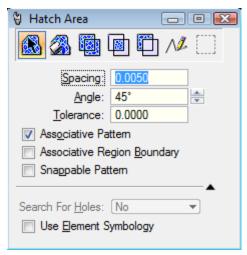
23) **Double-click** on the S.P. Label provided (left of the Vicinity Map), and input the State Project No.



Use the **Underline Station** command to complete the S.P. Label.

- 24) Snap to the endpoint of the Underline Station triangle when applying the Vicinity Map Leader.
- To apply the **Hatch Parish** command, **Double-click** the command, set your **Hatch Area** settings as shown below. Then, click the proper parish line to apply the hatch.







26) Insert Beginning and Ending of project cells from the CADconform Menu, along with all other site labels (matching the construction plans), complete the editing of all data fields, including the **Location of Work** table, and your Title Sheet is complete.

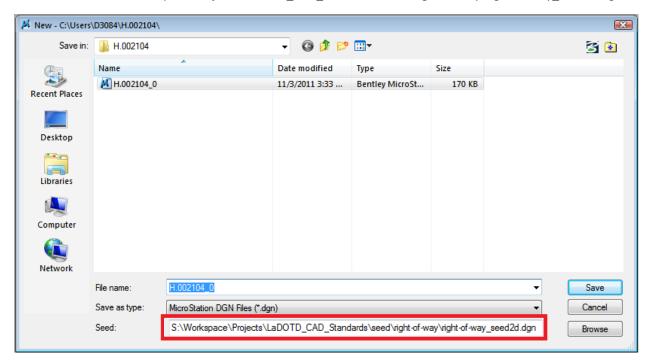
Plan Sheet

IMPORTANT: Copy the border sheet named "border_right-of-way_plan.dgn" to your local directory and place it in your current design file folder. This file can be found by following the path below. It will be used as a reference later on. Again, This path is for DOTD HQ employees. **Consultant's path will vary**.

\\H00001ms016\Workspace\Projects\LaDOTD_CAD_Standards\border\border_right-of-way_plan.dgn

- 1) Repeat Steps 1-2 on page 3-1.
- 2) Click **Browse** and select the following seed file:

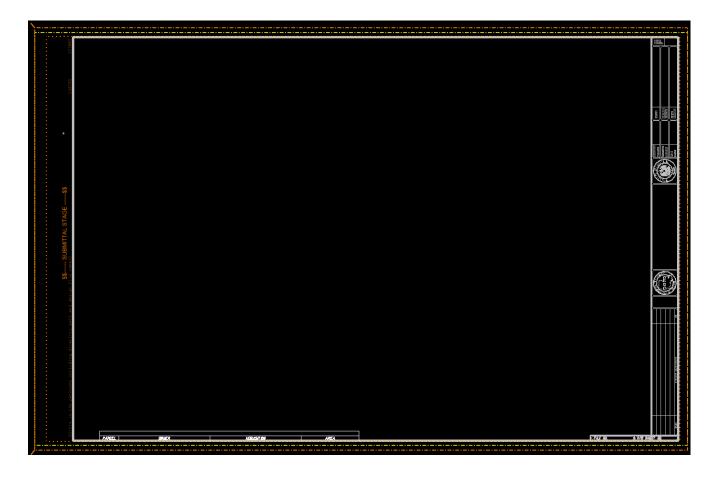
\\H0000MS016\Workspace\Projects\LaDOTD_CAD_Standards\Seed\right-of-way\right-of-way_seed2d.dgn



IMPORTANT: The 2D seed must be selected. Right of Way Maps do not show elevations (3D).

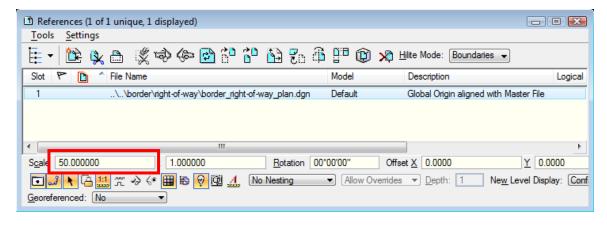
3) Click **Open**. Name the file, and click **Save**.

4) **Fit** the workspace view. If the correct seed file and border sheet reference is being used, the workspace should match the image shown here.



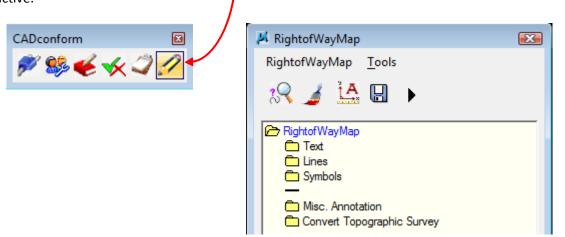
IMPORTANT: The Title Sheet/Plan Sheet reference must be set to scale before running CADconform.

5) To set the scale on a Plan sheet, in MicroStation, go to **File** ⇒ **References**. Input the scale in the box shown.

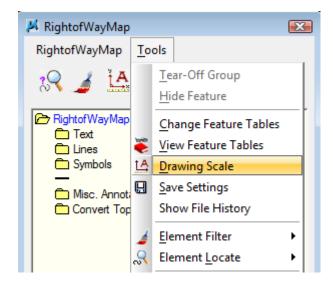


6) **Close** the References window.

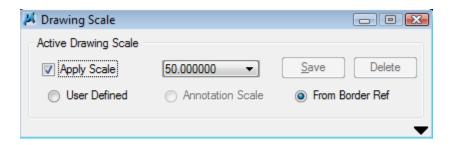
7) **Log in** to CADconform and select the **Draft** icon. Make sure that the **RightofWayMap** feature table is active.



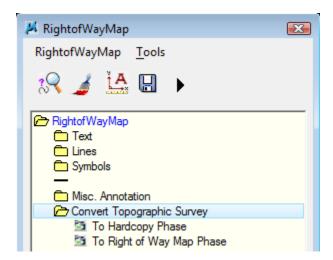
8) The scale of the Plan Sheet will be set according to the border reference scale. Select **Tools** ⇒ **Drawing Scale.**



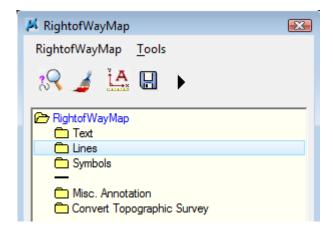
9) Select **From Border ref** as shown below.



10) Next, find the **Convert Topographic Survey** folder in the **RightofWayMap** feature table, shown below, and complete converting your topographic survey **To Hardcopy Phase**, then to **Right of Way Map Phase**. (Refer to **pg 5-87** for more information)



- Once converted to Right of Way Map Phase, Begin changing all lines in the .DGN to the supporting lines that are listed in the **Lines** folder in the RightofWayMap feature table.



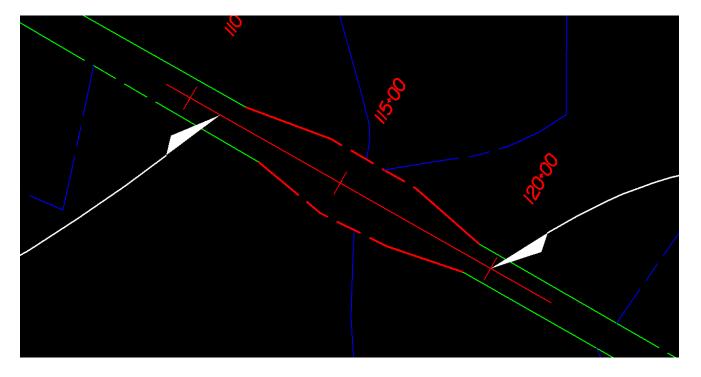
- Continue using the RightofWayMap feature table for all existing & required features used in the Right of Way Map. Refer to **Section 5** for information regarding each command in the RightofWayMap & Title Sheet feature table.

Residual Map

The Residual Map should be scaled to fit the entire project and visible within the border. The Residual Map uses the same reference and seed files as the Plan Sheets. If necessary, multiple Residual sheets will be allowed to clearly depict perimeter of remainders. Remember to change the Active Linestyle Scale.

The Construction Servitude shall not be shown on the Residual Map. However, Drainage Servitudes must be shown.

The Existing Right of Way lines shall be shown up to the taking lines, as shown below.



Refer to the example Residual Map located in the back of the manual for more information regarding Residual Maps.

SECTION 5

Feature Table Command Properties

- Right of Way Map Feature Table Properties
- Title Sheet Feature Table Properties



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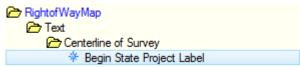
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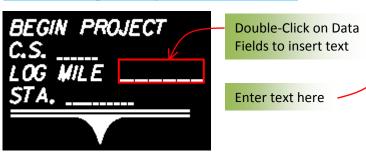
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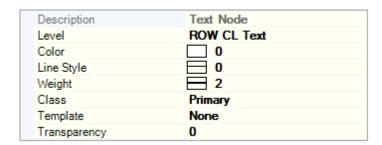
TEXT

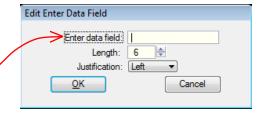
BEGIN STATE PROJECT LABEL

Text/Centerline of Survey/Begin State Project Label







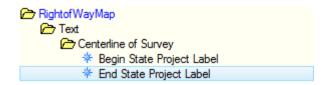


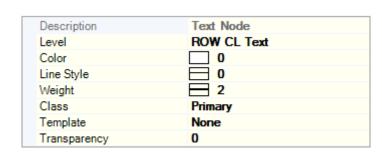
FONT NAME: font063
TEXT HEIGHT: 0.1584
TEXT WIDTH: 0.1584

Note: The Begin and End Project Labels <u>usually</u> require a Control Section and Log Mile (located on the construction plans). However, there are instances when the Control Section and Log Mile will not be required such as those projects not on a State Route. Sometimes the term "Construction" will used in lieu of "Project". The construction plans should dictate the correct term to be used. This also applies to the Title Sheet Project Labels.

END STATE PROJECT LABEL

Text/Centerline of Survey/End State Project Label





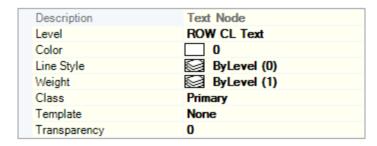


FONT NAME: font063
TEXT HEIGHT: 0.1584
TEXT WIDTH: 0.1584

EQUATION LABEL

Text/Centerline of Survey/Equation Label



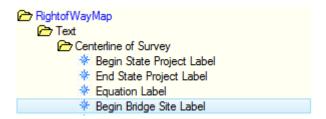




FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

BEGIN BRIDGE SITE LABEL

Text/Centerline of Survey/Begin Bridge Site Label



Description Text Node ROW CL Text Level Color 0 ByLevel (0) Line Style Weight ByLevel (1) Class **Primary** Template None Transparency 0

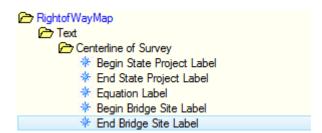
Note: The Layout Map Leader (located at the bottom of the Centerline of Survey folder) shall be used for this command.



FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

END BRIDGE SITE LABEL

Text/Centerline of Survey/End Bridge Site Label





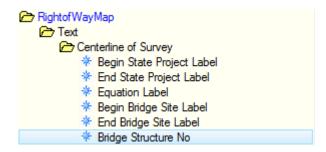
Note: The Layout Map Leader (located at the bottom of the Centerline of Survey folder) shall be used for this command.

Description	Text Node
Level	ROW CL Text
Color	0
Line Style	ByLevel (0)
Weight	ByLevel (1)
Class	Primary
Template	None
Transparency	0

FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

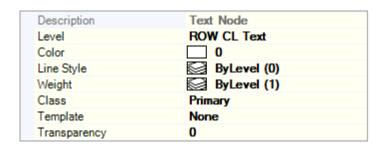
BRIDGE STRUCTURE NO.

Text/Centerline of Survey/Bridge Structure No.



BRIDGE STRUCTURE NO.

Note: Place this command on the bridge itself in the plan sheet(s), not interfering with the Baseline.

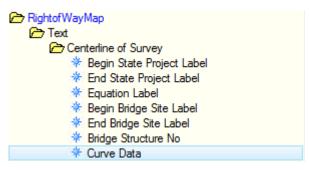


FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

Note: If there is a lack of space due to topographical features, bearing & distance text, Sta./Offset ties, or found survey monument labels then the label may be reduced to "STRUCTURE NO." by the "Edit Text" Command within Microstation.

CURVE DATA

Text/Centerline of Survey/Curve Data



Description	Text: C CURVE DATA
Level	ROW CL Text
Color	0
Weight	ByLevel (1)
Class	Primary
Template	None
Transparency	0

FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

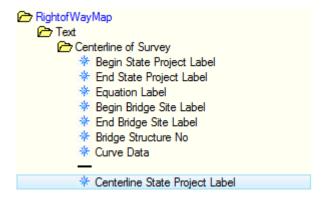


SKIP BERTMAN DRIVE © CURVE DATA

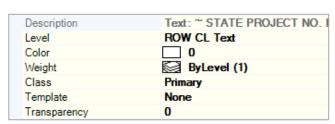
Note: When there is more than one centerline shown on a sheet then the text "CL CURVE DATA" is ambiguous. Text of the same font and weight must be added to the top of the text "CL CURVE DATA" to further describe the curve data for that specific alignment.

CENTERLINE STATE PROJECT LABEL

Text/Centerline of Survey/Centerline State Project Label



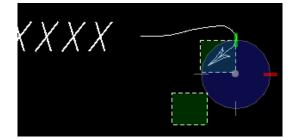




The leader in this command, along with all other leader commands, can be manipulated to your specifications by clicking on the "Stretch" icon in the Manipulate toolbox.

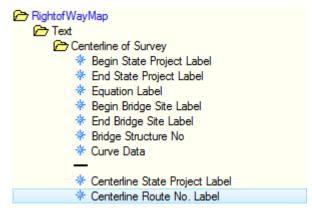


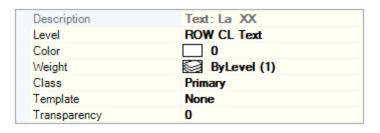
Then, draw a fence around the arrowhead and click and hold then drag where you want the leader to be located, then release.



CENTERLINE ROUTE NO. LABEL

Text/Centerline of Survey/Centerline Route No. Label





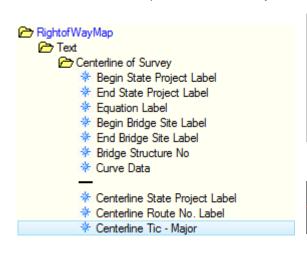
Edit the text by simply doubleclicking on the cell.

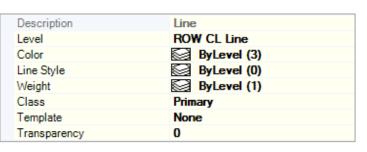


FONT NAME: font063 TEXT HEIGHT: 0.1250 TEXT WIDTH: 0.1250

CENTERLINE TIC - MAJOR

Text/Centerline of Survey/Centerline Tic - Major

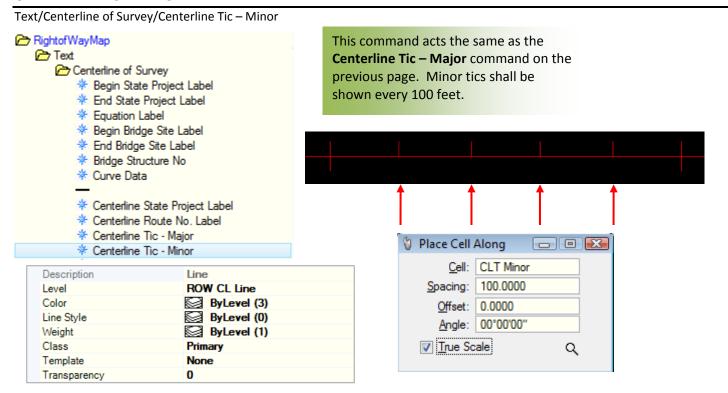




Q

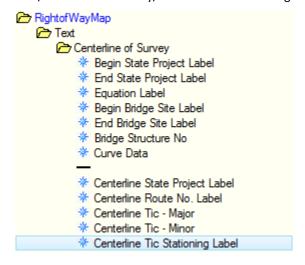


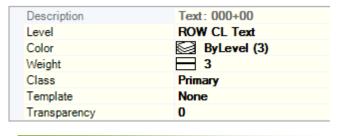
CENTERLINE TIC – MINOR



CENTERLINE TIC STATIONING LABEL

Text/Centerline of Survey/Centerline Tic Stationing Label





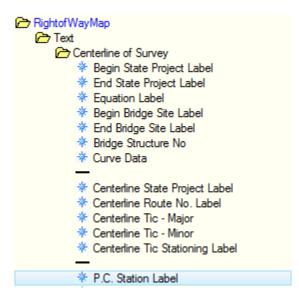
Note: As described in section 2-3.1 of this manual, station numbers should be shown every 500 ft. Example: 100+00, 105+00, 110+00, etc. If the ROW sheets are at a smaller scale it may be necessary to include station labels at a distance of less than 500 ft. in order to provide sufficient information that provide proper map orientation. Example: 100+00, 103+00.



FONT NAME: font063
TEXT HEIGHT: 0.2400
TEXT WIDTH: 0.2400

P.C. STATION LABEL

Text/Centerline of Survey/P.C. Station Label



Description	Text: P.C. STA. XXX+XX XX
Level	ROW CL Text
Color	□ 0
Weight	ByLevel (1)
Class	Primary
Template	None
Transparency	0

Description	Line
Level	ROW CL Text
Color	0
Line Style	ByLevel (0)
Weight	ByLevel (1)
Class	Primary
Template	None
Transparency	0

P.C. STA. XXX-XX.XX

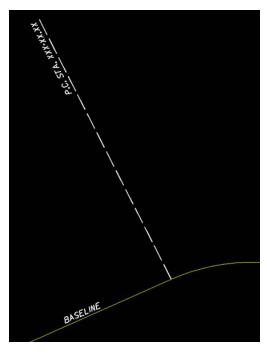
FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

The **Coordinate Label** is required to be placed under the dashed line, below the P.C. Station text.

Refer to the next page for important information regarding this command

The **P.C./P.T./P.I. Station Labels** require manipulation of the cells in order to be placed correctly, considering the rotation, orientation and location of the text. Refer to the explanation below on making these required manipulations.

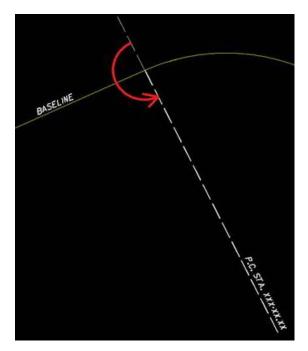
Let's use the image below as an example. The **P.C. Station Label** has been placed on the baseline P.C. and resides in the second quadrant.



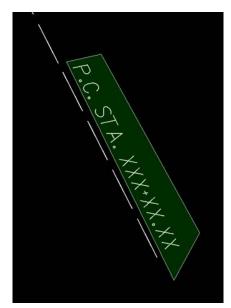
The P.C. Label text obviously needs to be rotated to look like the image below, but without having to drop the cell deeming it non-conforming.



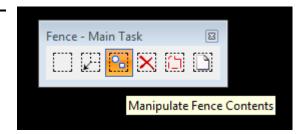
1. Rotate the cell 180° from the baseline.



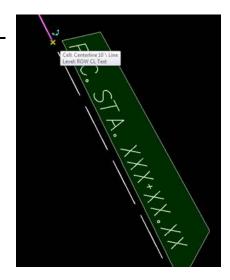
2. Place a fence around the text. Be careful not to include the line within the fence. Using "shape" to fence the text is recommended.



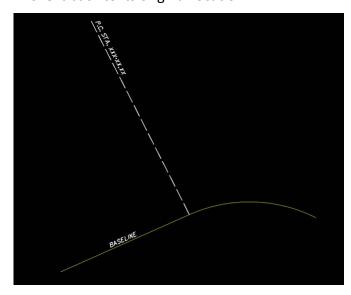
3. In the Fence – Main Task Bar, select Manipulate Fence Contents.



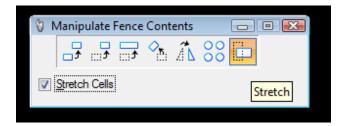
5. **Click** on the dashed line, just before the text, as shown here:



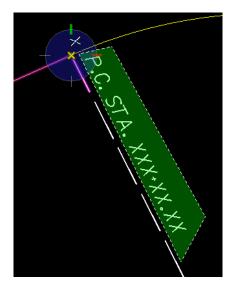
7. **Right-click** to de-select the fence, **select** (highlight) the cell, and move it back to its original location.



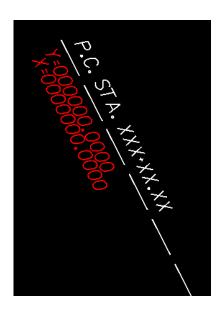
4. The Manipulate Fence Contents window will appear. Select the "Stretch" icon.



6. **Move** the cursor to the end of the dashed line (at the baseline), and **click** to accept location.

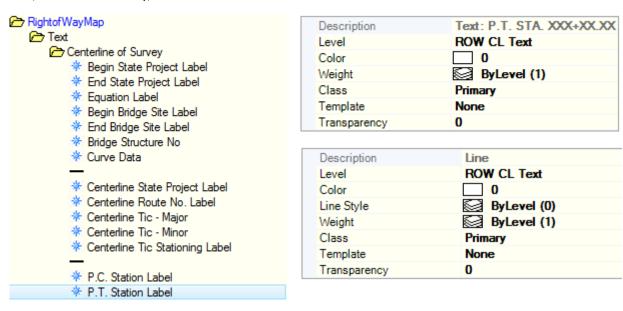


6. **Place** the **Coordinate Label** below the line. Rotate accordingly.



P.T. STATION LABEL

Text/Centerline of Survey/P.T. Station Label



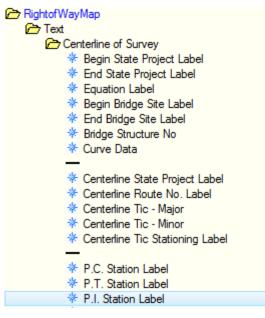
P.T. STA. XXX-XX.XX

FONT NAME: font063 TEXT HEIGHT: 0.1200 TEXT WIDTH: 0.1200

Refer to the Page 5-14 for important information regarding this command.

P.I. STATION LABEL

Text/Centerline of Survey/P.T. Station Label



Description	Text: P.I. STA. XXX+XX.XX
Level	ROW CL Text
Color	0
Weight	ByLevel (1)
Class	Primary
Template	None
Transparency	0

Description	Line
Level	ROW CL Text
Color	0
Line Style	ByLevel (0)
Weight	ByLevel (1)
Class	Primary
Template	None
Transparency	0

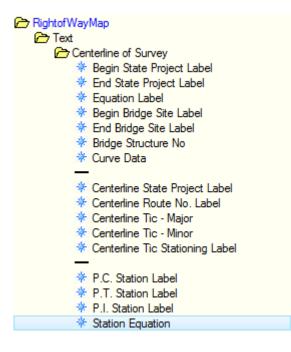
P.I. STA. XXX-XX.XX
Δ = XX*XX'XX.X* XX

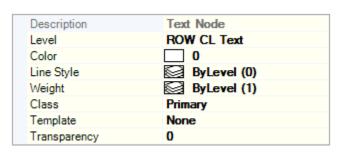
FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

Refer to the Page 5-14 for important information regarding this command.

