



Wetland Bank Easement Legal Survey & Signage Requirements

A legal boundary survey is required as a part of every wetland bank perpetual conservation easement (Easement) that is conveyed to the State of Minnesota. The owner of the wetland bank property, their consultant, or other representative (Landowner) must work with the Minnesota Board of Water and Soil Resources (BWSR) to develop and monument the Easement boundary. The Landowner must secure the services of a professional land surveyor (Surveyor) licensed and registered in the State of Minnesota to complete the boundary survey. The Landowner is responsible for providing this document to the Surveyor prior to commencing boundary survey field work.

The Easement legal boundary should not be surveyed until after the project's Wetland Mitigation Plan has been approved, unless otherwise advised by BWSR. Questions on survey and signage requirements should be directed toward the BWSR Easement Acquisition Specialist or local BWSR Wetland Specialist, as indicated on the following Wetland Banking Contacts form:

http://www.bwsr.state.mn.us/wetlands/wetlandbanking/guidance/BWSR_wetland_banking_contacts.pdf

SUMMARY OF REQUIREMENTS

The Surveyor must provide a legal boundary survey of each Easement parcel and, when applicable, an ingress/egress easement. As set forth in this document, the Surveyor must prepare a Certificate of Survey, provide a GIS compatible shapefile, and monument the boundary of the Easement parcel(s). The Landowner must work with the Surveyor to ensure that appropriate witness posts and signs are placed at each required monument location. The Landowner will provide the Surveyor with the location and/or maps of the intended Easement parcel(s), ingress/egress easement route(s), where required, and other such information as may be necessary and available to complete the work requirements set forth herein.

The work and work product of the Surveyor must be in accordance with ALTA standards, relevant state statutes and administrative rules, and any applicable local ordinances.

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SECTION 1: PRE-SURVEY COMMUNICATION

Prior to commencing the boundary survey, the Landowner and/or Surveyor must contact the BWSR Easement Acquisition Specialist to discuss and confirm the intended location of the easement boundary and ingress/egress route. The easement boundary and ingress/egress locations must correlate with the approved Wetland Mitigation Plan unless otherwise advised by BWSR.

SECTION 2: RESEARCH OF RECORDS

The Easement survey must be tied to a corner of a Public Land Survey (PLS) or corner of a recorded property. The Surveyor must gather existing information relative to property ownership, the Easement area, and the ingress/egress route from all available sources. The Surveyor must obtain from the Landowner the most current deed for the property (including any ingress/egress route area) together with copies of any recorded documents creating easements, servitudes, or covenants that benefit or burden the property, excluding mortgage documents. The Surveyor should coordinate with the BWSR Easement Acquisition Specialist if they foresee potential boundary conflicts related to recorded documents.

SECTION 3: ESTABLISHING CONSERVATION EASEMENT BOUNDARY

The Surveyor must locate the boundary angle points and record the description using bearings and distances as referenced to the National Spatial Reference System. The Easement boundary survey must be a complete traverse of the area tied to a corner of a Public Land Survey (PLS) or a corner of a recorded property.

The Surveyor must contact the BWSR Easement Acquisition Specialist if any potential ownership or boundary issues arise while in the field. Considerations and procedures for addressing common boundary issues are included in **Appendix D** of this document.

SECTION 4: ESTABLISHING ROUTE FOR INGRESS/EGRESS

The Survey must identify how the Easement parcel(s) will be accessed from a physically open and publicly maintained road right-of-way (Public Road). This section describes the work required to determine and establish a non-exclusive ingress/egress route between an Easement parcel and a Public Road.

If the Easement boundary abuts a Public Road and there is direct vehicular access between the Easement and the Public Road, then no separate ingress/egress route needs to be shown on the Certificate of Survey. The Certificate of Survey needs only to identify the area of abutment and access. If, however, either (i) the Easement area does not abut a Public Road or (ii) the Easement area does not have direct vehicular access to a Public Road, then an ingress/egress route between the Easement boundary and a Public Road must be identified and shown on the Certificate of Survey.

The ingress/egress route shall be no less than 20 feet in width, unless written exception has been provided by BWSR. The Surveyor must locate and describe all ingress/egress route centerline angle points using bearings and distances as referenced to the National Spatial Reference System, or alternatively shall locate the boundaries of the ingress/egress route in the same manner that the Easement boundaries were located.

When possible, the ingress/egress route must be located across property owned by the landowner granting the Easement. If the ingress/egress route utilizes an existing recorded access easement to cross another party's property, the Certificate of Survey must show its location and identify such existing easement by its recording information. BWSR must review the language of the existing recorded access easement to confirm that it will allow for perpetual non-exclusive use by BWSR and other applicable regulatory agencies.

In the case of a project that involves multiple adjacent Easements being established concurrently, access may be established jointly between and among the different Easement parcels.