STATION EQUATION

Text/Centerline of Survey/Station Equation



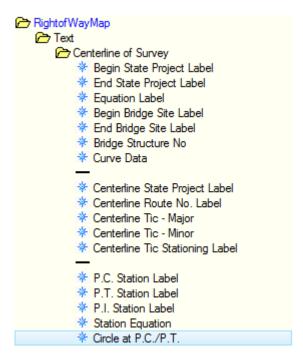




FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

CIRCLE AT P.C./P.T.

Text/Centerline of Survey/Circle at P.C./P.T.



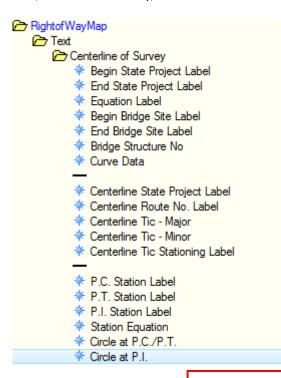
Description	Circle
Level	ROW CL Text
Color	0
Line Style	ByLevel (0)
Weight	ByLevel (1)
Class	Primary
Fill	(none)
Template	None
Transparency	0

Description	Circle
Level	ROW CL Text
Color	O
Line Style	ByLevel (0)
Weight	ByLevel (1)
Class	Primary
Fill	(none)
Template	None
Transparency	0

Drop Cell at the end of the P.C./P.T./P.I. Label, along the baseline.

CIRCLE AT P.I.

Text/Centerline of Survey/Circle at P.I.



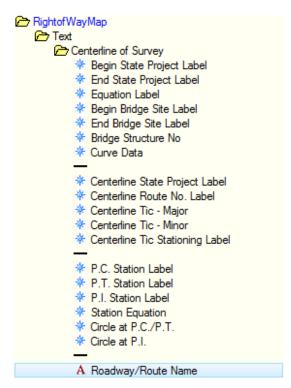


FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

This command is to be used off of the project centerline at the P.I. of a curve that is part of the project centrerline.

ROADWAY/ROUTE NAME

Text/Centerline of Survey/Roadway/Route Name



Description	Text: BEAR CAVE ROAD
Level	ROW ROADWAY Text
Color	ByLevel (0)
Weight	ByLevel (1)
Class	Primary
Template	None
Transparency	0

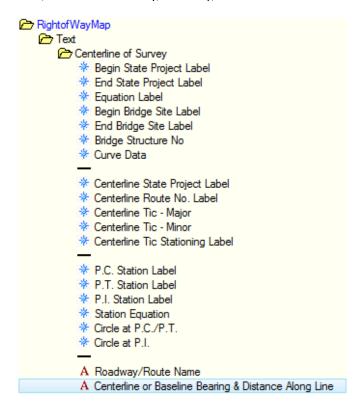
BEAR CAVE ROAD

In the Text Editor window, insert text, move cursor into workspace and select the location.

FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

CENTERLINE OR BASELINE BEARING & DISTANCE ALONG LINE

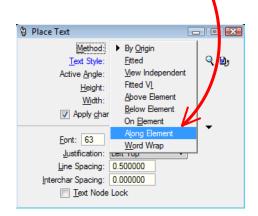
Text/Centerline of Survey/Roadway/Centerline or Baseline Bearing & Distance Along Line



Description	Text: N17°45'15.5"W
Level	ROW CL Text
Color	ByLevel (3)
Weight	ByLevel (1)
Class	Primary
Template	None
Transparency	0
Priority	0



Enter the Bearing and/or Distance in the Text Editor window. Notice the Place Text window. Under **Method**, select **Along Element**, then click the line you are measuring.

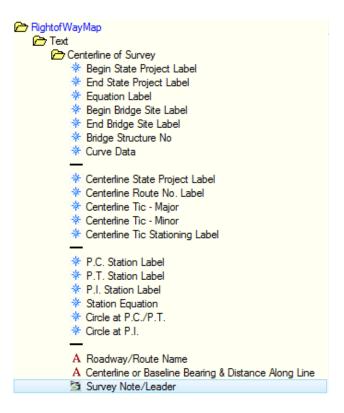


FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

NOTE: The centerline bearing must always be shown to 0.1" as shown in the example above.

SURVEY NOTE/LEADER

Text/Centerline of Survey/Roadway/Survey Note/Leader



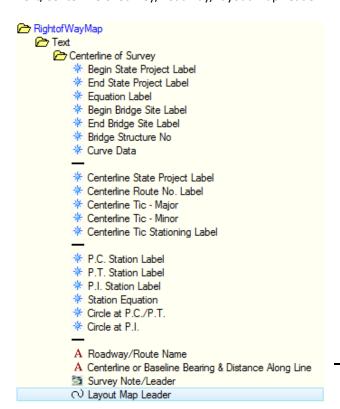
This command is used for any additional call outs or labels needed on the Right of Way Map that in which a command is not provided in the RightofWayMap Feature Table.



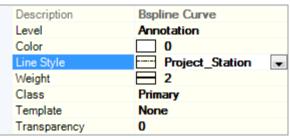
Description	Dimension
Level	ROW DIMN Text
Color	0
Line Style	□ 0
Weight	□ 0
Class	Dimension
Template	None
Transparency	0

LAYOUT MAP LEADER

Text/Centerline of Survey/Roadway/Layout Map Leader



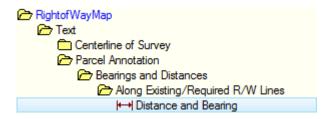


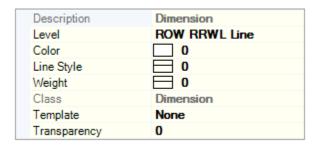


This leader is used for Begin/End State
Project Labels, Bridge/End Bridge Site
Labels, for the Title Sheet, Plan Sheet and
Residual Map. This leader is also available
on the Title Sheet Feature Table.

DISTANCE AND BEARING

Text/Parcel Annotation/Bearings and Distances/Along Existing/Required R/W Lines/Distance and Bearing



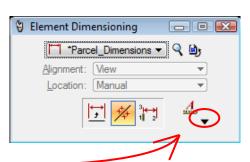


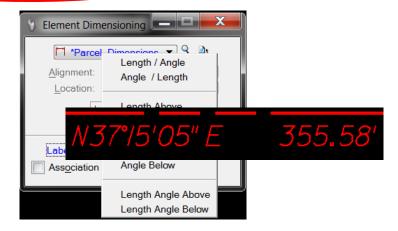


Once you select this command, look in the **Element Dimensioning** window and expand the window by clicking on the arrow.

Once expanded, click the Angle Above or Angle Below selection in the Label Line menu. Then, simply click the line you wish to label. The same procedure applies to the Length. It is always preferable to place the angle to the left of the distance with both being on the same side of the line as shown in the example above or the one shown below.

If there is not enough room to have both bearing and distance on the top/bottom of the line, the Bearing and Distance may be stacked but preferred to be on the same side of the line. See below.







OR



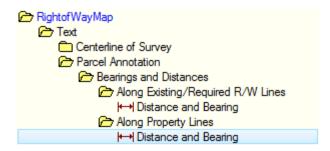
This functions the same for Bearing and Distance along Existing/Required R/W Lines, and Distance and Bearing along Property Lines.

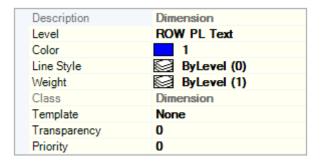
Whenever a Bearing and Distance must be "stacked" above or below a line due to insufficient space, **uncheck** the **Association** box to allow the bearing or distance to be moved without "breaking" the text, allowing it to conform. See the attached Sample Maps for additional allowed orientations.

To change the direction of a bearing (from N00°00′00″E to S00°00′00″W), use key-in: Change Direction, click on the line, move cursor over the arrow and click again.

DISTANCE AND BEARING

Text/Parcel Annotation/Bearings and Distances/Along Property Lines/Distance and Bearing







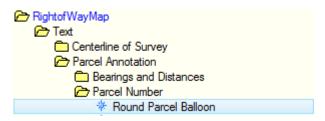
Refer to the previous page for important information regarding this command. This command is to be used in conjunction with the "Property Line with R/W" line feature.

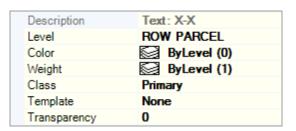


If there is not enough room to have both bearing and distance on the top/bottom of the line, select **Angle / Length**, don't use **Length / Angle**. As shown above.

ROUND PARCEL BALLOON

Text/Parcel Annotation/Parcel Number/Round Parcel Balloon



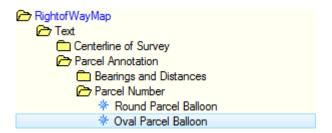


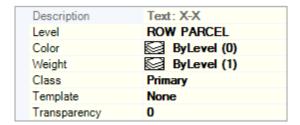


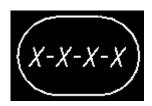
FONT NAME: font063 TEXT HEIGHT: 0.1250 TEXT WIDTH: 0.1250

OVAL PARCEL BALLOON

Text/Parcel Annotation/Parcel Number/Oval Parcel Balloon



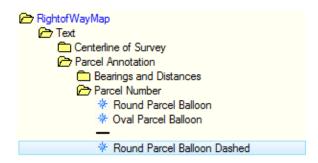


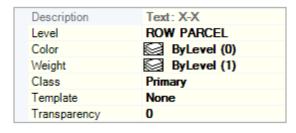


FONT NAME: font063
TEXT HEIGHT: 0.1250
TEXT WIDTH: 0.1250

ROUND PARCEL BALLOON DASHED

Text/Parcel Annotation/Parcel Number/Round Parcel Balloon Dashed



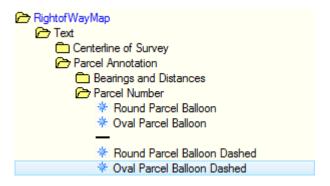


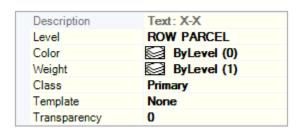


FONT NAME: font063
TEXT HEIGHT: 0.1250
TEXT WIDTH: 0.1250

OVAL PARCEL BALLOON DASHED

Text/Parcel Annotation/Parcel Number/Oval Parcel Balloon Dashed



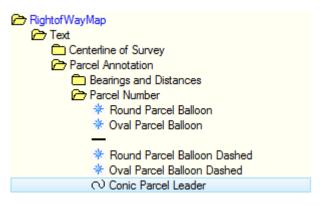


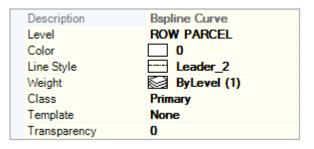


FONT NAME: font063
TEXT HEIGHT: 0.1250
TEXT WIDTH: 0.1250

CONIC PARCEL LEADER

Text/Parcel Annotation/Parcel Number/Conic Parcel Leader





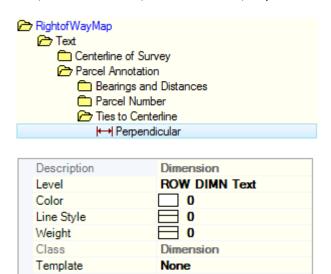


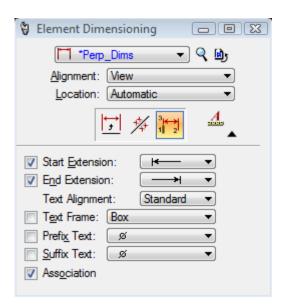
This Leader is used when the Parcel Balloon must reside outside the parcel because it cannot fit inside the parcel.

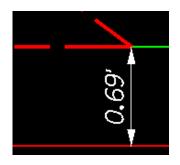
First, click the quadrant of the parcel, then click where the location of the arrowhead will be, then move the cursor to desired curve and click again.

PERPENDICULAR

Text/Parcel Annotation/Ties to Centerline/Perpendicular





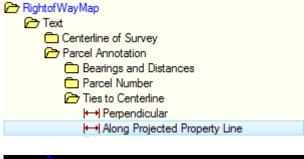


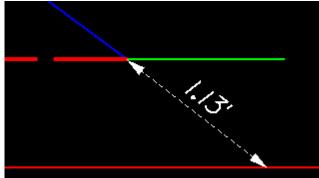
Transparency

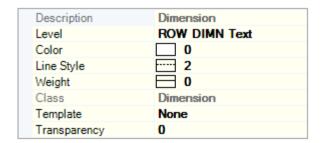
If adding a station to the perpendicular dimension is necessary, use the **Station Add-on** command in the **Ties to Centerline** folder. Enter station manually, rotate to match dimension line, and place the station **BELOW** the dimension line.

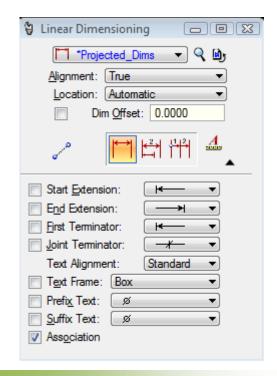
ALONG PROJECTED PROPERTY LINE

Text/Parcel Annotation/Ties to Centerline/Along Projected Property Line





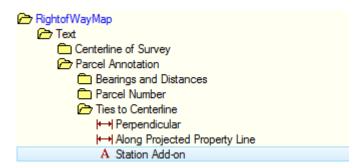


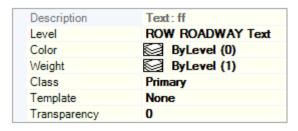


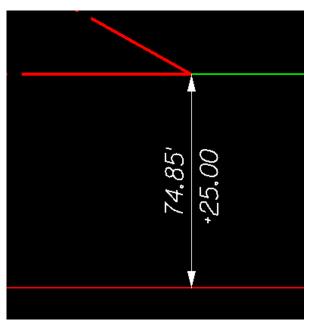
If adding a station to the perpendicular dimension is necessary, use the Station Add-on command in the Ties to Centerline folder. Enter station manually, rotate to match dimension line, and place the station BELOW the dimension line.

STATION ADD-ON

Text/Parcel Annotation/Ties to Centerline/Station Add-on



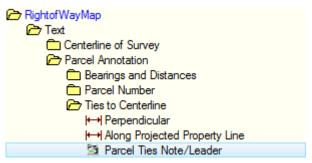


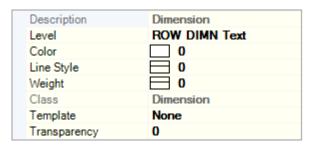


If adding a station to the perpendicular dimension is necessary, use the Station Add-on command in the Ties to Centerline folder. Enter station manually, rotate to match dimension line, and place the station BELOW the dimension line.

PARCEL TIES NOTE/LEADER

Text/Parcel Annotation/Ties to Centerline/Parcel Ties Note/Leader

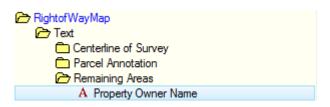




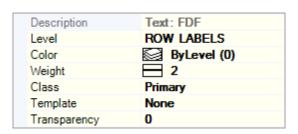


PROPERTY OWNER NAME

Text/Remaining Areas/Property Owner Name



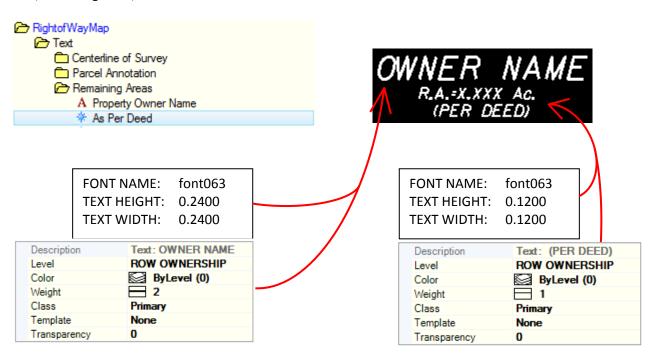




FONT NAME: font063
TEXT HEIGHT: 0.2400
TEXT WIDTH: 0.2400

AS PER DEED

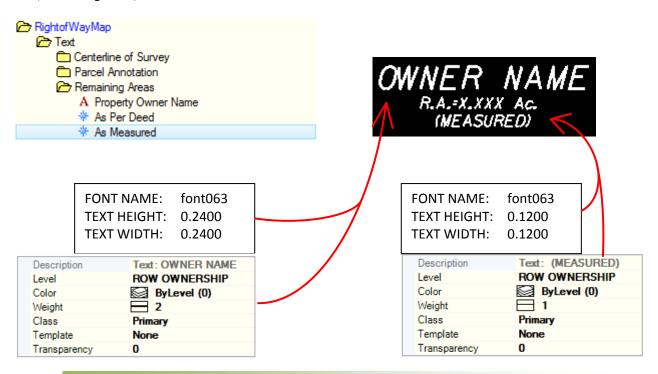
Text/Remaining Areas/As Per Deed



Refer to the Remaining Area After Right of Way Acquisition on Page 1-4 regarding the rules for Remaining Area Precision.

AS MEASURED

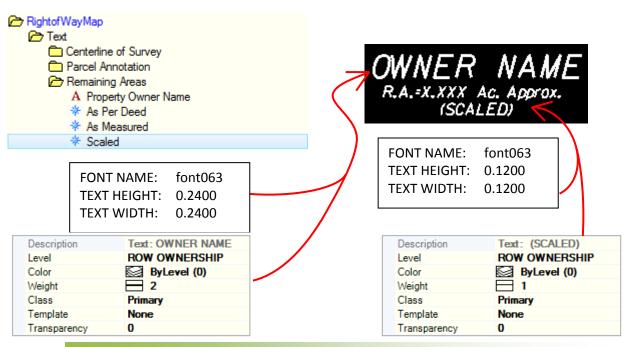
Text/Remaining Areas/As Measured



Refer to the Remaining Area After Right of Way Acquisition on Page 1-4 regarding the rules for Remaining Area Precision.

SCALED

Text/Remaining Areas/Scaled



Refer to the Remaining Area After Right of Way Acquisition on Page 1-4 regarding the rules for Remaining Area Precision.

EXISTING RIGHT OF WAY LABEL

Text/Right of Way/Existing Right of Way Label



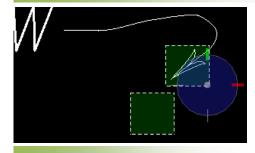


Description	Text: EXISTING R/W
Level	ROW ERWL Text
Color	O
Weight	□ 2
Class	Primary
Template	None
Transparency	0

FONT NAME: font063 TEXT HEIGHT: 0.1200 TEXT WIDTH: 0.1200 The leader in this command, along with all other leader commands, can be manipulated to your specifications by clicking on the "Stretch" icon in the Manipulate toolbox.



Then, draw a fence around the arrowhead and click and hold then drag where you want the leader to be located, then release.

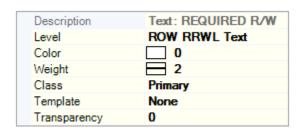


Right click to accept new location.

REQUIRED RIGHT OF WAY LABEL

Text/Right of Way/Required Right of Way Label





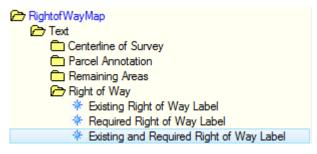


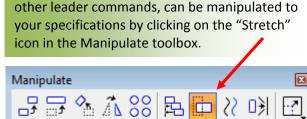
FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

Refer to the information above for helpful hints on this command.

EXISTING AND REQUIRED RIGHT OF WAY LABEL

Text/Right of Way/Existing and Required Right of Way Label

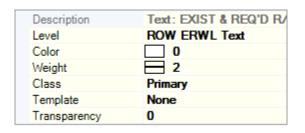


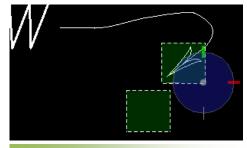


The leader in this command, along with all

EXIST & REO'D R/W

Then, draw a fence around the arrowhead and click and hold then drag where you want the leader to be located, then release.



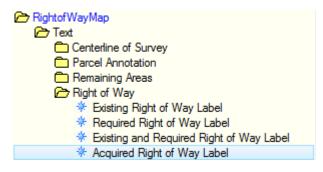


FONT NAME: font063 TEXT HEIGHT: 0.1200 TEXT WIDTH: 0.1200

Right click to accept new location.

ACQUIRED RIGHT OF WAY LABEL

Text/Right of Way/Acquired Right of Way Label



Description	Text Node
Level	ROW ERWL Text
Color	O
Line Style	□ 0
Weight	□ 2
Class	Primary
Template	None
Transparency	0

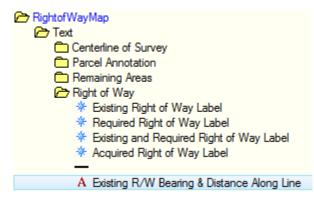


FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

This label is to be used when an "ADV" parcel was purchased using via a "Special Map", and when labeling the previously acquired right of way on an "A" sheet, (Sheet 4-A). It is also used on Right-of-Way Monument Maps.

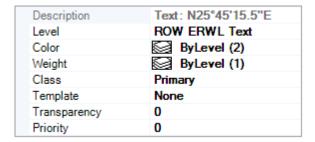
EXISTING R/W BEARING & DISTANCE ALONG LINE

Text/Right of Way/Existing R/W Bearing & Distance Along Line

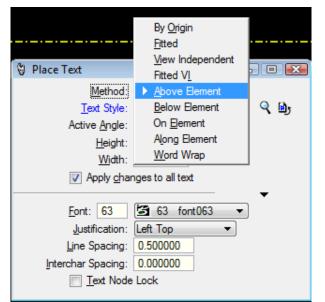


Once you select this command, look in the Place Text window and under the Method menu, there is a list of options. Choose either Above Element or Below Element, depending on what side of the R/W line the Bearing & Distance needs to be.



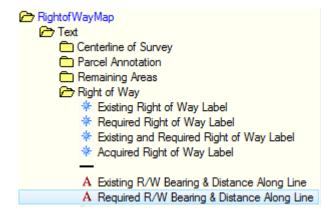


FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200



REQUIRED R/W BEARING & DISTANCE ALONG LINE

Text/Right of Way/Required R/W Bearing & Distance Along Line

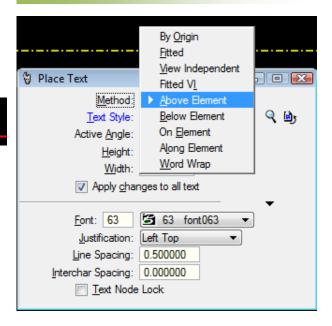


N25°45'15"E

Description	Text: N17°45'15.5"E
Level	ROW RRWL Text
Color	ByLevel (3)
Weight	ByLevel (1)
Class	Primary
Template	None
Transparency	0
Priority	0

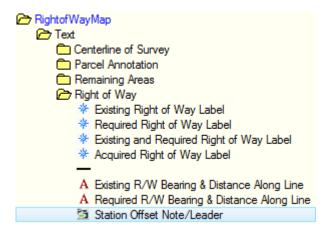
FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

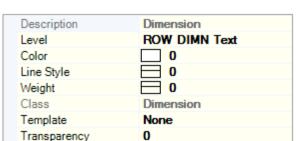
Once you select this command, look in the **Place Text** window and under the **Method** menu, there is a list of options. Choose either **Above Element** or **Below Element**, depending on what side of the R/W line the Bearing & Distance needs to be.

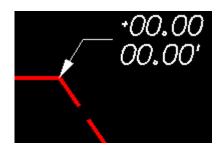


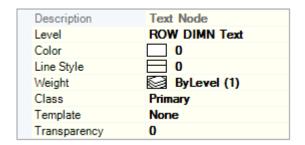
STATION OFFSET NOTE/LEADER

Text/Right of Way/Required R/W Bearing & Distance Along Line



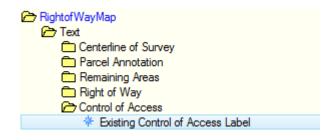




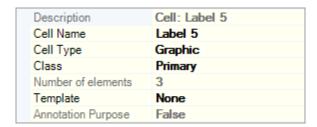


EXISTING CONTROL OF ACCESS LABEL

Text/Control of Access/Existing Control of Access Label



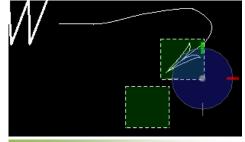




The leader in this command, along with all other leader commands, can be manipulated to your specifications by clicking on the "Stretch" icon in the Manipulate toolbox.



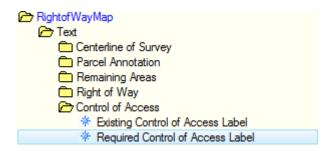
Then, draw a fence around the arrowhead and click and hold then drag where you want the leader to be located, then release.



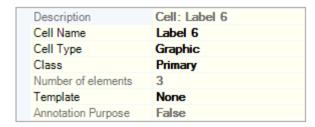
Right click to accept new location.

REQUIRED CONTROL OF ACCESS LABEL

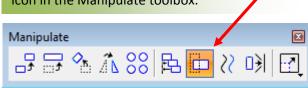
Text/Control of Access/Required Control of Access Label



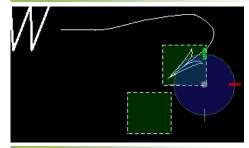




The leader in this command, along with all other leader commands, can be manipulated to your specifications by clicking on the "Stretch" icon in the Manipulate toolbox.



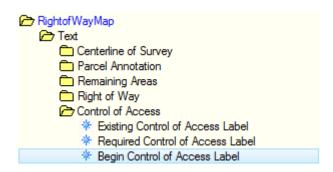
Then, draw a fence around the arrowhead and click and hold then drag where you want the leader to be located, then release.

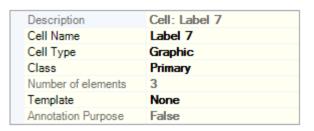


Right click to accept new location.

BEGIN CONTROL OF ACCESS LABEL

Text/Control of Access/Begin Control of Access Label



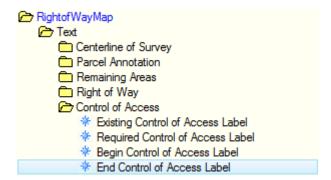




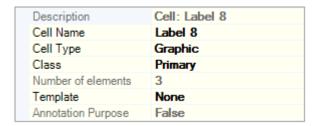
The leader in this command can be manipulated the same as the command above.

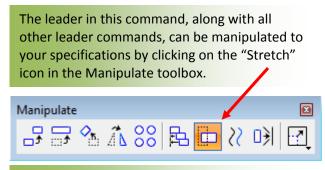
END CONTROL OF ACCESS LABEL

Text/Control of Access/End Control of Access Label

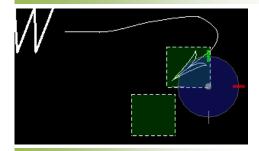








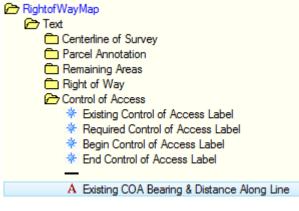
Then, draw a fence around the arrowhead and click and hold then drag where you want the leader to be located, then release.



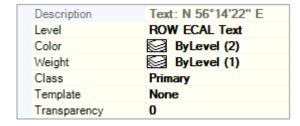
Right click to accept new location.

EXISTING COA BEARING & DISTANCE ALONG LINE

Text/Control of Access/Existing COA Bearing & Distance Along Line

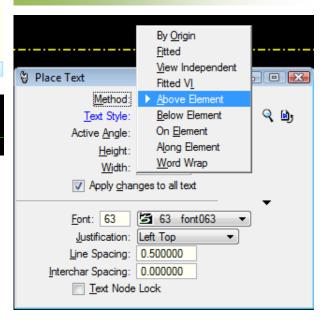






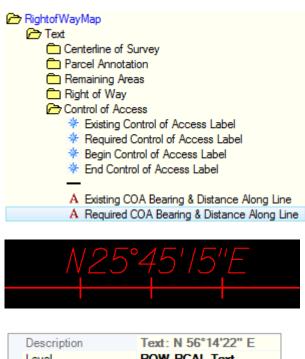
FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

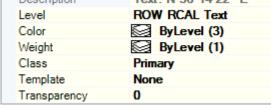
Once you select this command, look in the Place Text window and under the Method menu, there is a list of options. Choose either Above Element or Below Element, depending on what side of the R/W line the Bearing & Distance needs to be.



REQUIRED COA BEARING & DISTANCE ALONG LINE

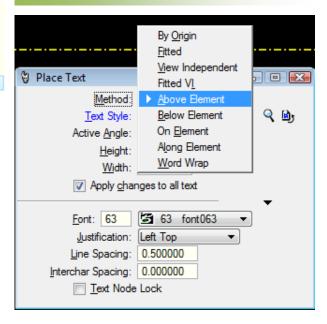
Text/Control of Access/Required COA Bearing & Distance Along Line





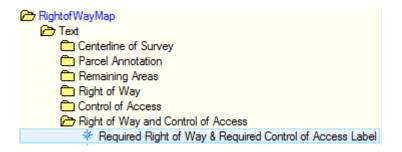
FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

Once you select this command, look in the Place Text window and under the Method menu, there is a list of options. Choose either Above Element or Below Element, depending on what side of the R/W line the Bearing & Distance needs to be.



REQUIRED RIGHT OF WAY & REQUIRED CONTROL OF ACCESS LABEL

Text/Right of Way and Control of Access/Required Right of Way & Required Control of Access Label



FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

REO'D R/W & REO'D C. of A.

Description	Cell: Label 9
Cell Name	Label 9
Cell Type	Graphic
Class	Primary
Number of elements	3
Template	None
Annotation Purpose	False

Description
Level ROW ERWCAL Text
Color 0
Line Style 0
Weight 2
Class Primary
Template None
Transparency 0

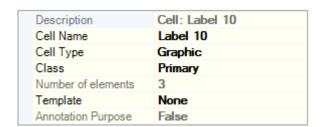
EXISTING RIGHT OF WAY & EXISTING CONTROL OF ACCESS LABEL

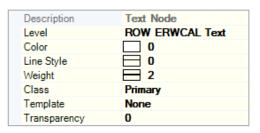
Text/Right of Way and Control of Access/Existing Right of Way & Existing Control of Access Label



FONT NAME: font063 TEXT HEIGHT: 0.1200 TEXT WIDTH: 0.1200

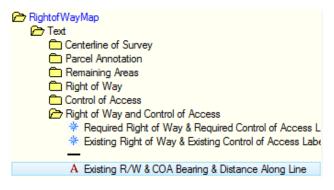
EXIST R/W & EXIST C. of A.

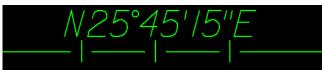




EXISTING R/W & COA BEARING & DISTANCE ALONG LINE

Text/Right of Way and Control of Access/Existing R/W & COA Bearing & Distance Along Line

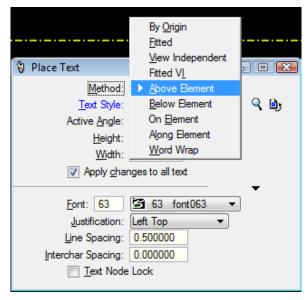




Description	Text: N17°45'15.5"E
Level	ROW ECAL Text
Color	ByLevel (2)
Weight	ByLevel (1)
Class	Primary
Template	None
Transparency	0
Priority	0

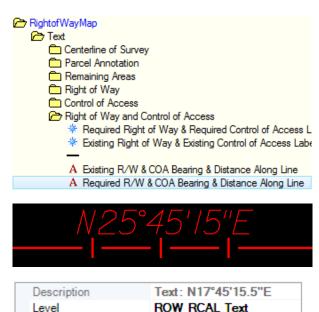
FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

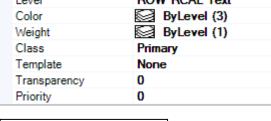
Once you select this command, look in the **Place Text** window and under the **Method** menu, there is a list of options. Choose either **Above Element** or **Below Element**, depending on what side of the R/W line the Bearing & Distance needs to be.



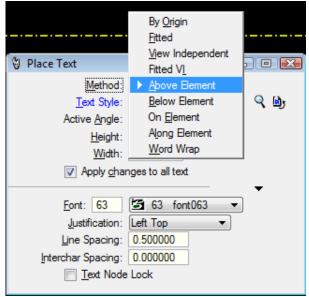
REQUIRED R/W & COA BEARING & DISTANCE ALONG LINE

Text/Right of Way and Control of Access/Required R/W & COA Bearing & Distance Along Line





FONT NAME: font063 TEXT HEIGHT: 0.1200 TEXT WIDTH: 0.1200 Once you select this command, look in the Place Text window and under the Method menu, there is a list of options. Choose either Above Element or Below Element, depending on what side of the R/W line the Bearing & Distance needs to be.



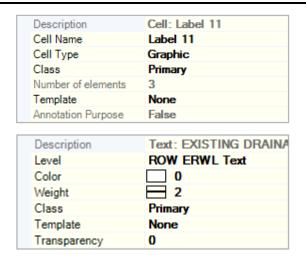
EXISTING DRAINAGE SERVITUDE

Text/Servitudes/Existing Drainage Servitude

RightofWayMap
Text
Centerline of Survey
Parcel Annotation
Remaining Areas
Right of Way
Control of Access
Right of Way and Control of Access
Servitudes
Existing Drainage Servitude

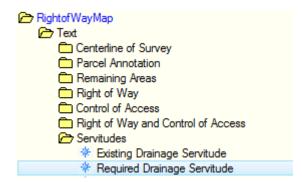


FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200



REQUIRED DRAINAGE SERVITUDE

Text/Servitudes/Required Drainage Servitude



REQUIRED DRAINAGE SERVITUDE

FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

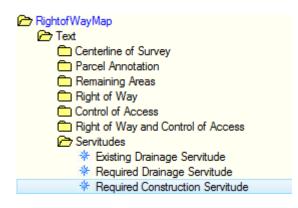
Description	Text: REQUIRED DRAIN
Level	ROW ERWL Text
Color	0
Weight	□ 2
Class	Primary
Template	None
Transparency	0

Description	Cell: Label 12
Cell Name	Label 12
Cell Type	Graphic
Class	Primary
Number of elements	3
Template	None
Annotation Purpose	False

Refer to Page 5-39 for helpful information regarding this command.

REQUIRED CONSTRUCTION SERVITUDE

Text/Servitudes/Required Construction Servitude



 Description
 Cell: Label 13

 Cell Name
 Label 13

 Cell Type
 Graphic

 Class
 Primary

 Number of elements
 3

 Template
 None

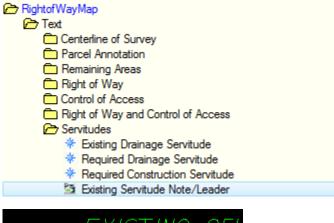
 Annotation Purpose
 False

REQUIRED CONSTRUCTION SERVITUDE -

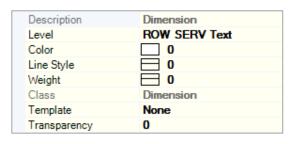
FONT NAME: font063 TEXT HEIGHT: 0.1200 TEXT WIDTH: 0.1200

EXISTING SERVITUDE NOTE/LEADER

Text/Servitudes/Existing Servitude Note/Leader





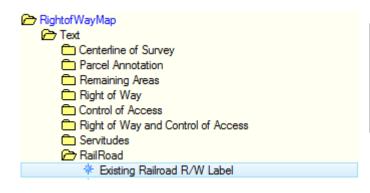


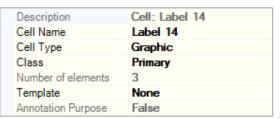
Description	Text Node
Level	ROW SERV Text
Color	2
Line Style	□ 0
Weight	□ 0
Class	Primary
Template	None
Transparency	0

FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

EXISTING RAILROAD R/W LABEL

Text/Railroad/Existing Railroad R/W Label



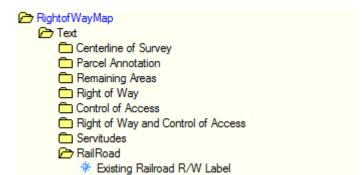


FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200



EXISTING COMMON R/W LABEL

Text/Railroad/Existing Common R/W Label



 Description
 Cell: Label 15

 Cell Name
 Label 15

 Cell Type
 Graphic

 Class
 Primary

 Number of elements
 3

 Template
 None

 Annotation Purpose
 False

FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

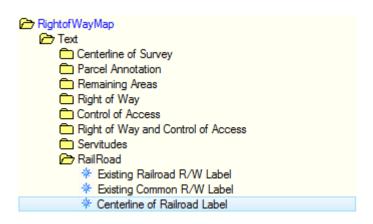
EXISTING COMMON R/W

Existing Common R/W Label

Refer to Page 5-39 for helpful information regarding this command.

CENTERLINE OF RAILROAD LABEL

Text/Railroad/Centerline of Railroad Label



 Description
 Cell: Label 20

 Cell Name
 Label 20

 Cell Type
 Graphic

 Class
 Primary

 Number of elements
 3

 Template
 None

 Annotation Purpose
 False

Description
Level
ROW CL Text
Color
Weight
Class
Primary
Template
Transparency
O

Color
None
Text: ~ XXXXXX RAILRO
ROW CL Text

ByLevel (1)

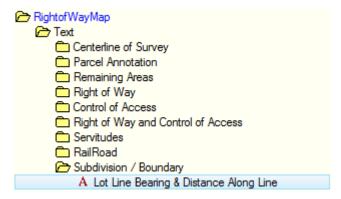
Primary
Template
Transparency
O



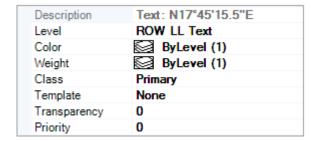
FONT NAME: font063 TEXT HEIGHT: 0.1200 TEXT WIDTH: 0.1200

LOT LINE BEARING & DISTANCE ALONG LINE

Text/Subdivision / Boundary/Lot Line bearing & Distance Along Line

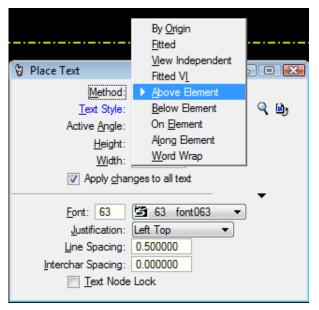


N17°45′15″E



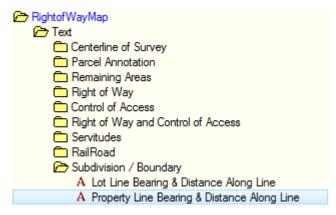
FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

Once you select this command, look in the Place Text window and under the Method menu, there is a list of options. Choose either Above Element or Below Element, depending on what side of the R/W line the Bearing & Distance needs to be.



PROPERTY LINE BEARING & DISTANCE ALONG LINE

Text/Subdivision / Boundary/Property Line Bearing & Distance Along Line

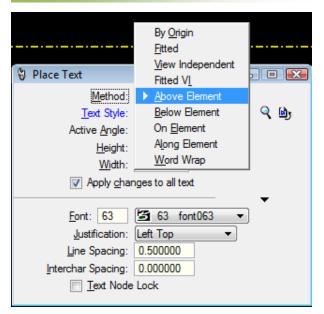




Description	Text: N17°45'15.5"E
Level	ROW PL Text
Color	ByLevel (1)
Weight	ByLevel (1)
Class	Primary
Template	None
Transparency	0
Priority	0

FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

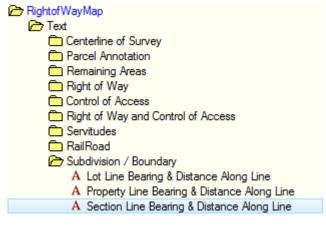
Once you select this command, look in the Place Text window and under the Method menu, there is a list of options. Choose either Above Element or Below Element, depending on what side of the R/W line the Bearing & Distance needs to be.



Seldom is a distance shown on the portion of the property line that is not part of the taking parcel. The distance is usually provided when showing the dimension to a rear property corner when a monument is shown as the corner.

SECTION LINE BEARING & DISTANCE ALONG LINE

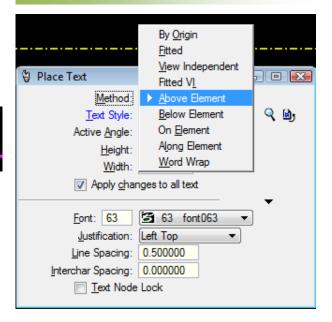
Text/Subdivision / Boundary/Section Line bearing & Distance Along Line





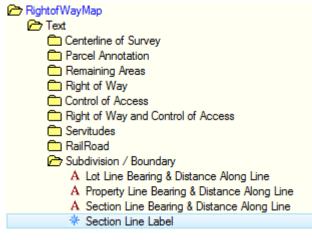
Description	Text: N17°45'15.5"E
Level	ROW SL Text
Color	ByLevel (5)
Weight	ByLevel (1)
Class	Primary
Template	None
Transparency	0
Priority	0

FONT NAME: font063 TEXT HEIGHT: 0.1200 TEXT WIDTH: 0.1200 Once you select this command, look in the Place Text window and under the Method menu, there is a list of options. Choose either Above Element or Below Element, depending on what side of the R/W line the Bearing & Distance needs to be.



SECTION LINE LABEL

Text/Subdivision / Boundary/Section Line Label



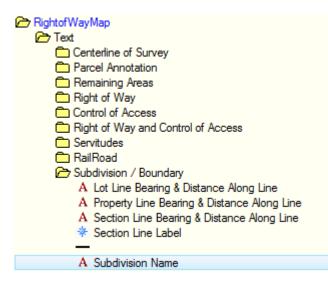
Description	Cell: Label 23
Cell Name	Label 23
Cell Type	Graphic
Class	Primary
Number of elements	2
Template	None
Annotation Purpose	False
Description	Text: SECTION XX
Level	ROW SL Text
Color	O
Weight	□ 2
Class	Primary
Template	None
Transparency	0



FONT NAME: font063
TEXT HEIGHT: 0.1800
TEXT WIDTH: 0.1800

SUBDIVISION NAME

Text/Subdivision / Boundary/Subdivision Name



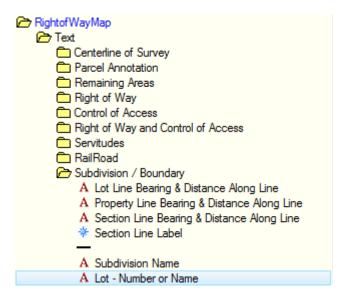
Description
Level ROW LABELS
Color ByLevel (0)
Weight 2
Class Primary
Template None
Transparency 0



FONT NAME: font063
TEXT HEIGHT: 0.1800
TEXT WIDTH: 0.1800

LOT – NUMBER OR NAME

Text/Subdivision / Boundary/Lot - Number or Name



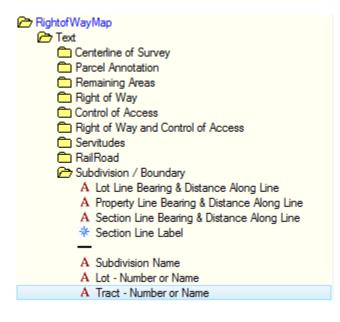
Description	Text: LOT 2
Level	ROW LABELS
Color	ByLevel (0)
Weight	ByLevel (1)
Class	Primary
Template	None
Transparency	0

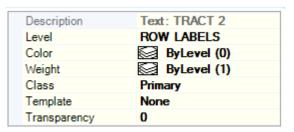
FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200



TRACT - NUMBER OR NAME

Text/Subdivision / Boundary/Tract – Number or Name



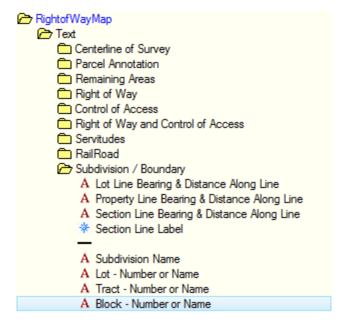


FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

TRACT 2

BLOCK – NUMBER OR NAME

Text/Subdivision / Boundary/Block – Number or Name



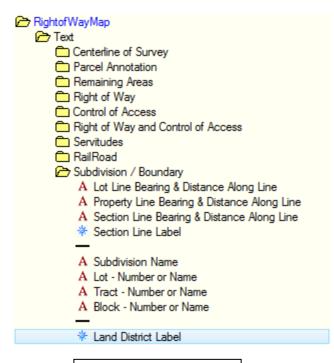
Description	Text: BLOCK 2
Level	ROW LABELS
Color	ByLevel (0)
Weight	ByLevel (1)
Class	Primary
Template	None
Transparency	0

BLOCK 2

FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

LAND DISTRICT LABEL

Text/Subdivision / Boundary/Land District Label



FONT NAME: font063
TEXT HEIGHT: 0.2400
TEXT WIDTH: 0.2400

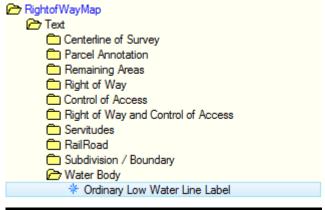
Description	Cell: Border 5
Cell Name	Border 5
Cell Type	Graphic
Class	Primary
Number of elements	1
Template	None
Annotation Purpose	False

Description	Text Node
Level	ROW BORDER SHEET
Color	0
Line Style	□ 0
Weight	⊟ 3
Class	Primary
Template	None
Transparency	0

? LAND DISTRICT T?S - R?E SECTIONS ? & ?

ORDINARY LOW WATER LINE LABEL

Text/Water Body/Ordinary Low Water Line Label



Description	Cell: Label 18
Cell Name	Label 18
Cell Type	Graphic
Class	Primary
Number of elements	3
Template	None
Annotation Purpose	False

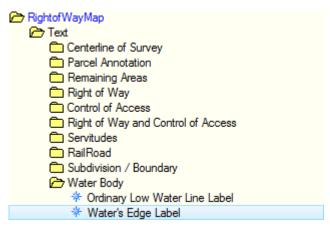
FONT NAME: font063
TEXT HEIGHT: 0.1000
TEXT WIDTH: 0.1000

ORDINARY LOW WATER LINE

Refer to Page 5-39 for helpful information regarding this command.

WATER'S EDGE LABEL

Text/Water Body/Water's Edge Label



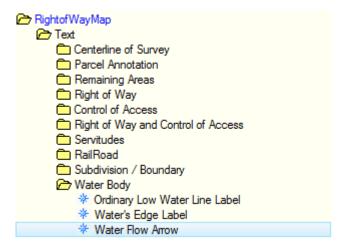
Cell: Label 19
Label 19
Graphic
Primary
3
None
False

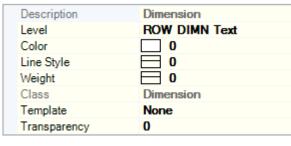
FONT NAME: font063
TEXT HEIGHT: 0.1000
TEXT WIDTH: 0.1000



WATER FLOW ARROW

Text/Water Body/Water Flow Arrow

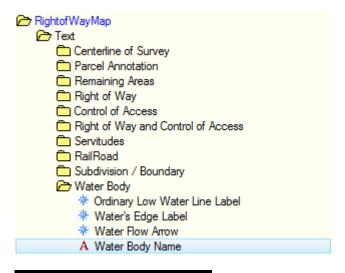


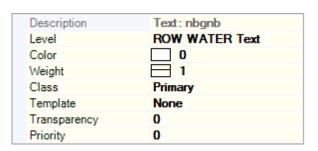




WATER BODY NAME

Text/Water Body/Water Body Name



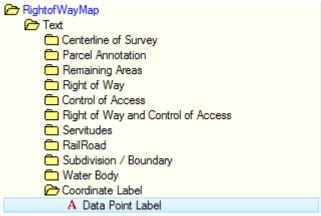


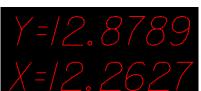
FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200



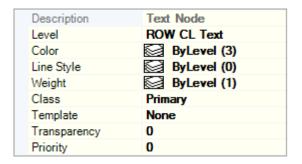
DATA POINT LABEL

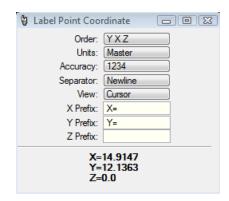
Text/Coordinate Label/Data Point Label





FONT NAME: font063 TEXT HEIGHT: 0.1200 TEXT WIDTH: 0.1200



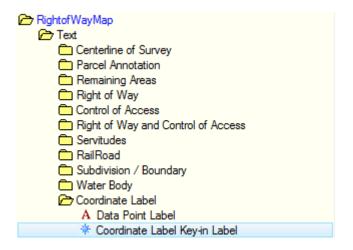


This command is a Label Point Coordinate. It automatically depicts the coordinate. Snap the origin to the spot of the desired coordinate and then move the text to the preferred location.

If working in a 3D seed file, the "Z" will appear. All R/W Maps should be done in 2D.

COORDINATE LABEL KEY-IN LABEL

Text/Coordinate Label/Coordinate Label Key-in Label





FONT NAME: font063
TEXT HEIGHT: 0.1200
TEXT WIDTH: 0.1200

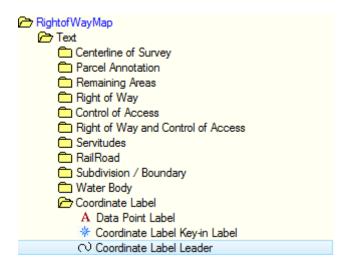
Description	Cell: Label 17
Cell Name	Label 17
Cell Type	Graphic
Class	Primary
Number of elements	2
Template	None
Annotation Purpose	False

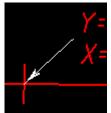
Description	Text: Y=000000.0000
Level	ROW CL Text
Color	ByLevel (3)
Weight	ByLevel (1)
Class	Primary
Template	None
Transparency	0
Priority	0

This command requires you to enter the coordinates manually. Double-click the cell to enter text.

COORDINATE LABEL LEADER

Text/Coordinate Label/Coordinate Label Leader

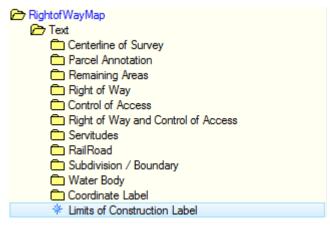




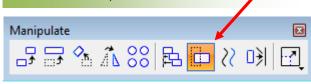
Description	Line
Level	ROW CL Text
Color	O
Line Style	Leader_1
Weight	□ 0
Class	Primary
Template	None
Transparency	0
Priority	0

LIMITS OF CONSTRUCTION LABEL

Text/Limits of Construction Label



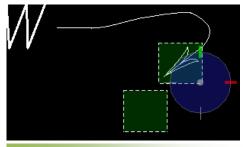
The leader in this command, along with all other leader commands, can be manipulated to your specifications by clicking on the "Stretch" icon in the Manipulate toolbox.



Then, draw a fence around the arrowhead and click and hold then drag where you want the leader to be located, then release.

LIMITS OF CONSTRUCTION

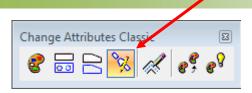
Description	Cell: Label 16
Cell Name	Label 16
Cell Type	Graphic
Class	Primary
Number of elements	3
Template	None
Annotation Purpose	False



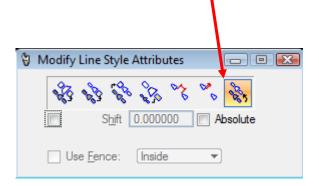
Text Node Description ROW LOC Level Color 0 0 Line Style **0** Weight **Primary** Class None Template Transparency 0 0 Priority

LINES

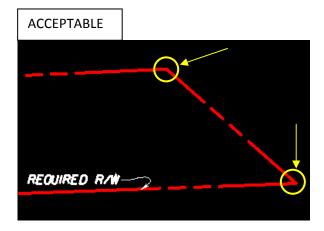
When inserting lines with certain linestyles associated with it, you will most certainly have to move the linestyle up or down the line to prevent it from appearing on a P.I., Intersection, or other unwanted areas. This can be done by selecting the **Modify Line Style Attributes** icon in the **Change Attributes Classic** toolbox.

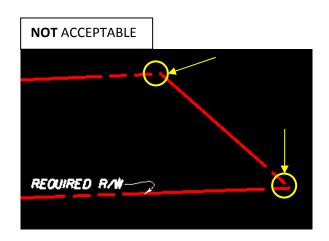


Once selected, the Modify Line Style Attributes window appears. Select the Shift icon.



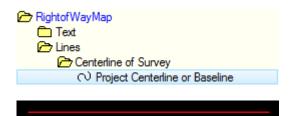
Then, click on the line you want to modify, and move the cursor along the line until the linestyle location is in the desired location. Then, click again to accept changes.

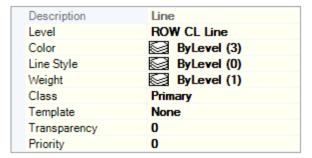




PROJECT CENTERLINE OR BASELINE

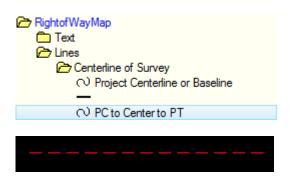
Lines/Centerline of Survey/Project Centerline or Baseline

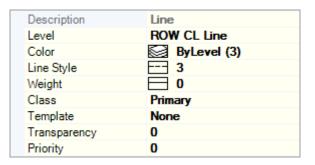




PC TO CENTER TO PT

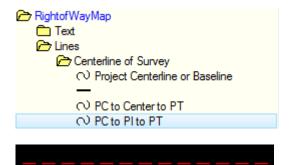
Lines/Centerline of Survey/PC to Center to PT

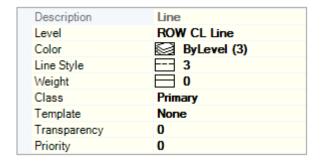




PC TO PI TO PT

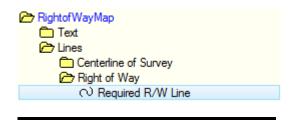
Lines/Centerline of Survey/PC to PI to PT



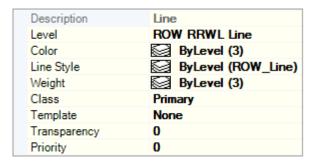


REQUIRED R/W LINE

Lines/Right of Way/Required R/W Line

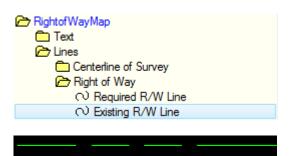


Refer to Page 5-59 for important information regarding this command.

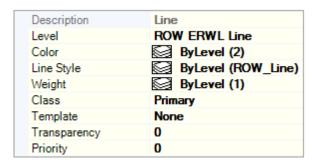


EXISTING R/W LINE

Lines/Right of Way/Existing R/W Line

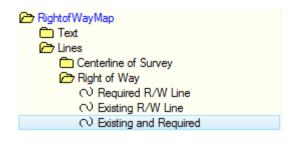


Refer to Page 5-59 for important information regarding this command.

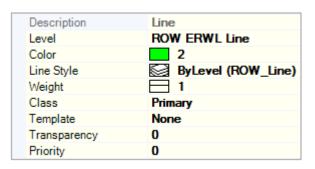


EXISTING AND REQUIRED R/W LINE

Lines/Right of Way/Existing and Required R/W Line

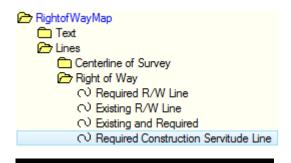


Refer to **Page 5-59** for important information regarding this command.



REQUIRED CONSTRUCTION SERVITUDE LINE

Lines/Right of Way/Required Construction Servitude Line

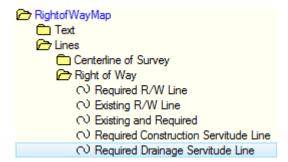


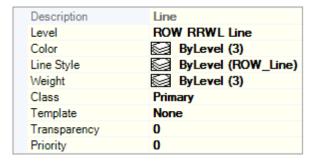
Description **ROW RRWL Line** Level ByLevel (3) Color Line Style ByLevel (ROW_Line) Weight ByLevel (3) Class **Primary** Template None Transparency 0 Priority 0

Refer to Page 5-59 for important information regarding this command.

REQUIRED DRAINAGE SERVITUDE LINE

Lines/Right of Way/Required Drainage Servitude Line

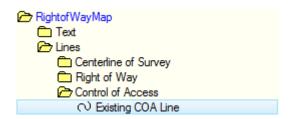




Refer to Page 5-59 for important information regarding this command.

EXISTING COA LINE

Lines/Right of Way/Existing COA Line



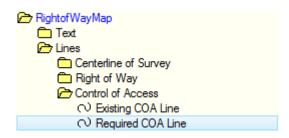
Refer to Page 5-59 for important information regarding this command.



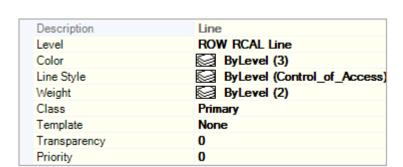
Description	Line
Level	ROW ECAL Line
Color	ByLevel (2)
Line Style	ByLevel (Control_of_Access)
Weight	ByLevel (0)
Class	Primary
Template	None
Transparency	0
Priority	0

REQUIRED COA LINE

Lines/Control of Access/Required COA Line

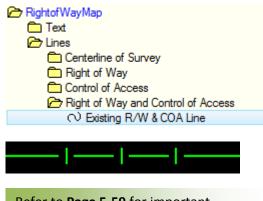


Refer to Page 5-59 for important information regarding this command.



EXISTING R/W & COA LINE

Lines/Right of Way and Control of Access/Existing R/W & COA Line

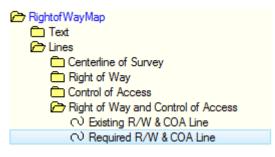


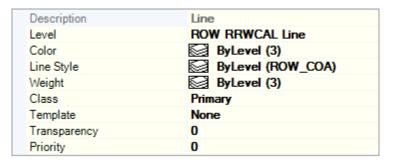
Description Line **ROW ERWCAL Line** Level Color ByLevel (2) Line Style ByLevel (ROW_COA) Weight ByLevel (1) **Primary** Class Template None Transparency 0 0 Priority

Refer to **Page 5-59** for important information regarding this command.

REQUIRED R/W & COA LINE

Lines/Right of Way and Control of Access/Required R/W & COA Line

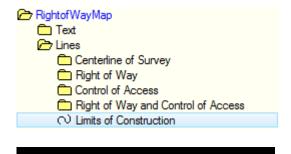






LIMITS OF CONSTRUCTION

Lines/Limits of Construction

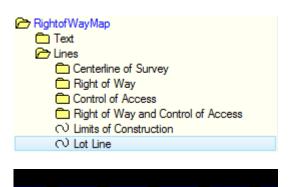


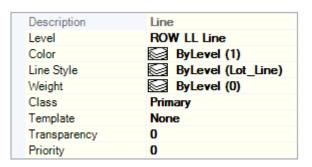
Description Line Level ROW LOC Color ByLevel (4) ByLevel (Limits_of_Construct Line Style ByLevel (0) Weight Class **Primary** Template None Transparency 0 Priority 0

Refer to Page 5-59 for important information regarding this command.

LOT LINE

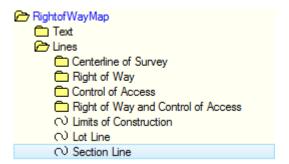
Lines/Lot Line





SECTION LINE

Lines/Section Line

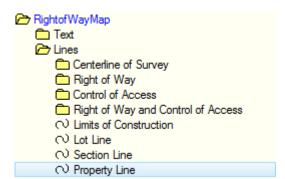


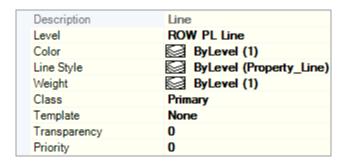
Description	Line
Level	ROW SL Line
Color	ByLevel (5)
Line Style	ByLevel (Section_Line)
Weight	ByLevel (4)
Class	Primary
Template	None
Transparency	0
Priority	0

Refer to Page 5-59 for important information regarding this command.

PROPERTY LINE

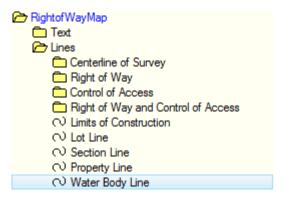
Lines/Property Line

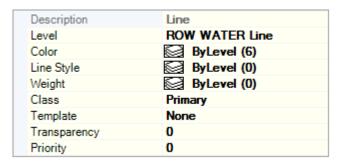




WATER BODY LINE

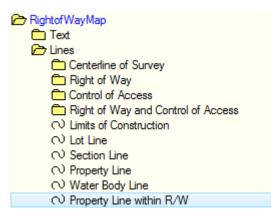
Lines/Water Body Line

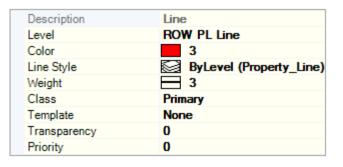




PROPERTY LINE WITHIN R/W

Lines/Property Line within R/W

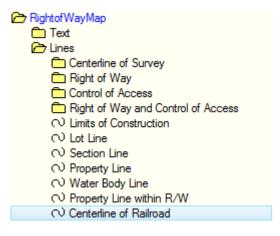


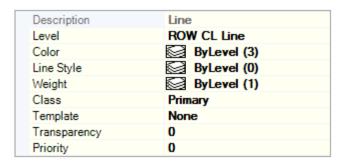




CENTERLINE OF RAILROAD

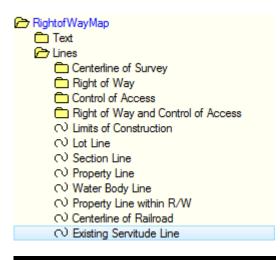
Lines/Centerline of Railroad

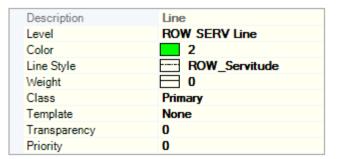




EXISTING SERVITUDE LINE

Lines/Existing Servitude Line

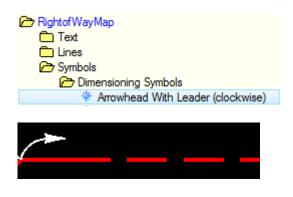


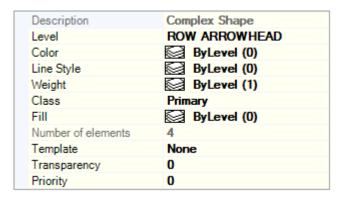


SYMBOLS

ARROWHEAD WITH LEADER (CLOCKWISE)

Symbols/Dimensioning Symbols/Arrowhead with Leader (clockwise)

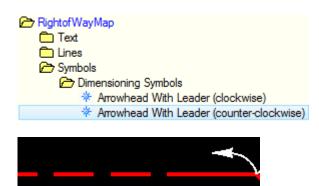


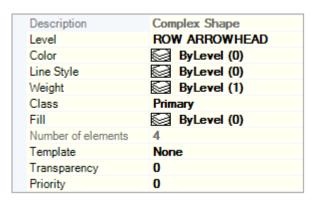


Description	Cell: Parcel_Arrow_1
Cell Name	Parcel_Arrow_1
Cell Type	Graphic
Class	Primary
Number of elements	4
Template	None
Annotation Purpose	False

ARROWHEAD WITH LEADER (COUNTER-CLOCKWISE)

Symbols/Dimensioning Symbols/Arrowhead with Leader (counter-clockwise)

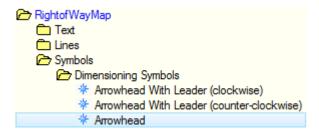


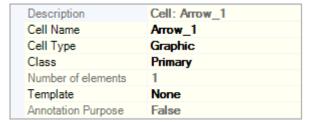


Description	Cell: Parcel_Arrow_2
Cell Name	Parcel_Arrow_2
Cell Type	Graphic
Class	Primary
Number of elements	2
Template	None
Annotation Purpose	False

ARROWHEAD

Symbols/Dimensioning Symbols/Arrowhead



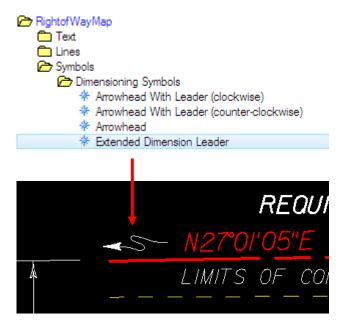


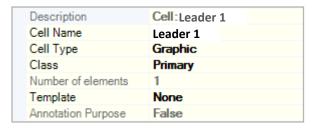


Description	Complex Shape
Level	ROW ARROWHEAD
Color	ByLevel (0)
Line Style	ByLevel (0)
Weight	ByLevel (1)
Class	Primary
Fill	ByLevel (0)
Number of elements	4
Template	None
Transparency	0
Priority	0

Extension Dimension Leader

Symbols/Dimensioning Symbols/Extension Dimension Leader



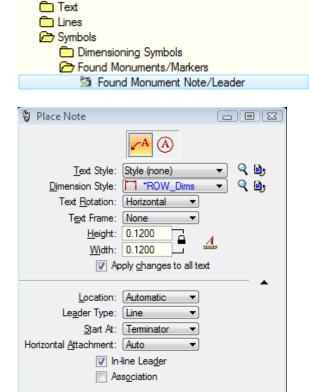


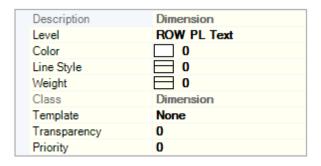
Description	Complex Shape
Level	ROW ARROWHEAD
Color	O
Line Style	ByLevel (0)
Weight	□ 0
Class	Primary
Template	None
Transparency	0
Annotation Purpose	False
Priority	0

FOUND MONUMENT NOTE/LEADER

RightofWayMap

Symbols/Found Monuments/Markers/Found Monument Note/Leader

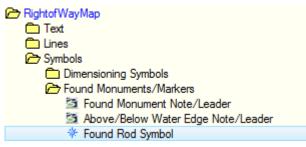


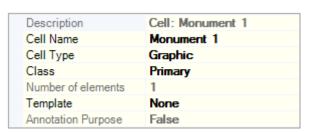




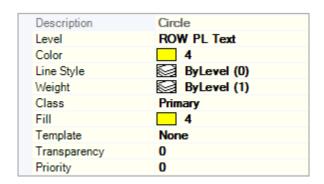
FOUND ROD SYMBOL

Symbols/Found Monuments/Markers/Found Rod Symbol



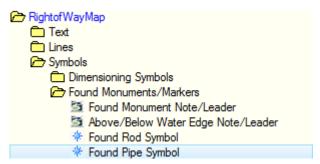


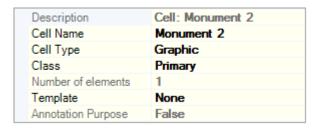




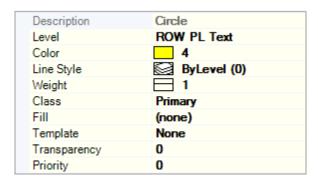
FOUND PIPE SYMBOL

Symbols/Found Monuments/Markers/Found Pipe Symbol



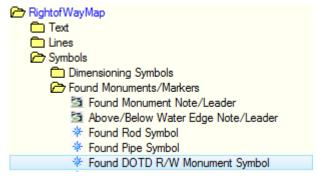




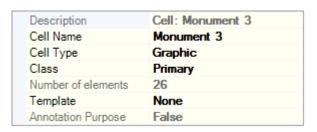


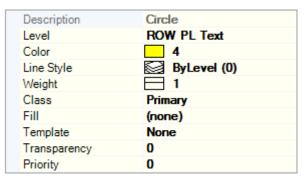
FOUND DOTD R/W MONUMENT SYMBOL

Symbols/Found Monuments/Markers/Found DOTD Monument Symbol



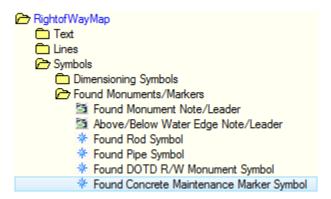




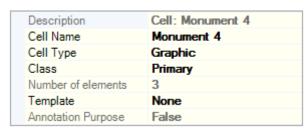


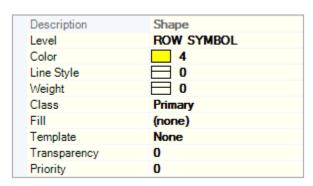
FOUND CONCRETE MAINTENANCE MARKER SYMBOL

Symbols/Found Monuments/Markers/Found Concrete Maintenance Marker Symbol









NORTH ARROW

Symbols/North Arrow



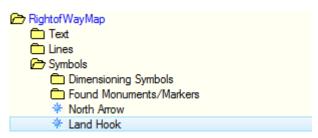


Description	Cell: North Arrow
Cell Name	North Arrow
Cell Type	Graphic
Class	Primary
Number of elements	7
Template	None
Annotation Purpose	False

Description	Line
Level	ROW BORDER SHEET
Color	ByLevel (0)
Line Style	ByLevel (0)
Weight	ByLevel (1)
Class	Primary
Template	None
Transparency	0
Priority	0

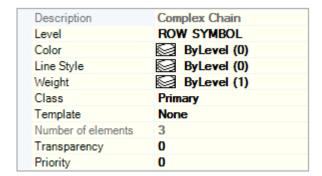
LAND HOOK

Symbols/Land Hook



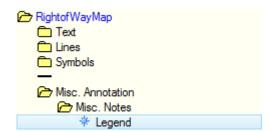


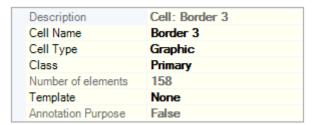
Description	Cell: Land Hook
Cell Name	Land Hook
Cell Type	Graphic
Class	Primary
Number of elements	1
Template	None
Annotation Purpose	False



LEGEND

Misc. Annotation/Misc. Notes/Legend

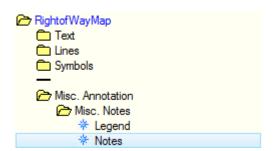






NOTES

Misc. Annotation/Misc. Notes/Notes

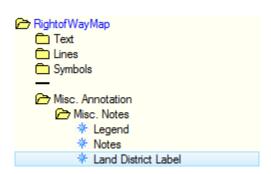


Description
Cell: Border 2
Cell Name
Border 2
Cell Type
Class
Primary
Number of elements
Template
Annotation Purpose
Cell: Border 2
Graphic
Primary
None
False

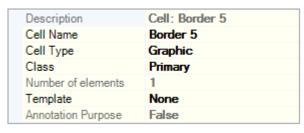
NOTES: I. ALL PIPES AND MONUMENTS	SHOWN HEREON WERE FOUND	2.
2. THE COORDINATES AND BELLOUISIANA STATE PLANE COTO CONVERT FROM GRID BELUSE: XX*XX'XX.X" + + + + - + + - + + + + + + +	COORDINATE SYSTEM, XXXXX ZO	BASED ON ONE (NAD XX (XXXX)EPOCH XXXX.XX)
BASE STATIONS:		
STATION.PID. DESIGNATION LAT=NXX"XX'XX.XXXXX" LONG=WXXX"XX'XX.XXXXX" Y=XXXXXX.XX X=XXXXXX.XX		
	RIZONTAL GROUND DISTANCES. RIVED FROM COORDINATES SH STANCES. USE SCALE FACTOR.	

LAND DISTRICT LABEL

Misc. Annotation/Misc. Notes/Land District Label



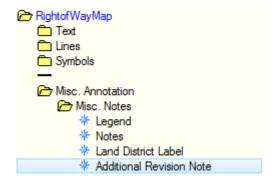


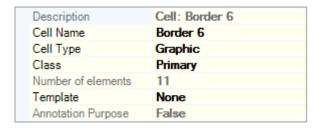


Description	Text Node
Level	ROW BORDER SHEET
Color	O
Line Style	□ 0
Weight	⊟ 3
Class	Primary
Template	None
Transparency	0
Priority	0

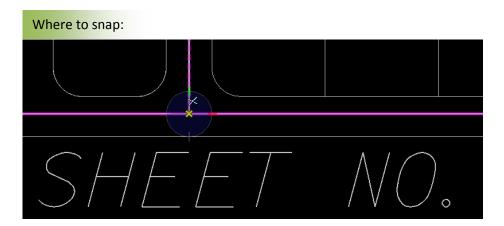
ADDITIONAL REVISION NOTE

Misc. Annotation/Misc. Notes/Additional Revision Note

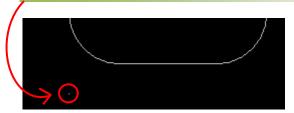






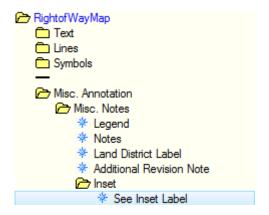


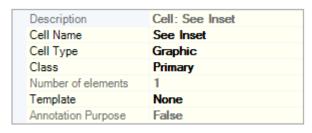
If another Revision note is needed, there is a cell origin that is located on the bottom-left of the cell. Simply snap to the cell origin of the first Revision Note.

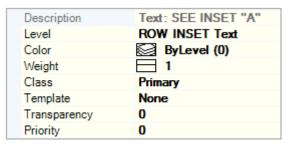


SEE INSET LABEL

Misc. Annotation/Misc. Notes/Inset/See Inset Label





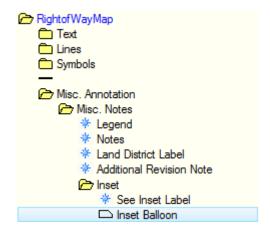


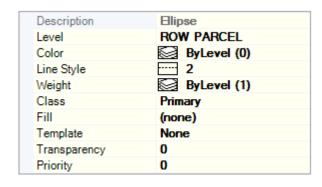
SEE INSET "A"

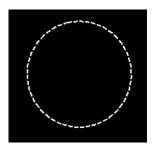
The leader used for this command is located two commands below this one in the same folder, called **Conic Inset Leader**.

INSET BALLOON

Misc. Annotation/Misc. Notes/Inset/Inset Balloon



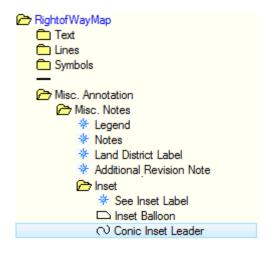


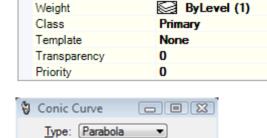


The first click inside the workspace signifies the center of the balloon. The Second click signifies the radius of the balloon at one axis, and the third click signifies the radius of another axis, providing elliptical properties.

CONIC INSET LEADER

Misc. Annotation/Misc. Notes/Inset/Conic Inset Leader





Description

Line Style

Input By: Points

Level

Color



This leader command is used for the See Inset Label command. The first click in the workspace signifies the tail of the leader (next to See Inset Label), and the second signifies the end of the arrowhead, and the amplitude of the curve in the leader.

Bspline Curve

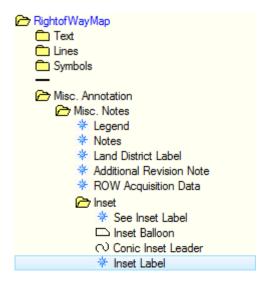
ROW PARCEL

---- Leader 2

0

INSET LABEL

Misc. Annotation/Misc. Notes/Inset/Inset Label





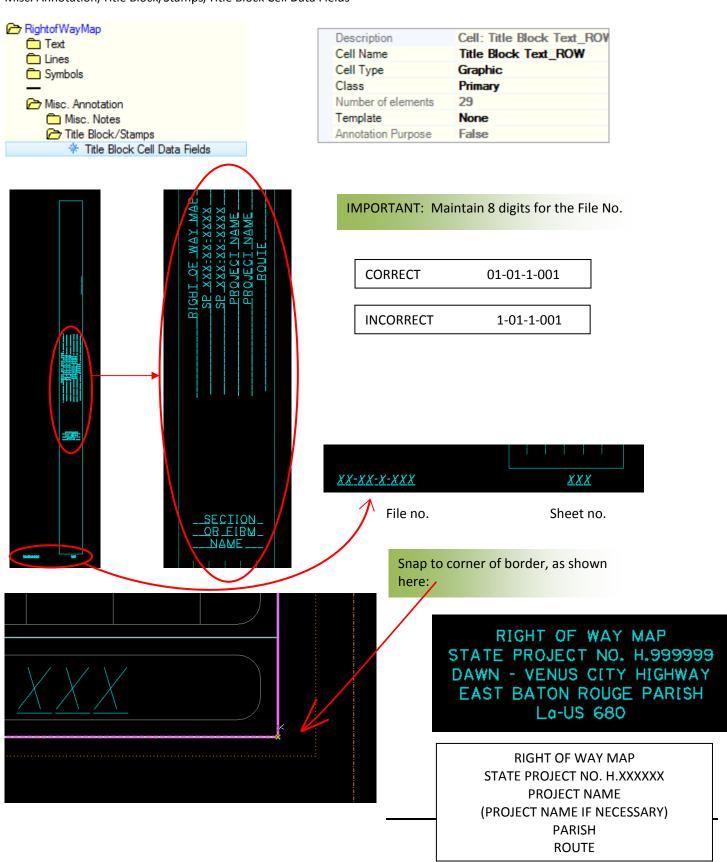
Description	Cell: Inset Scale
Cell Name	Inset Scale
Cell Type	Graphic
Class	Primary
Number of elements	4
Template	None
Annotation Purpose	False

Description	Text: INSET "A"
Level	ROW INSET Text
Color	ByLevel (0)
Weight	□ 1
Class	Primary
Template	None
Transparency	0
Priority	0

The origin of the cell is set up to where you snap to the lower quadrant of the inset balloon as shown in the image.

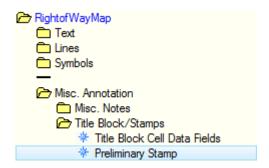
TITLE BLOCK CELL DATA FIELDS

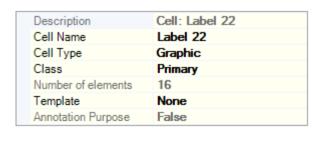
Misc. Annotation/Title Block/Stamps/Title Block Cell Data Fields



PRELIMINARY STAMP

Misc. Annotation/Title Block/Stamps/Preliminary Stamp



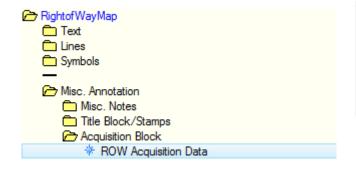




The "Submittal Stage" will be automatically populated once the correct Design Script (.PEN file) is selected when using IPLOT.

ROW ACQUISITION DATA

Misc. Annotation/Acquisition Block/ROW Acquisition Data

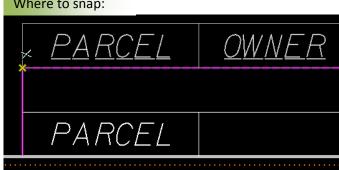


Description
Cell: Border 4
Cell Name
Border 4
Cell Type
Class
Primary
Number of elements
Template
Annotation Purpose
Cell: Border 4
Border

FONT NAME: font063
TEXT HEIGHT: 0.1250
TEXT WIDTH: 0.1250

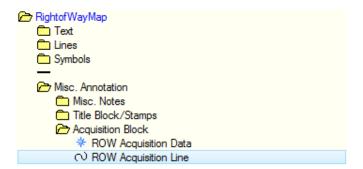
Description Text: PARCEL ROW ACQ DATA Level Color ByLevel (0) ByLevel (1) Weight Class **Primary** Template None Transparency 0 0 Priority

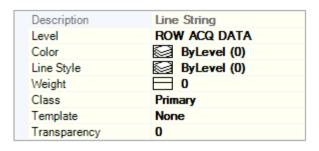


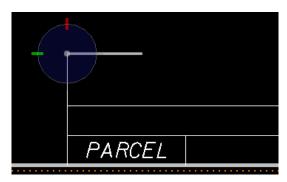


ROW ACQUISITION LINE

Misc. Annotation/Acquisition Block/ROW Acquisition Line



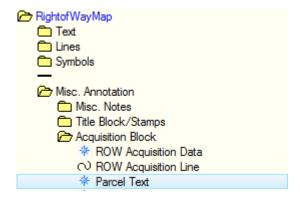




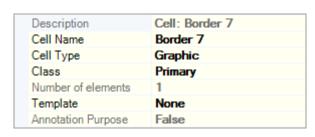
This command is used when there are modifications that need to be done to the Acquisition Block. For example, there is more than one parcel to an owner. Use this command to trace the outlines of the acquisition block to your specifications. Then, add the text in the Parcel column by using the Parcel Text command. Repeat this for all columns. Always snap this text to the lower-left corner of the "cell," as shown below.

PARCEL TEXT

Misc. Annotation/Acquisition Block/Parcel Text





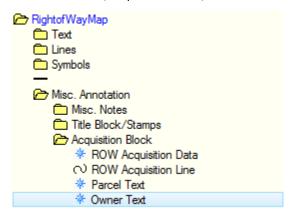


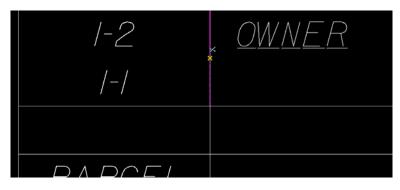
Description	Text: PARCEL
Level	ROW ACQ DATA
Color	ByLevel (0)
Weight	ByLevel (1)
Class	Primary
Template	None
Transparency	0
Priority	0

Use this command along with the ROW Acquisition Line command to provide a custom layout for the Parcel text. Refer to ROW Acquisition Line command above for more information. Snap the cell as shown in the image to the left, then move vertical to specified location. This ensures all text is justified correctly.

OWNER TEXT

Misc. Annotation/Acquisition Block/Owner Text





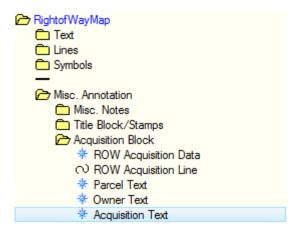
Description	Cell: Border 8
Cell Name	Border 8
Cell Type	Graphic
Class	Primary
Number of elements	1
Template	None
Annotation Purpose	False

Description	Text: OWNER
Level	ROW ACQ DATA
Color	ByLevel (0)
Weight	ByLevel (1)
Class	Primary
Template	None
Transparency	0
Priority	0

Use this command along with the ROW Acquisition Line command to provide a custom layout for the Parcel Owner text. Refer to ROW Acquisition Line on the previous page for more information. Snap the cell along the line as shown in the image above, then move vertical to preferred location to ensure all text is justified correctly.

ACQUISITION TEXT

Misc. Annotation/Acquisition Block/Acquisition Text





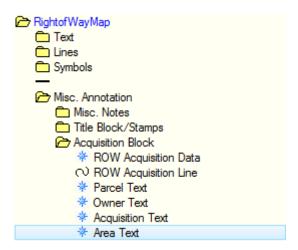
Description	Cell: Border 9
Cell Name	Border 9
Cell Type	Graphic
Class	Primary
Number of elements	1
Template	None
Annotation Purpose	False

Description	Text: ACQUISITION
Level	ROW ACQ DATA
Color	ByLevel (0)
Weight	ByLevel (1)
Class	Primary
Template	None
Transparency	0
Priority	0

Use this command along with the ROW Acquisition Line command to provide a custom layout for the Acquisition text. Refer to ROW Acquisition Line on Page 5-84 for more information. Snap the cell along the line as shown in the image above, then move vertical to preferred location to ensure all text is justified and aligned correctly.

AREA TEXT

Misc. Annotation/Acquisition Block/Area Text





Description	Cell: Border 10
Cell Name	Border 10
Cell Type	Graphic
Class	Primary
Number of elements	1
Template	None
Annotation Purpose	False

Description	Text: AREA
Level	ROW ACQ DATA
Color	ByLevel (0)
Weight	ByLevel (1)
Class	Primary
Template	None
Transparency	0
Priority	0

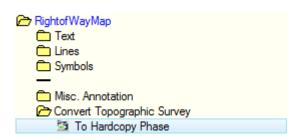
Use this command along with the ROW Acquisition Line command to provide a custom layout for the Acquisition text. Refer to ROW Acquisition Line on Page 5-83 for more information. Snap the cell along the line as shown in the image above, then move vertical to preferred location to ensure all text is justified and aligned correctly.

CONVERT TOPOGRAPHIC SURVEY

The Convert Topographic Survey folder contains commands that when selected, will run a program inside of CADconform that will reduce the features in a survey .DGN by deleting all items within the .DGN that do not serve a purpose in a Right of Way Map, leaving all the major components of the .DGN.

TO HARDCOPY PHASE

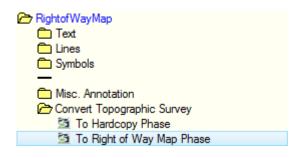
Convert Topographic Survey/To Hardcopy Phase



Once selected, this command will begin rapidly deleting several items in the survey .DGN and leaving the major features & items that may be used to set Property Lines and other boundaries, but will still contain items that should* not be shown on a Right of Way Map.

TO RIGHT OF WAY MAP PHASE

Convert Topographic Survey/To Right of Way Map Phase



This is this second phase of converting. Once selected, this command will begin rapidly deleting several items that were left in the survey .DGN after running the Hardcopy Phase, and leaving just the major features that should* be shown on a Right of Way Map.

* It will be at the surveyor's discretion what is necessary to be shown on a Right of Way Map. However, any items required by DOTD Section 30 must be shown.

TITLE SHEET FEATURE TABLE

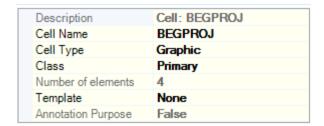
BEGIN PROJECT LABEL

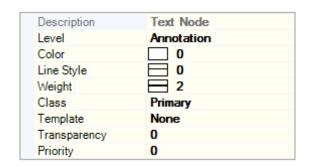
Title Sheet/Project Specific Features/Layout Map/Begin Project Label





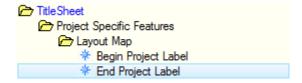
FONT NAME: LEROY TEXT HEIGHT: 0.0132 TEXT WIDTH: 0.0132

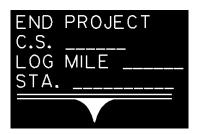




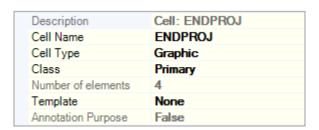
END PROJECT LABEL

Title Sheet/Project Specific Features/Layout Map/End Project Label





FONT NAME: LEROY
TEXT HEIGHT: 0.0132
TEXT WIDTH: 0.0132



Description	Text Node
Level	Annotation
Color	O
Line Style	□ 0
Weight	□ 2
Class	Primary
Template	None
Transparency	0
Priority	0

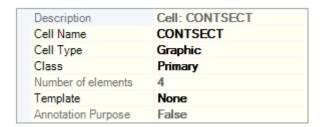
CONTROL SECTION LABEL

Title Sheet/Project Specific Features/Layout Map/Control Section Label





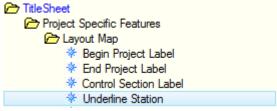
FONT NAME: LEROY
TEXT HEIGHT: 0.0132
TEXT WIDTH: 0.0132



Description	Text Node
Level	Annotation
Color	□ 0
Line Style	⊟ 0
Weight	 ⊇
Class	Primary
Template	None
Transparency	0
Priority	0

UNDERLINE STATION

Title Sheet/Project Specific Features/Layout Map/Underline Station

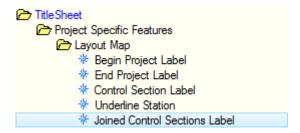




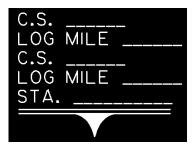
Description	Cell: UNDERLINE
Cell Name	UNDERLINE
Cell Type	Graphic
Class	Primary
Number of elements	3
Template	None
Annotation Purpose	False

JOINED CONTROL SECTIONS LABEL

Title Sheet/Project Specific Features/Layout Map/Joined Control Sections Label



Description	Cell: CONTSECT2
Cell Name	CONTSECT2
Cell Type	Graphic
Class	Primary
Number of elements	4
Template	None
Annotation Purpose	False

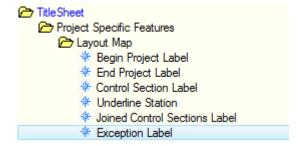


Description	Text Node
Level	Annotation
Color	0
Line Style	□ 0
Weight	⊟ 2
Class	Primary
Template	None
Transparency	0
Priority	0

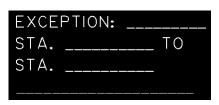
FONT NAME: LEROY
TEXT HEIGHT: 0.0132
TEXT WIDTH: 0.0132

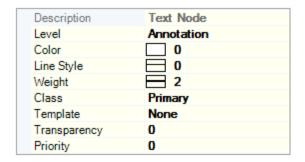
EXCEPTION LABEL

Title Sheet/Project Specific Features/Layout Map/Exception Label



Description	Cell: EXECPT
Cell Name	EXECPT
Cell Type	Graphic
Class	Primary
Number of elements	4
Template	None
Annotation Purpose	False

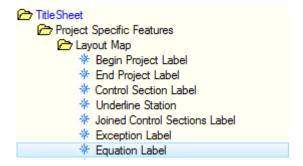




FONT NAME: LEROY
TEXT HEIGHT: 0.0107
TEXT WIDTH: 0.0107

EQUATION LABEL

Title Sheet/Project Specific Features/Layout Map/Equation Label





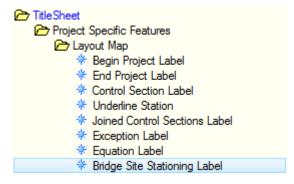
FONT NAME: LEROY TEXT HEIGHT: 0.0107 TEXT WIDTH: 0.0107

Description	Cell: EQN
Cell Name	EQN
Cell Type	Graphic
Class	Primary
Number of elements	3
Template	None
Annotation Purpose	False

Description	Text Node
Level	Annotation
Color	o
Line Style	□ 0
Weight	2
Class	Primary
Template	None
Transparency	0
Priority	0

BRIDGE SITE STATIONING LABEL

Title Sheet/Project Specific Features/Layout Map/Bridge Site Stationing Label





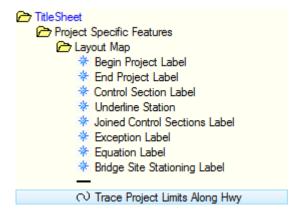
FONT NAME: LEROY
TEXT HEIGHT: 0.0107
TEXT WIDTH: 0.0107

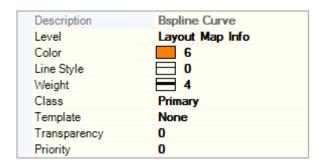
Description	Cell: BRSTA
Cell Name	BRSTA
Cell Type	Graphic
Class	Primary
Number of elements	4
Template	None
Annotation Purpose	False

Description	Text Node
Level	Annotation
Color	0
Line Style	□ 0
Weight	□ 2
Class	Primary
Template	None
Transparency	0
Priority	0

TRACE PROJECT LIMITS ALONG HWY

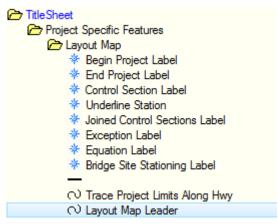
Title Sheet/Project Specific Features/Layout Map/Trace Project Limits Along Hwy





LAYOUT MAP LEADER

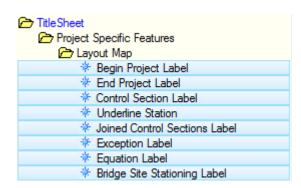
Title Sheet/Project Specific Features/Layout Map/Layout Map Leader





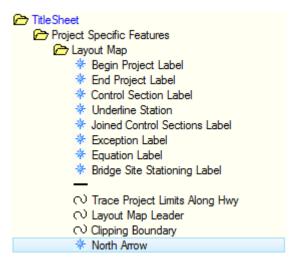
Description	Bspline Curve
_evel	Annotation
Color	0
Line Style	Project_Station
Weight	⊟ 2
Class	Primary
Template	None
Transparency	0
Priority	0

The following commands will use the Layout Map Leader.



NORTH ARROW

Title Sheet/Project Specific Features/Layout Map/North Arrow

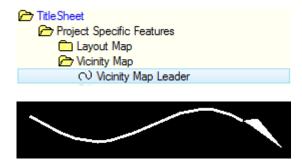


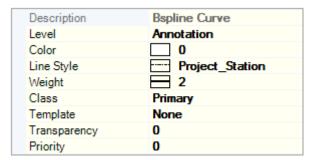
Cell: NARROW
NARROW
Graphic
Primary
8
None
False



VICINITY MAP LEADER

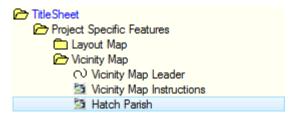
Title Sheet/Project Specific Features/Vicinity Map/Vicinity Map Leader



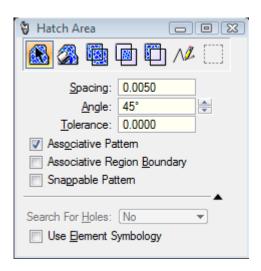


HATCH PARISH

Title Sheet/Project Specific Features/Vicinity Map/Hatch Parish

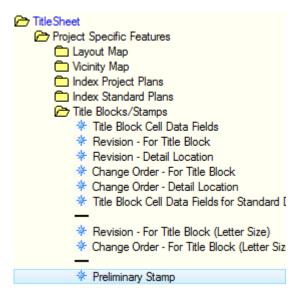






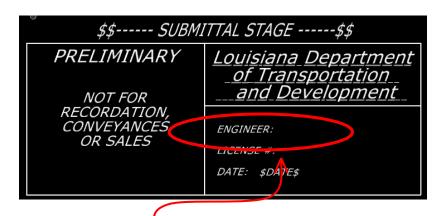
PRELIMINARY STAMP

Title Sheet/Project Specific Features/Title Block/Stamps/Preliminary Stamp



Description	Cell: Preliminary Stamp
Cell Name	Preliminary Stamp
Cell Type	Graphic
Class	Primary
Number of elements	16
Template	None
Annotation Purpose	False

Description	Cell: Label 22
Cell Name	Label 22
Cell Type	Graphic
Class	Primary
Number of elements	16
Template	None
Annotation Purpose	False



This Preliminary Stamp cell that is used for the Title Sheet comes preformatted with "ENGINEER" as shown above. Use the Edit Text tool to manually change "ENGINEER" to "LAND SURVEYOR.





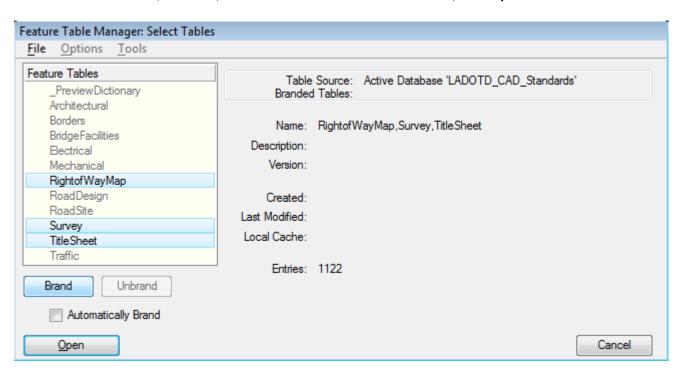
CONFORMING



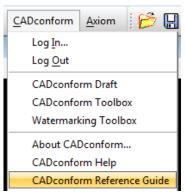
The Conform tool checks the active design file for any invalid items that are not associated with the selected Feature Table(s). The same feature tables used when creating the Right of Way Map must be used (Branded) when using Conform.

If there were no feature tables branded prior to selecting the Conform icon, a window will appear prompting you to select a feature table(s), depending on how many feature tables were used. When conforming a Right of Way Map, the "RightofWayMap", "Survey" and "TitleSheet" feature tables should be branded.

Select one feature table, hold Ctrl, then select the other two. Click Brand, then Open.

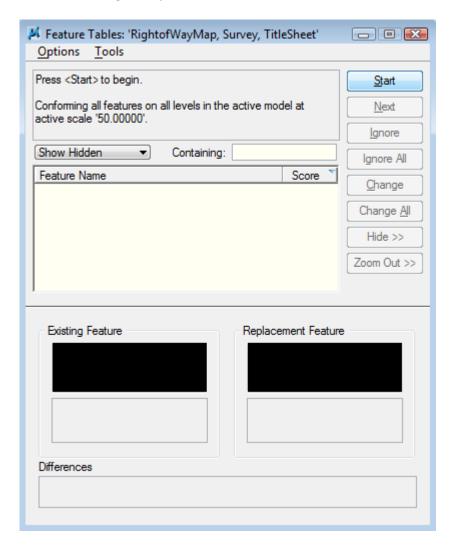


For more information regarding the Conform process, refer to the CADconform Reference Guide in the CADconform tab.



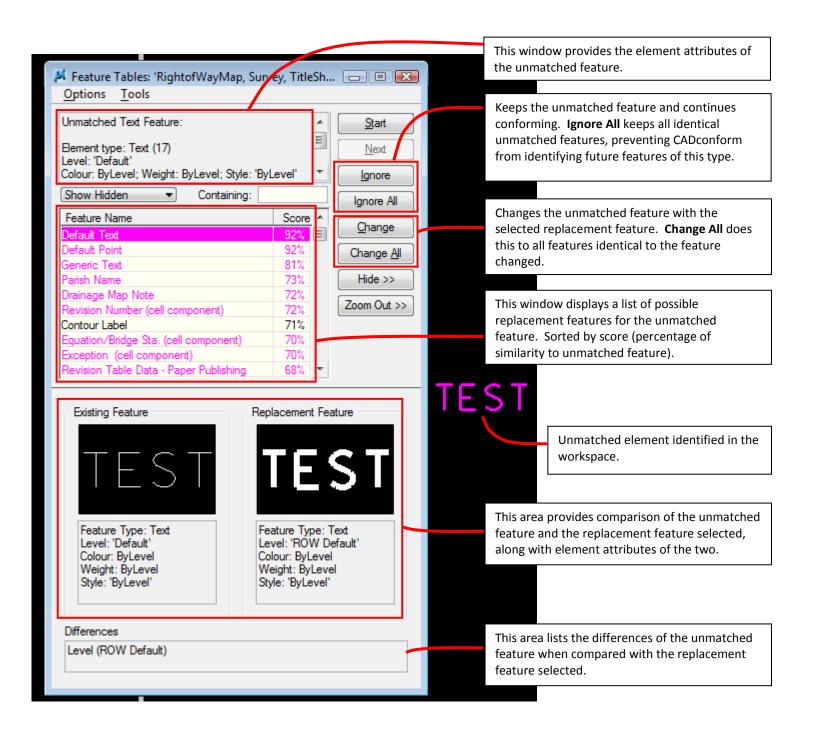
Once you have branded the feature tables, you can begin conforming your design file.

Click **Start** to begin the process.



Now, Conform will begin searching through the design file. All unknown features will be magnified to fit view and flash magenta. A list will be presented, displaying all the known features within the selected feature table dictionary file(s), according to the percentage of similarity to the unknown feature.

The image displayed below is a screenshot of Conform identifying an unmatched feature.

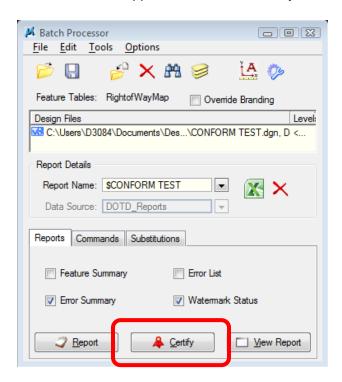


NOTE: Ignoring unmatched features will not conform the dgn. The feature MUST be manually replaced by using a CADconform command (recommended), or replaced while running Conform in order to successfully certify the dgn.

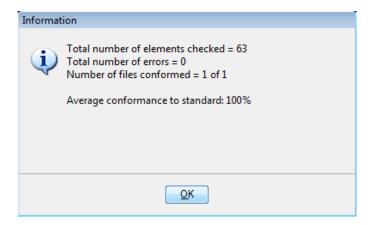
Once everything on the map conforms, click on the Generate Reports icon to certify the map.

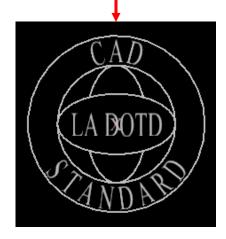


Once the window appears, **Click** on the **Certify** button.



Once the Certify button has been selected, CADconform will display the number of elements checked, total number of errors the map contains, and the number of files conformed. If the Average conformance to standard percentage is 100%, CADconform will certify the map, in which the Conform stamp will appear outside the left border. Click **OK** to accept the stamp.





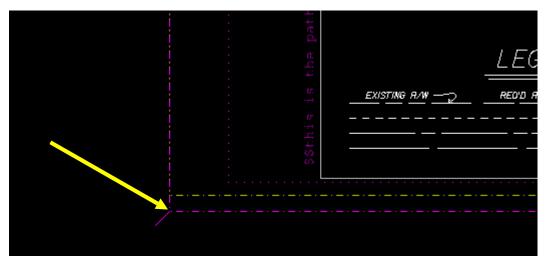
If any element is changed, or if there are elements added to the map after the Certification, the stamp will become invalid and appear as so:



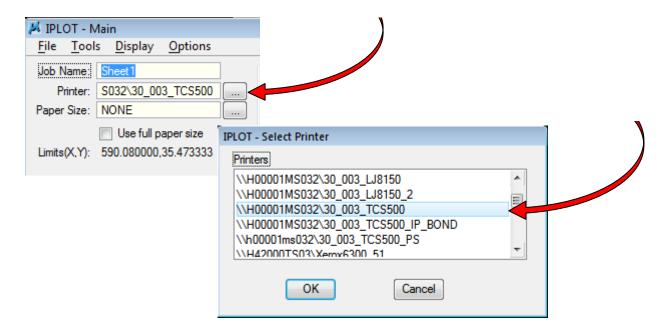
SECTION 7 Plotting

PLOTTING

1) Create Fence around outside border:

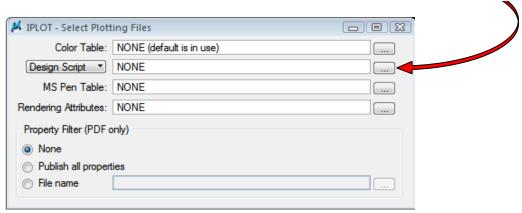


2) On the Main IPLOT menu, select **Printer** options, and choose the Printer below



This plotter is specific to DOTD HQ Section 30 - Location & Survey employees. Consultant's plotter will vary.

3) Go to File ➤ Select Plotting Files and click on the Design Script folder icon.



Design script: (S: \Workspace\Projects\LaDOTD_CAD_Standards\plotting\iplot\pen)

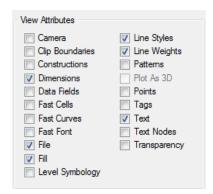
Note: This path is specific to La DOTD – HQ employees. Consultants' path may vary.

- The Design Script distinguishes which submittal stage the map is currently in.
- Within this pen folder of .pen files, **eight** are used for plotting Right of Way Maps.
 - full property ROW.pen Full-sized (22" x 34") 60% Base Right of Way Map
 - Use this .pen for the property survey submittal stage, the 1ST milestone submittal.
 - Property Survey Phase will be shown in the left margin of the map.
 - full 60base ROW.pen Full-sized (22" x 34") 60% Base Right of Way Map
 - Use this .pen for 60% submittal stage, the 2nd milestone submittal.
 - 60% Base Right-of-Way Map will be shown in the left margin of the map.
 - full_finalcp_ROW.pen Full-sized (22" x 34") Final Right of Way Map Check Prints
 - Use this .pen for Final submittal stage (paper), the 3rd milestone submittal.
 - Final Right-of-Way Map Check Prints will be shown in the left margin of the map.
 - full_final_ROW.pen Full-sized (22" x 34") Final Right of Way Map
 - Use this .pen for Final submittal stage (matte film), the last milestone submittal.
 - Final Right-of-Way Map will be shown in the left margin of the map.
 - full_ROW_Mon Full-sized (22" x 34") Right of Way Monument Map
 - Use this .pen for Right-of-Way Monument Map submittal.
 - Right-of-Way Monument Map will be shown in the left margin of the map.
 - FULL.pen Full-sized (22" x 34") Right of Way Map Check Prints
 - Use this .pen for routine distribution.
 - This design script is **not** to be used by consultants.
 - **CHECK PRINTS** will be shown in the left margin of the map.
 - There are duplicate .pen files of the four listed above with the prefix "half_" in place of "full_" that are used for plotting 11" X 17" size prints as opposed to 22" X 34" size prints. These .pen files are used specifically for convenience, typically for Joint Plan Review meetings.

 Example: full_final_ROW.pen (22x34) : half_final_ROW.pen (11x17)

 FULL.pen (22x34) : HALF.pen (11x17)

- 4) After selecting the correct .pen, **close** the Select Plotting Files window and select the appropriate plotter.
- 5) Scale: same scale as .dgn !!!!ATTENTION!!!! When plotting the Title Sheet the active linestyle scale should be set to "0.08333333" and the plotting scale should be set to 0.083333.
- 6) **Rotate** 90 degrees
- 7) Go to **Tools** ➤ **Center**
- 8) Go to **Display** ➤ **Attributes**
 - Uncheck all fields EXCEPT for Dimensions, File, Fill, Line Styles, Line Weight & Text



- Select Apply to Selected File
- Close the window
- 9) Go to **Options** ➤ **Submit**
 - Uncheck both boxes
 - Select **OK**
- 10) Select **Plot** to print the .dgn

ATTENTION!!!!!
All map deliverables

MUST have the
following margins.

Right – 0.5" Top – 0.5" Bottom – 0.5" Left – 2"

SECTION 8

Quality Control – Quality Assurance

QUALITY CONTROL – QUALITY ASSURANCE

Prior to transmitting any of the milestone submittals of the Right of Way Map, an effort shall be made to rectify any errors or omissions that may exist in the deliverables. This chapter will list some suggested procedures to implement that will reduce problems discovered after acceptance of the map as final.

Property Survey Submittal

- **8-1.1** Verify that the coordinate system used is consistent with initial survey control used for the topographic survey.
- **8-1.2** Verify that field measurement procedures during the Property Survey were performed within acceptable standards of practice of survey measurements.
- **8-1.3** Verify that existing Right of Way lines throughout the project are correct and were established by means of an acceptable method.
- **8-1.4** Confirm that the accepted Project Centerline, whether surveyed or projected and adopted, is included on the Property Survey. A printout of the "Geometry Report File" of the project alignment should be imported into the property survey CAD file. Station and offset calls will be referenced from this line.
- **8-1.5** Refer to the Property Survey Submittal Checklist to assure all items are on the map.

60% Base Map Submittal

8-2.1 Refer to the 60% Base Map Checklist at the end of this section to assure all items are on the map.

Final Check Print Submittal

8-3.1 Refer to the Final Right of Way Map Checklist at the end of this section to assure all items are on the map.

Final Right of Way Map Submittal

- **8-4.1** Refer to the Final Right of Way Map Checklist at the end of this section to assure all items are on the map.
- **8-4.2** Assure correct Parcel Numbers are listed at the top of each Title Research Report.
- **8-4.3** Assure Parcel Descriptions are correct and are in agreement with the map. The Parcel "OUT" file should be generated and reviewed against the map to assure consistency. Any differences will not be accepted.
- **8-4.4** Title Reports shall be submitted in PDF format. Each report will be a separate PDF file. The PDF file shall be named by Project Number, Parcel Number, and Date "H.xxxxxxx_1-1_YYMMDD". If one report covers multiple parcels, the file name will be as "H.xxxxxxx_1-1_1-5_YYMMDD".

Common Mistakes On Right of Way Maps

- **8-5.1** Project Information (Project Name, State Project Number, Limits of Work, Layout Map, etc...)
 - 1. Not in concurrence with construction plans.
 - 2. Not in concurrence on Title Sheet, body of map or Residual Sheets.
 - 3. Not shown in standard manner and with left margin.
- **8-5.2** Alignments (centerlines) not in concurrence with construction plans.
- **8-5.3** Failure to show equations or event points on the R/W map that are given on the construction plans or equations and event points shown on the map that are not in concurrence with construction plans.

8-5.4 Ties:

- 1. Failure to show station offsets at all breaks in required R/W, or, station offset data of required R/W that is not in concurrence with construction data.
- 2. Parcel ties not in correct form. Parcels must be tied on an extension of their property line bearings, using dashed lines with dimension arrows.
- 3. Existing R/W ties of intersecting streets not in correct form. These also must be tied on a skew as above.
- 4. Insufficient ties where Existing R/W intersects the Centerline. In addition, the following must be shown:
- **8-5.5** A **station** at the intersection of Existing R/W and Centerline.
- **8-5.6** A **station offset** at breaks along Required R/W.
- **8-5.7** A **distance and bearing** between breaks along Required R/W.
- **8-5.8** Title information (Project Name, Route, Parish and S.P. number) on Title Sheet and Title Blocks that are not in concurrence.
- **8-5.9** Failure to show state plane coordinates at the beginning and end of the job, at PC's, PI's, PT's and at beginning and end of each sheet.
- 8-5.10 Acquisition Block:
 - 1. Parcel numbers not in ascending order.
 - 2. Acquisition data not in tabular form.
- **8-5.11** Failure to match owners' names throughout entirety of map. Frequent spelling errors, parts of names omitted, etc.
- **8-5.12** Failure to indicate continuous ownership with Land Hooks on lot lines and on Section lines where relevant.
- **8-5.14** Failure to dimension from Centerline to Required R/W (at ends of sheets) if they are parallel.

8-5.15 Section Lines:

- 1. Using Section Line symbology alone to show a property boundary between diverse owners.
- 2. A property line consistent with other property lines must be shown. Heavy weight section lines can be indicated over a portion of the property line
- 3. Failure to differentiate Section Line symbology from lot lines. Section lines should be extended heavyweight dashes as opposed to lot line's short lightweight dashes.
- **8-5.16** Scale of residual maps too large to accommodate complete outline of properties.
- **8-5.17** Failure to change Linestyle Scale and scale of other features on residual maps.
- **8-5.18** Maps congested with unnecessary lines that obstruct text and arrows.
- **8-5.19** Leader lines that overlap and illegible.
- **8-5.20** Lettering through lines.
- **8-5.21** Omissions in residual maps such as incomplete centerline and project information, owners' names and Remaining Areas, Lot lines, centerline labeling, legend, etc...
- **8-5.22** North Arrow in wrong direction on residual maps and plan sheets.
- **8-5.21** Leaving the Linestyle of the line at breaks or intersections of lines. *Refer to Page 5-59.*
- **8-5.23** Improper data placement to the Acquisition Block when modifications are needed. *Refer to Pages 5-83 5-87.*
- **8-5.24** Improper Bearing & Distance Placement on taking lines, property lines and centerline. *Refer to Page 5-23.*

Checklists

The Location & Survey Department incorporates checklists to the majority of tasks performed within the department as a go-by to maintain effective Quality Control & Quality Assurance.

This section focuses specifically on the **Property Survey Submittal**, **60% Base Right of Way Map** and the **Final Right of Way Map** Checklists.

The LA DOTD Right of Way Map Checking Unit uses a checklist that contains a list of all the features analyzed and measured within all Right of Way Maps. There are two types of checklists that pertain to Right of Way Maps, the 60% Base Checklist and the Final Checklist.

PROPERTY SURVEY MAP CHECKLIST (DGN and PDF map file)

Preliminary Information

North Arrow	Centerline Stationing	
Project beginning Station	Project ending Station	
Section Lines	Section Numbers	
Preliminary Certification	Existing R/W Disclaimer Note	

Title Block

Scale	Date	
Project Name	Project Number	
Route Number	Parish	

Property Survey Information

Existing Right of Way shown in taking	Station & Offset ties to Existing R/W in
area	taking area
Existing Right of Way shown in non-taking	Point numbers for found property
area	monuments.
Project Centerline Alignment Data from the Geometry Report file in text/column format.	Property Owner Names as shown on title take offs.

- 1. Point numbers for found monuments will be shown.
- 2. Station and Offset ties for found Monuments will not be required at this time but will be required on the Final Right of Way Map.

List of Deliverables

TXT file of all Points, Coordinates, and descriptions of all found monuments.	PDF of all documents (Plats, Maps, etc) used to determine property line locations
Microstation DGN file of Survey Map	Adobe PDF file of Survey Map
PDF copy of Title Take-Offs used	Electronic copy of Field Notes

1. Electronic files will be delivered directly to ProjectWise or on a CD with the folder structure consistent with the ProjectWise folder structure.

Property Survey DGN and PDF files

Geometry Inroads geometry files and x,y,z point files

Miscellaneous Plats . . . Scanned survey plats used to set property lines.

Title Take-Offs Title information used to set Property Lines

60% BASE RIGHT OF WAY MAP CHECKLIST

Preliminary Information

North Arrow	Equations
Land District	Centerline Curve Data (0.1" precision)
Township and Range	Tic Marks
Section	Centerline State Project No.
Centerline Bearing (0.1" precision)	Route
Bearing Note	State Plane Coordinates, Zone, and Controlling Stations.
R/W Sheet No.	Convergence Angle
Centerline Stationing	Grid – Ground Scale Factor

- 1. The alignment **Must Match** on the R/W Maps and on the construction plans (0.1" precision).
- 2. Beginning & Ending Stations <u>Must Match</u> on <u>R/W Sheets</u> and agree with <u>construction plans</u>.
- 3. P.C., P. I., and P. T. Station Breaks Must Match on R/W Maps and construction plans.

Title Block

State Project No.	Sheet No.	
State Project Name	Route No.	
Control Section	Parish	
Scale	Detailed, Computed &Checked by	

Acquisition Block

Parcel No.		Approximate Parcel Area	
Property Owner Name (name must match	on map	sheets and residual)	

Right of Way Information

Subdivision Names
Remaining Areas (approximate)
Label Section lines
Label Township and Range
Label Existing R/W
Label Required R/W
Label Construction Servitude
Label Limits of Construction
* Appropriate Topography
Preliminary Stamp

^{1.} Ties to project centerline at all breaks in Required R/W lines (or Existing R/W where there is no taking).

^{*} This includes all major improvements within 50 feet of the Required Right of Way line be shown, dimensioned, and tied to the centerline. Major improvements include buildings, out sheds, historical trees, business signs, decorative fencing, etc., this however does not include normal trees, bushes, utilities, ditches, etc., unless used to determine parcel line location.

FINAL RIGHT OF WAY MAP CHECKLIST

Preliminary Information

North Arrow	Equations
Land District	Centerline Curve Data (0.1" precision)
Township and Range	Tic Marks
Section	Centerline State Project No.
Centerline Bearing (0.1" precision)	File No.
Bearing Note	State Plane Coordinates, Zone & Controlling Stations.
Route No.	R/W Sheet No.
	· · ·
Field Book Numbers	Convergence Angle
Centerline Stationing	Grid – Ground Scale Factor

- 1. The alignment Must Match on the R/W Maps and on the construction plans (0.1" precision).
- 2. Beginning & Ending Stations Must Match on R/W Sheets and agree with construction plans.
- 3. P.C., P. I., and P. T. Station Breaks Must Match on R/W Maps and construction plans.

Title Block

State Project No.	Date
Control Section	Scale
Project Name	Detailed By
Parish	Computed By
Route Number	Checked By (2)
Sheet Number	Firm Name/Logo

Acquisition Block

Parcel No.	Acquisition	
Property Owner Names	Parcel Area	

Right of Way Information

Parcel No	Street Names	
Property Owner Names	Street Widths	
Remaining Areas	Label Sections	
Property Line Stations	Label Township and Range	
Property Line Ties	Label Existing Right of Way	
Label Pipes	Label Required Right of Way	
Label Monuments	Label Existing Control of Access	
Lot Numbers	Label Required Control of Access	
Parcel Metes and Bounds	Label Limits of Construction	
Land Hooks	Label Construction Servitude	
Subdivision Names	Label Drainage Servitude	
Ties to Pipes and Monuments	Label Existing Servitude (Area with each)	
Bridge Structure No.	* Appropriate Topography	

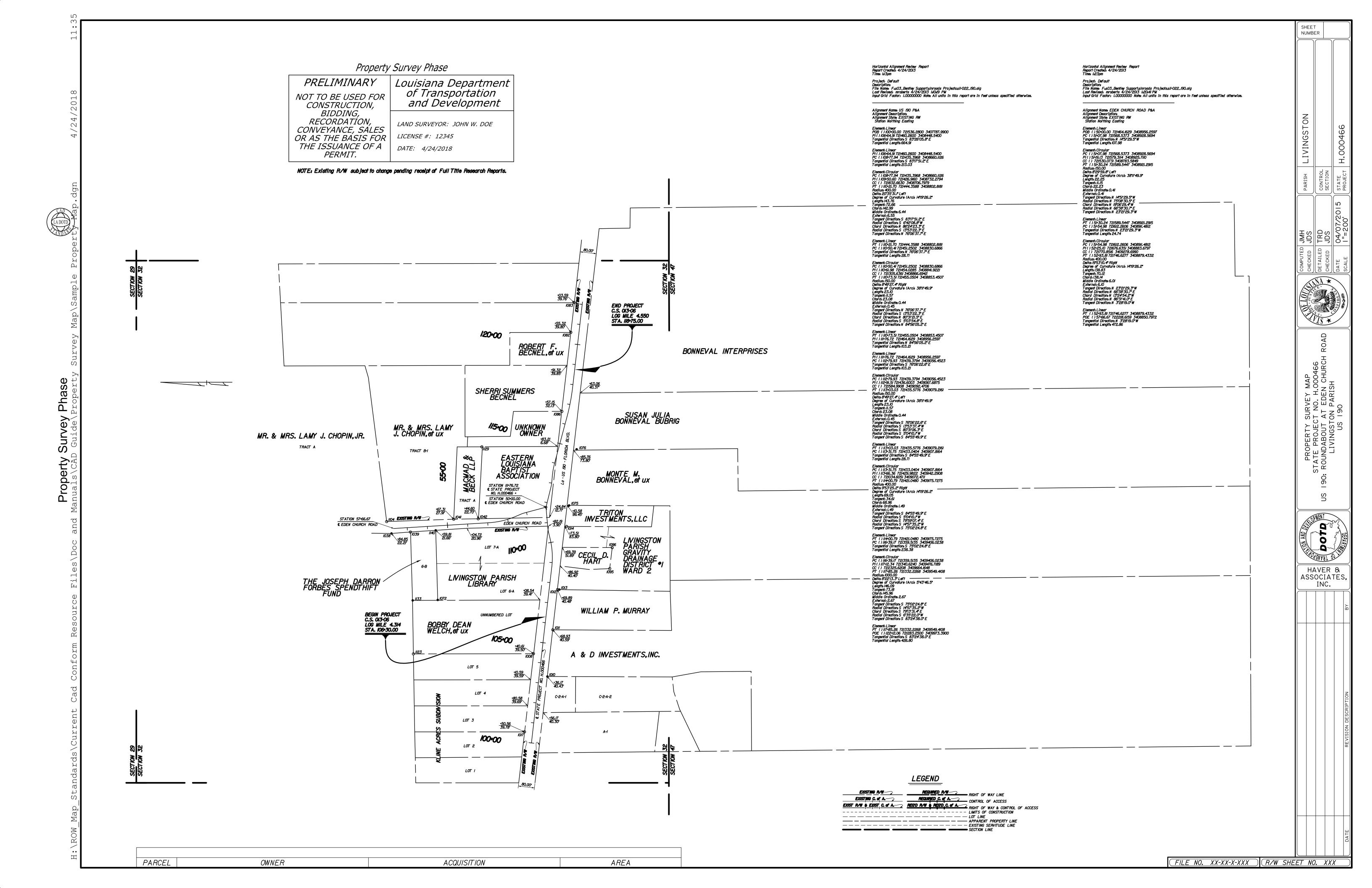
^{1.} Ties to project centerline at all breaks in Required R/W lines (or Existing R/W where there is no taking).

^{*} This includes all major improvements within 50 feet of the Required Right of Way line be shown, dimensioned, and tied to the centerline. Major improvements include buildings, out sheds, historical trees, business signs, decorative fencing, etc., this however does not include normal trees, bushes, utilities, ditches, etc., unless used to determine parcel line location.

SECTION 9

Sample Property Survey Map & Right of Way Map





LOCATION OF WORK

2.536

CONTROL

SECTION

019-02

LOG MILE

END

4.192

STATE OF LOUISIANA

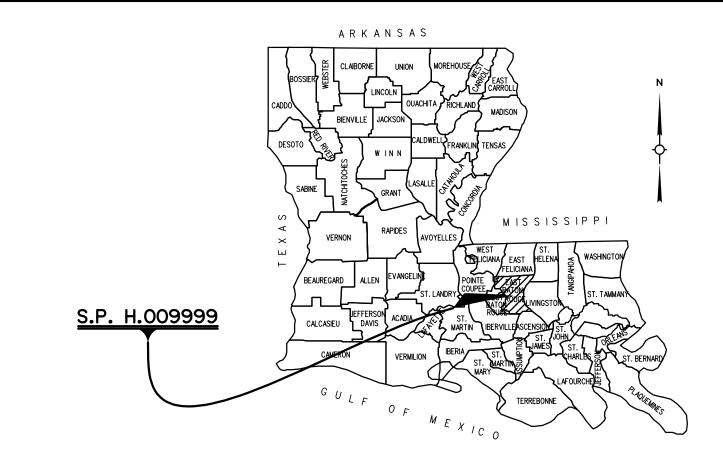
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

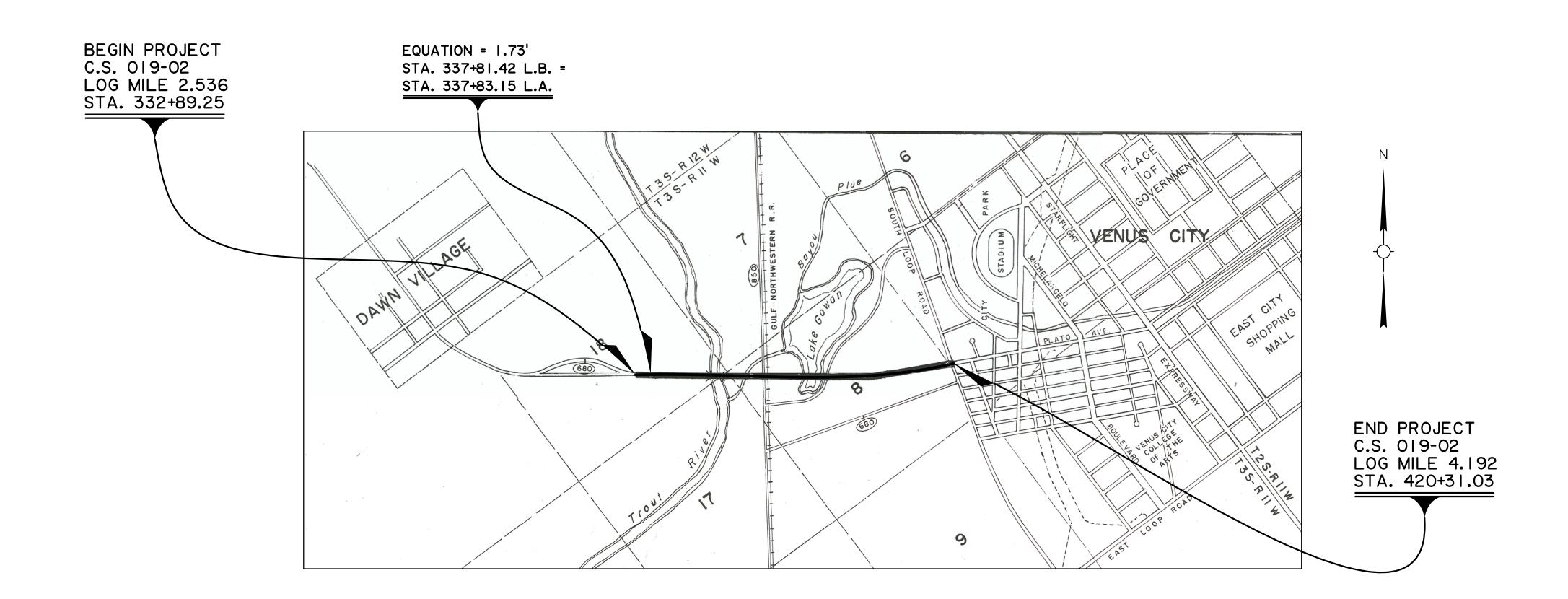
RIGHT OF WAY PROPERTY MAP OF PROPOSED

STATE HIGHWAY

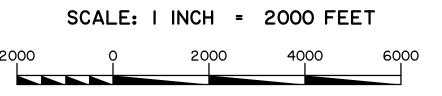
STATE PROJECT NO. H.999999

DAWN VILLAGE - VENUS CITY HIGHWAY EAST BATON ROUGE PARISH La-US 680



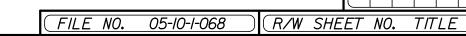


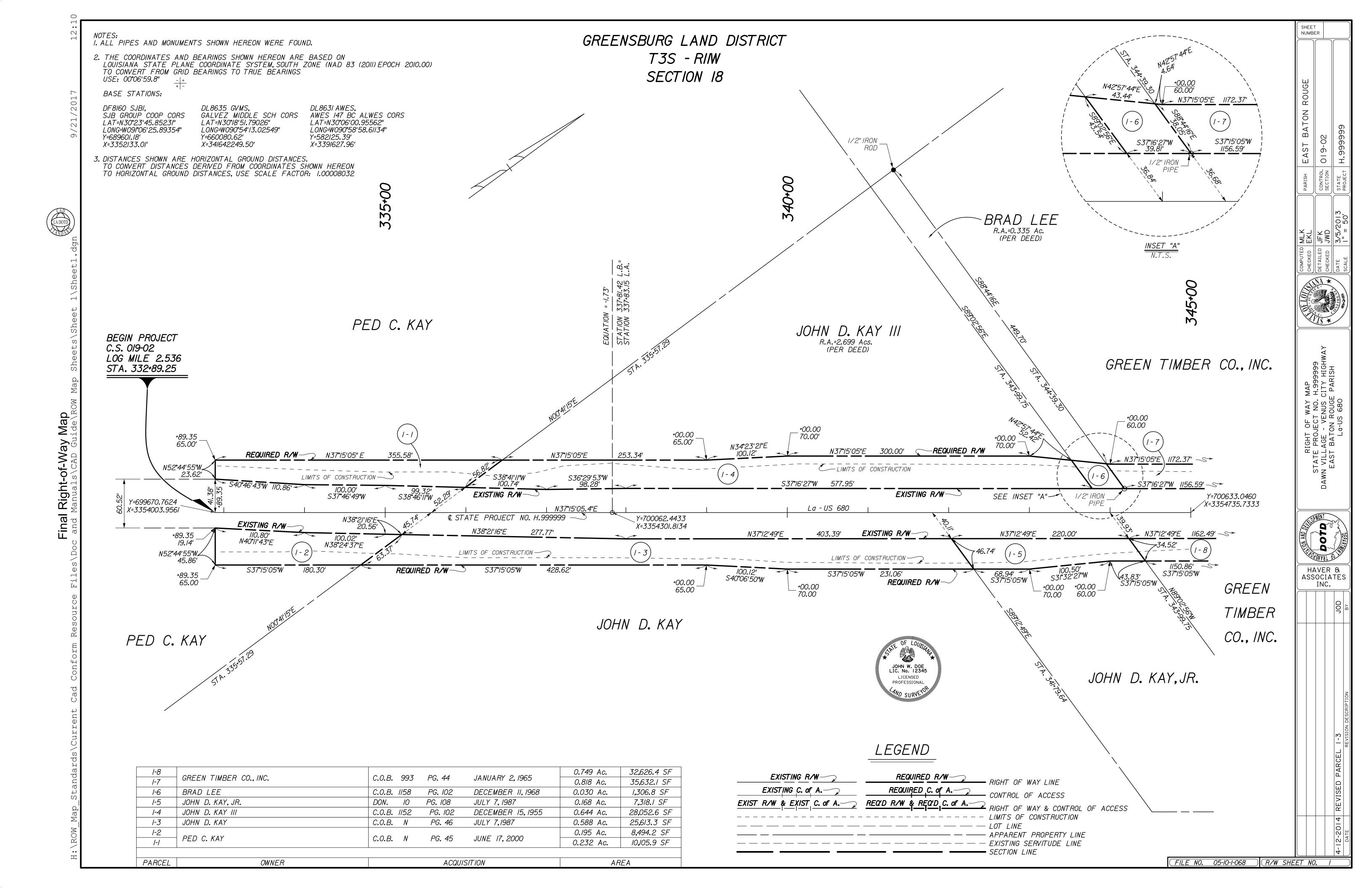
LAYOUT MAP

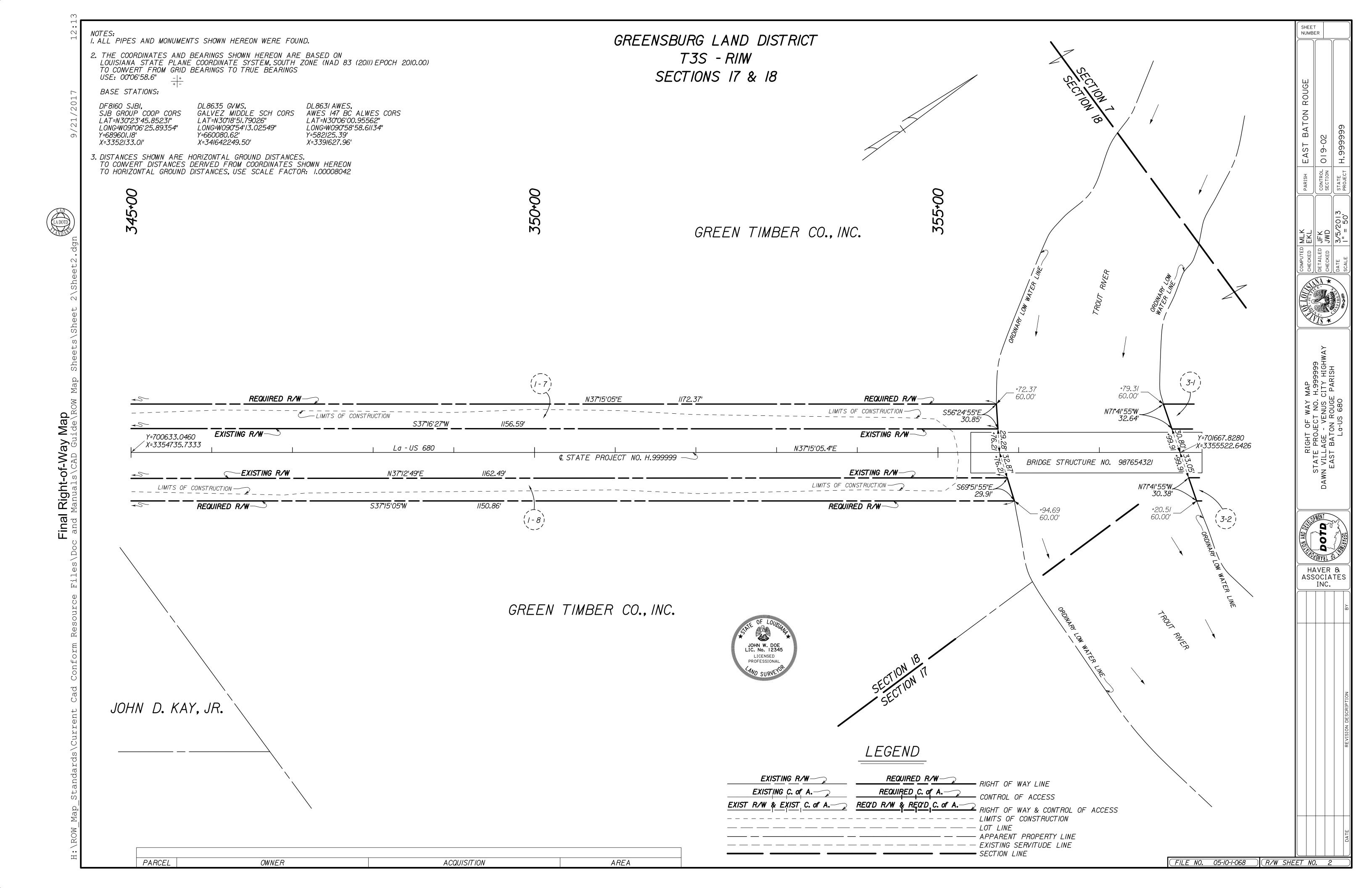


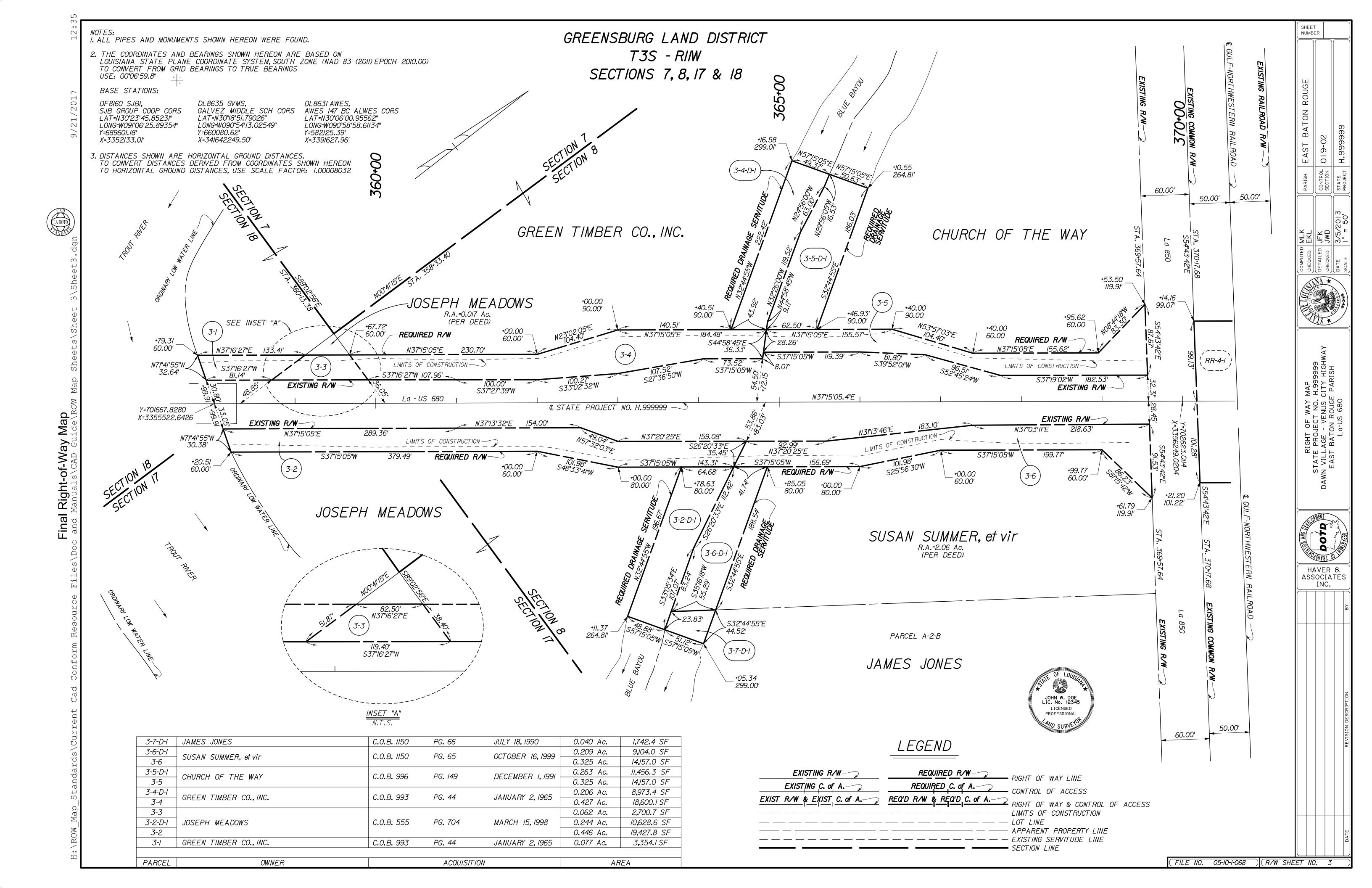


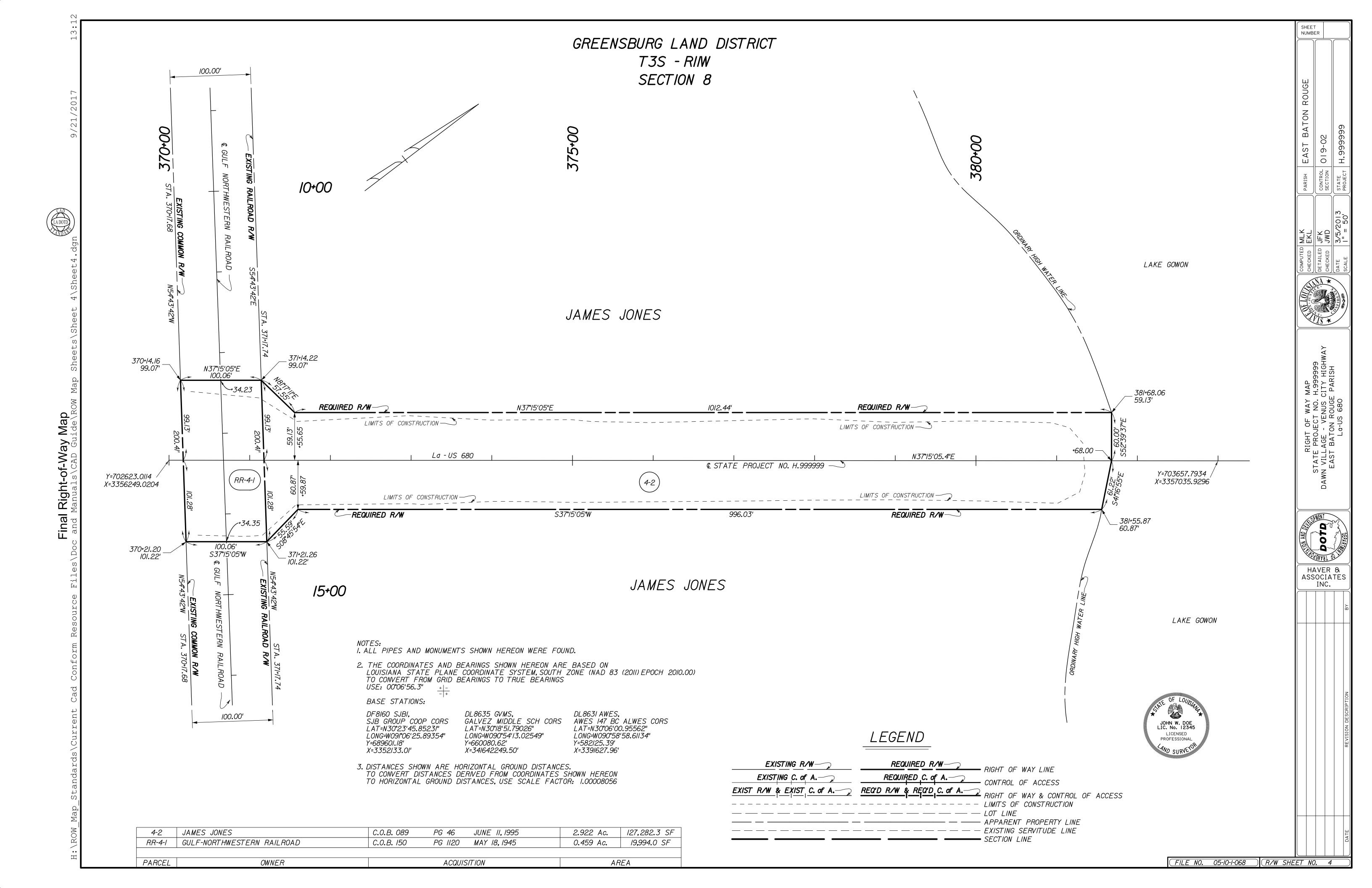


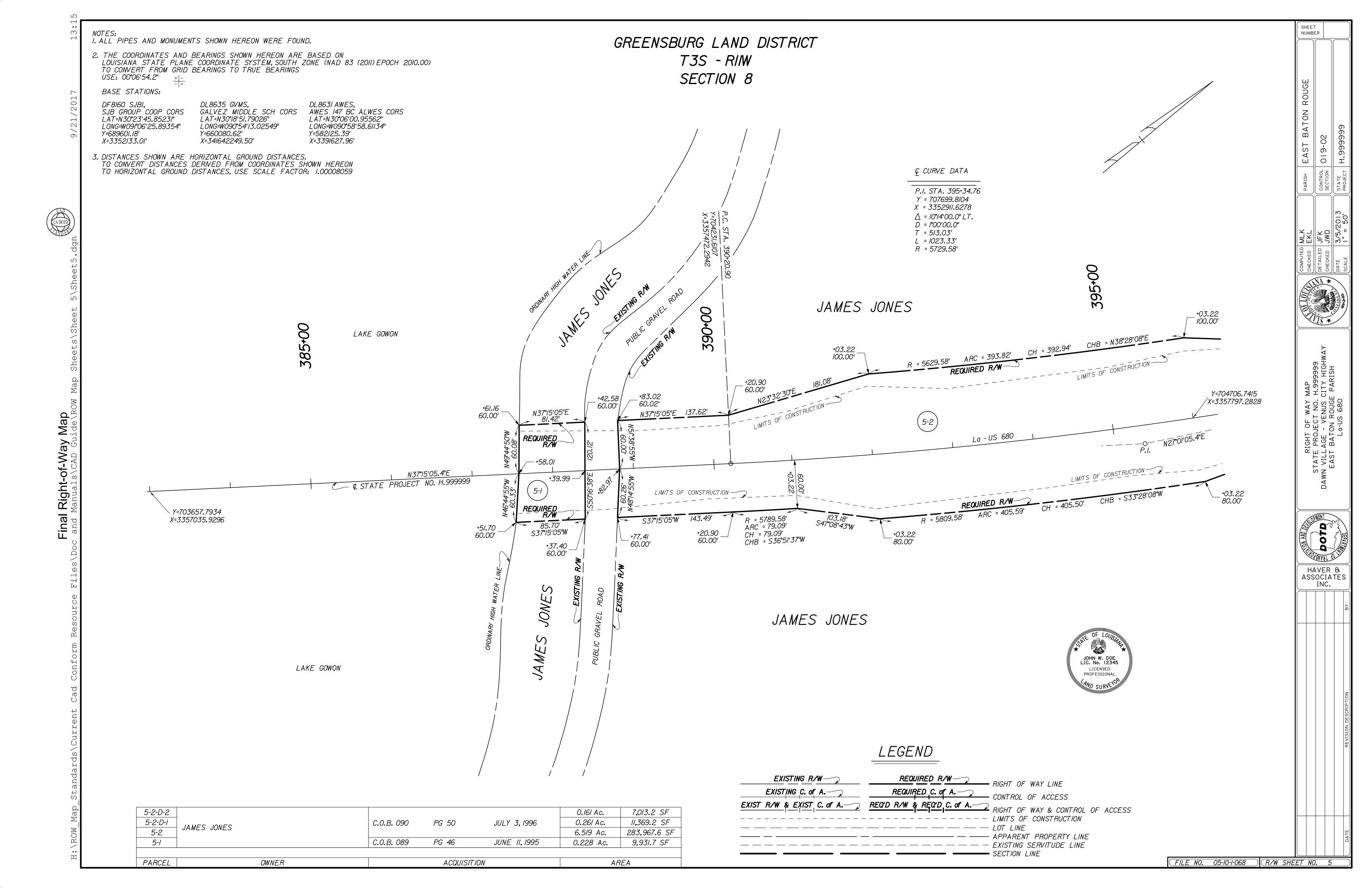


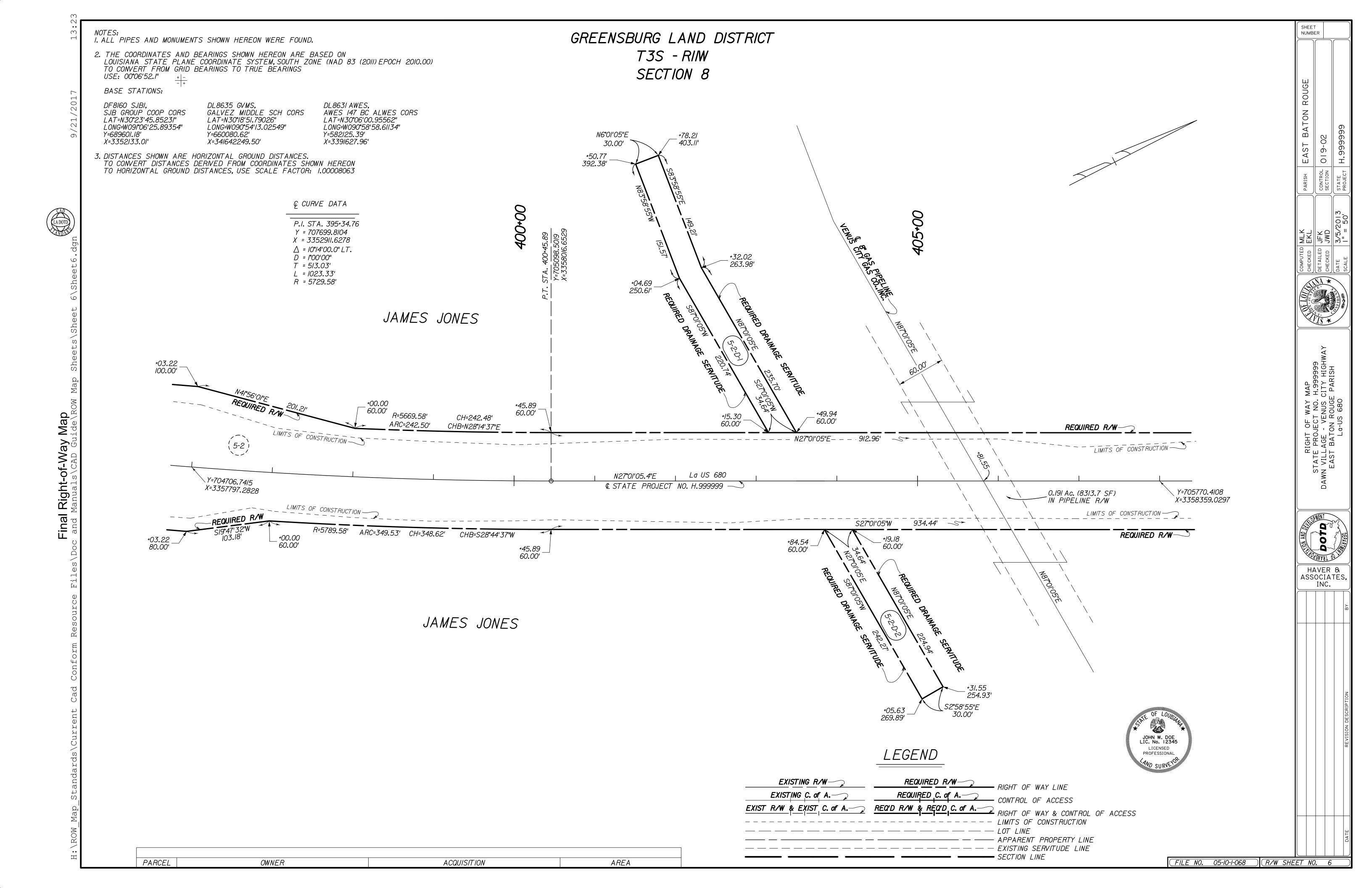


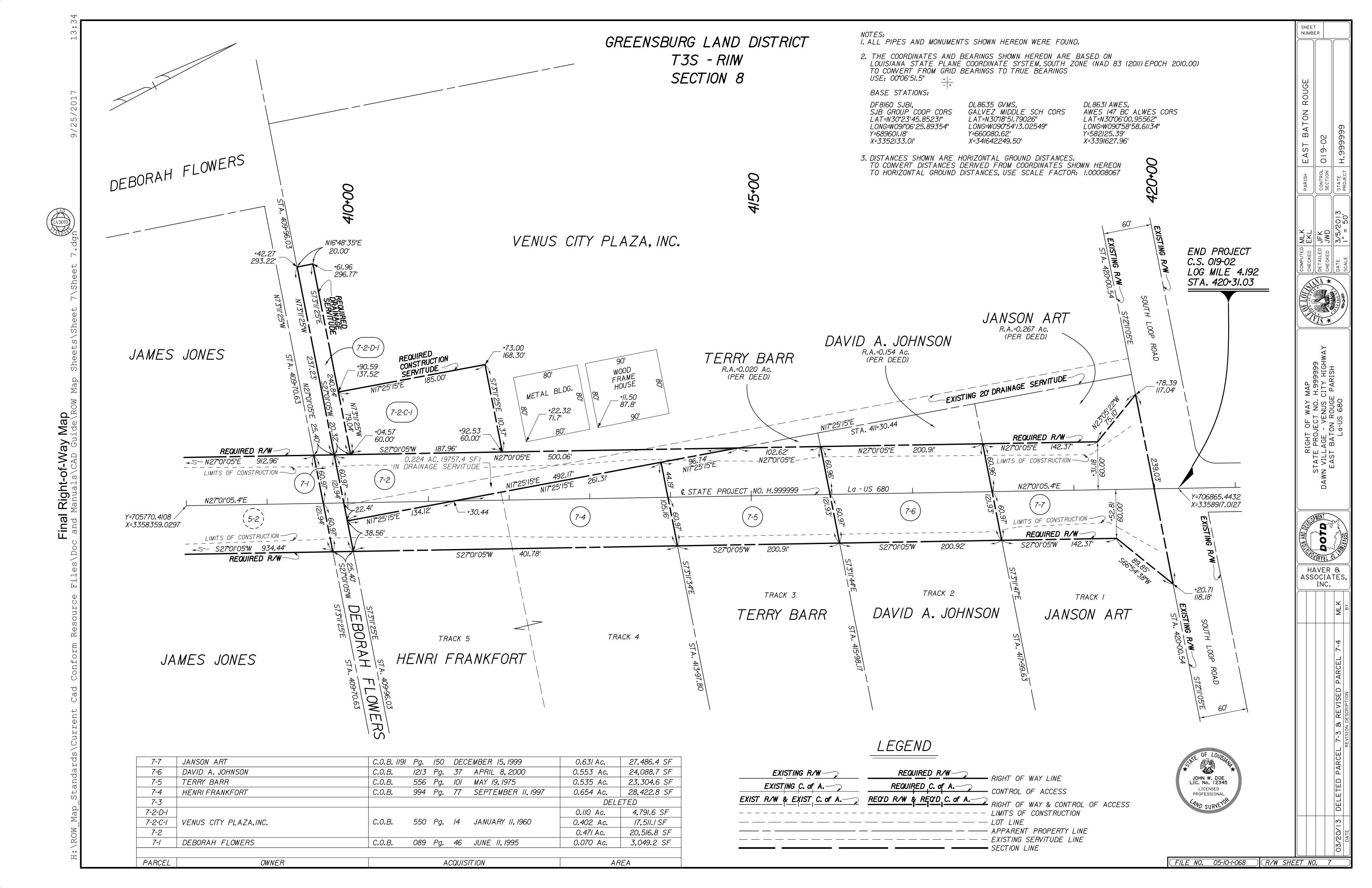


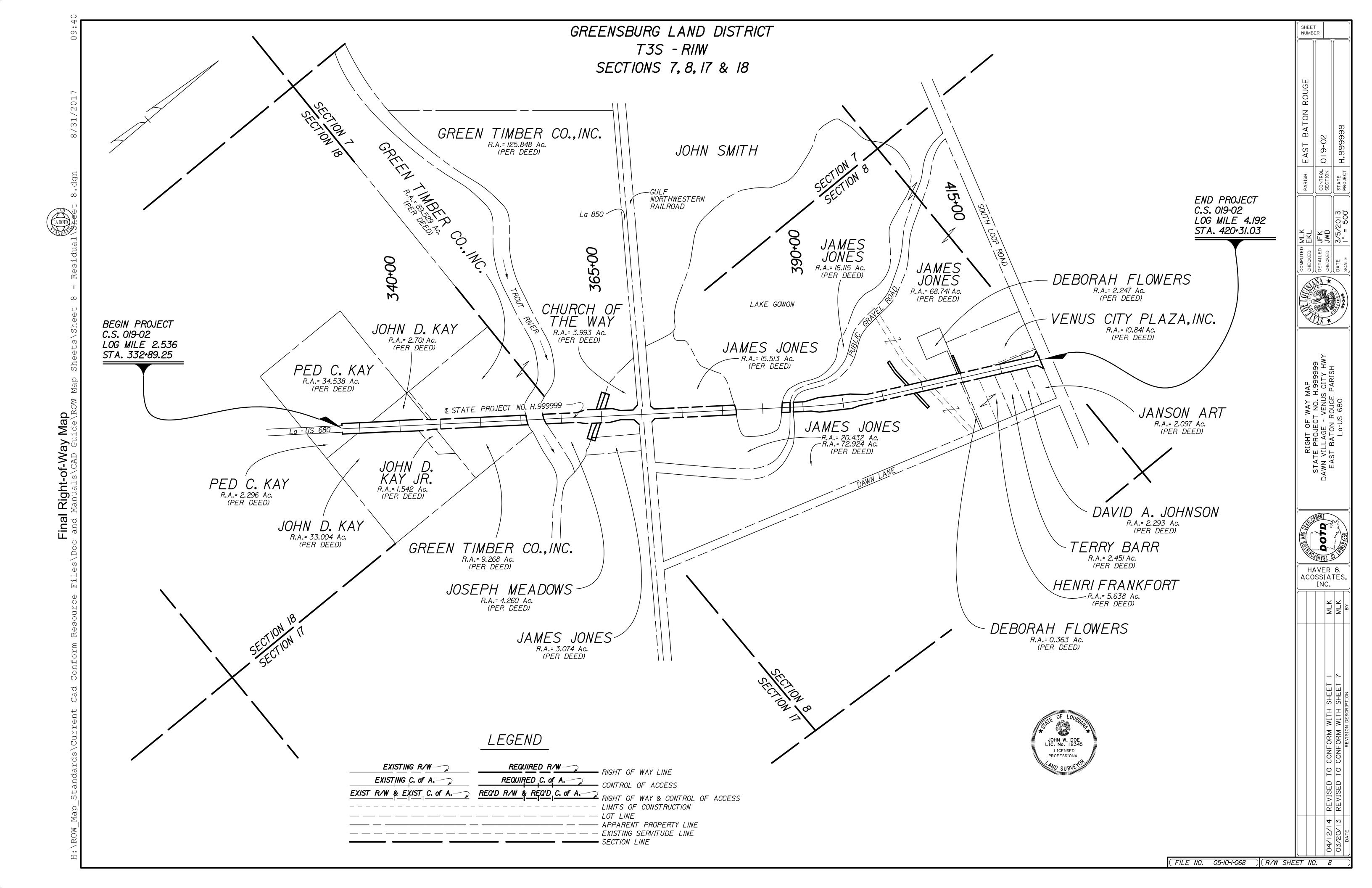












SECTION 10 Right of Way Monument Map

RIGHT OF WAY MONUMENT MAP

Section 708.03 GENERAL CONSTRUCTION REQUIREMENTS of the "2016 Louisiana Standard Specifications For Roads and Bridges" states that the construction contractor shall Prepare a reproducible final plat reflecting the surveyor's location of the monuments in accordance with the right-of-way map on standard size Department plan sheet(s). Submit the final plat to the project engineer for forwarding to the Location and Survey Section Administrator. Record the final plat in the appropriate parish courthouse(s) and provide a

copy of the filing receipt(s) to the project engineer. Also provide a copy of the final plat to

the appropriate parish engineer(s) and Planning Commission(s), if applicable.

Occasionally we will receive an advanced copy of this map for review before the Project Engineer accepts the plat as complete. Maps should never be accepted directly from the surveyor and must be sent through the Project Engineer.

The review by Location and Survey would be a cursory review of content and would not be an in depth review of survey procedures. If obvious blunders, errors are discovered during this cursory review, they must be brought to the Project Engineers attention. Since these Maps are "Boundary Maps" marking the property line acquired by the Department, they must be in accordance with the Standards of Practice for Boundary Surveys. The comprehensive checklist on the next page will assist in complying with the Standards of Practice requirements.

The cursory Review by Location and Survey would generally consist of the following:

1.	Review the Map for Format and confirm that it appears as the Sample Map in the
	Addendum "A" Manual.
2.	Compare the Map Monument Locations with the construction plans and confirm that
	there are not any discrepancies.
3.	Obtain a File Number and log it into Map Indexing. Write the File Number on the Map.
4.	Compare the map to the comprehensive checklist to look for line items that were not
	addressed.
5.	Write the transmittal letter back to the Project Engineer accepting or rejecting the Map.
	NOTE: Rejected Maps will be returned with comments marked in red and/or the
	comprehensive checklist marked with comments to be addressed.
6.	If acceptable, place a PDF copy of the Map in ProjectWise in:
	Published Submittals/Project Drawings/Right of Way Mans/Monument Location Man

RIGHT OF WAY MONUMENT MAP CHECKING FORM

State Project No Date Submitted		Date Checked
		Checked By
Parish	1	Submitted By
	Stable and durable dra	wing films of standard Department size plans.
		nt of Way Monuments for compliance with Right of Way Maps
	_	gs or angles, including sufficient data to define curves
	shall be neatly and leg	
		beled as "set", with a brief description of the monument.
		d include physical characteristics of the monument and its
	relevance to the survey	
	•	as existing or acquired right of way. (The superseded "Existing
	The centerline of the p	roject should be labeled. (route number, project
	number, centerline, syn	mbol etc.) (Bearing to 0.1")
	Proper line types and v	weights are used in accordance with DOTD R/W maps.
	All maps or plats must	show a north arrow and it is recommended that the
	drawing be oriented so	that north is toward the top of the sheet. (when feasible)
	A statement indicating	the origin of the bearings shall be made on each plat,
	map or drawing. The o	origin of the bearings should include one or more of the
	following	
	a. Reference to no	orth as determined by astronomic observation.
	b. Reference to th	e Louisiana Coordinate System with the proper zone
	and controlling	stations(s) noted;
	c. Reference to the	record bearing of a well-established line found monumented
	on the ground. (C	Original R/W map did not include state plane coordinates.).
	If a coordinate system	is used on a map, its origin must be identified. If that system
	is the Louisiana Coord	inate System, the appropriate zone must be shown on the
	map. Also the mapping	g angle and scale factor shall be shown.
	Where separate intrica	te details, blowups or inserts are required for clarity, they
	shall be properly refere	enced to the portion of the map where they apply.
	Cemeteries and burial	grounds known should be indicated on the plat.
	Caption or title: (Section	on Township Range and Land District)

 General location of the property (or vicinity map);
 Name, address, phone number, and registration number of the surveyor
 Signature and stamp or impression seal of the surveyor
 Survey classification (Louisiana Professional Engineering and Land Surveying Board)
 Stationing with major Stations shown and tick marks for major and minor stations in
accordance with the Right of Way maps
 Offset information as in accordance with the Right of Way maps.
 Standard DOTD title block shall be shown and include the following:
a. Type or purpose of map.
b. State Project Number.
c. Name of Project.
d. Parish survey is located in.
e. Route
 DOTD file number indicated in the lower right corner of the map or plat.
(This file number will be added by Location and Survey Section).

Example of Certification note:

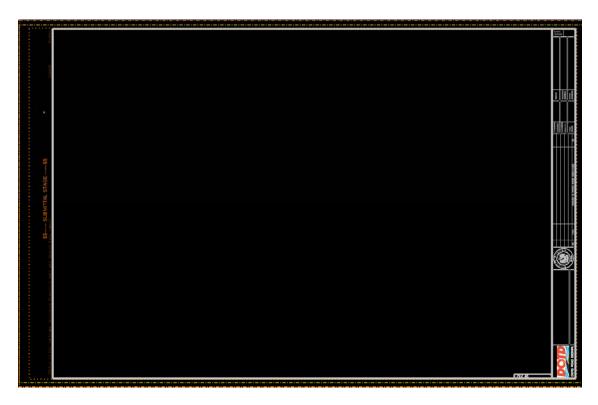
I, JOHN W. DOE, P.L.S., HEREBY CERTIFY THE RIGHT-OF-WAY MONUMENTS SHOWN HEREON HAVE BEEN SET UNDER MY DIRECT SUPERVISION IN ACCORDANCE WITH CHAPTER 29, TITLE 46, PART LXI, OF THE RULES OF THE LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD TO THE ACCURACY OF A CLASS "C" SURVEY.

JOHN W. DOE, P.L.S. NO. 12345 HAVER & ASSOCIATES, INC. 12345 MAIN STREET BATON ROUGE, LA 70801 PHONE: 225-555-1234 **DATE**

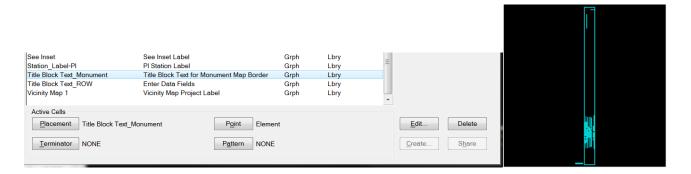
When using CAD Conform to develop the Right of Way Monument Maps the following tools should be used:

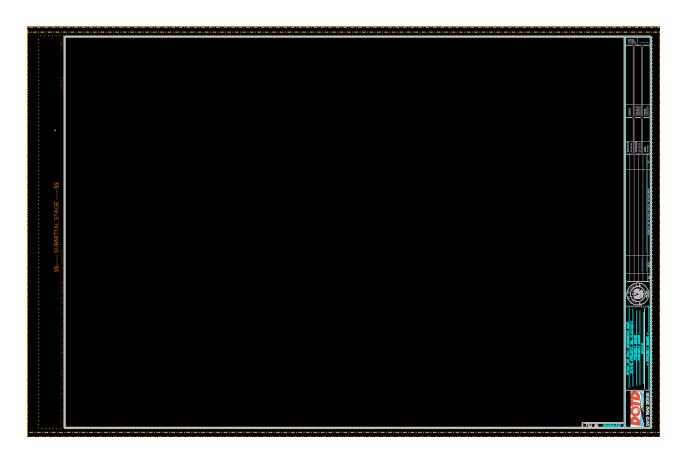
Border – **border_right-of-way_monument** should be used when preparing a monument map. This border is different from that of a standard right-of-way map.

border_right-of-way_monument 9/13/2017 4:04 PM DGN File 226 KB



Cell – In order to populate the border with data use the *Title Block Text_Monument* cell located in the right-of-way_map.cel file.





The *full_ROW_Mon* PEN file should be used when plotting the monument map.

	10/11/1010 1111 1 111		
full_property_ROW	4/1/2015 10:52 AM	PEN File	4 KB
full_ROW_Mon	9/11/2017 10:01 A	PEN File	4 KB
half_60base_ROW	11/15/2013 8:14 A	PEN File	4 KB
- · · · · · · - · · · · · · · · · ·			