SECTION 5: CONSERVATION EASEMENT BOUNDARY MONUMENTATION

The timing for setting permanent monuments will depend on when any farming or other land use practices, with which permanent monuments may interfere, are scheduled to cease within the Easement area as per the following guidance:

- A. If farming practices and other land uses are not an issue and will be unaffected by the Easement monumentation, then the Surveyor may set the permanent monuments during the initial field survey of the easement boundary, as site conditions warrant.
- B. If farming and other land use activities will continue within the Easement boundary for an extended period and the monumentation of all or portions of the Easement will affect those activities, then all or portions of the Easement boundary shall be marked with temporary markers until the relevant land use activities have ceased. Such temporary markers shall be of a kind that do not cause damage to farm equipment, livestock, construction equipment, etc. Upon termination or completion of these activities, the Surveyor must return to the site to set any remaining permanent monuments.

If the Easement boundary changes after the permanent monuments have been set, the Surveyor must re-set them at each appropriate location. Unless BWSR advises otherwise, monumentation of any ingress/egress easement route is not required.

Specifications: Monumentation of the Easement boundary must comply with the following specifications and as provided in **Appendices C and D**:

- A. Monuments must be located at each corner, angle point, approximately every 500 feet along a tangent (straight line segment) and at each intersection between the Easement boundary and existing property lines, or as prescribed in the approved Wetland Mitigation Plan. An exception to this specification may be for Easement boundaries that are described as abutting and following a meandering riparian edge where permanent monumentation would be impracticable.
- B. All monuments must be thoroughly described and specifically identified as either found, set, or to be set, whenever shown on maps or referred to in documents prepared by the Surveyor.
- C. Descriptions of monuments must be sufficient in detail to readily facilitate future recovery by other Surveyors and to enable positive identification.
- D. Monuments must be a 5/8-inch outside diameter steel pipe or rod with a minimum length of 24 inches. The pipe or rod shall be set flush with ground and capped as per requirements of state law.
- E. For recovery of damaged or compromised monuments, each monument that is set must include a secondary, sub-surface monument. The sub-surface monument must be a 5/8-inch outside diameter steel pipe or rod with a minimum length of 8 inches, placed directly below the primary monument.
- F. Witness post(s) must be placed at each monument location (see figure in **Appendix C**). Two witness posts, facing away from the easement area, must be installed at each angle point, one on the back tangent and one on the forward tangent to represent the direction of the easement line. Single witness post facing away from easement area must be installed at each straight line monument location and at all property line intersection monuments.
- G. Witness posts must consist of steel "U" channel posts, minimum length of seventy two (72) inches, with a minimum weight of 1.12 lbs. per foot.
- H. Witness posts must be of natural color, preferably green.
- I. The appropriate Easement boundary sign must be attached to the top of each witness post (see sign specifications in **Appendix C**).

SECTION 6: CERTIFICATE OF SURVEY

Upon completion of boundary survey field work, the Surveyor must prepare and submit a draft Certificate of Survey in accordance with the below format specifications. The BWSR Easement Acquisition Specialist will review the draft, provide comments as appropriate, and request a final signed version upon approval. The final Certificate of Survey as prepared and provided by the Surveyor will be attached to and made part of the recorded Easement document.

Specifications: The Certificate of Survey must include a written legal description and drawings for each Easement parcel and, where required, for each ingress/egress easement. In addition to complying with ALTA Standards, the format of the Certificate of Survey must comply with the following:

- J. Be legibly printed or reproduced in black and white by a process guaranteeing a permanent record.
- K. Be on letter (8 ½ inches x 11 inches) sized paper with one-half inch minimum margins on all sides.
- L. Be in two parts described as follows:
 - C1. The first part, commencing on page 1, shall contain the written legal descriptions for the Easement and ingress/egress routes, if needed. The formatting and other requirements for the written legal description are provided in **Appendix A**.*
 - C2. The second part shall contain the survey drawings/maps for the Easement and when needed, the ingress/egress routes. The formatting and other requirements for the survey drawings/maps are provided in **Appendix B**.*
- M. The written legal descriptions and survey drawings/maps must not be combined on the same sheet. Instead, they must be presented on separate sheets within the certificate survey document.
- N. Each sheet must show the number of that sheet and the total number of sheets included (ex. Sheet 1 of 2).
- O. Each sheet must be titled – “CERTIFICATE OF SURVEY”. This title must be centered and appear across the top of each sheet in CAPITAL LETTERS and shall not be underlined.
- P. Each sheet must include reference to the unique easement number that has been assigned to the Easement by BWSR. The easement number must appear in the upper right-hand corner of each sheet and must be expressed as “**Easement No: (number)**”. The Surveyor must obtain the easement number from BWSR.
- Q. Each sheet must be certified and signed as required by MN Administrative Rule 1800.4200.
- R. Each sheet must include a border with the border line placed one-half inch inside the outer edge of the sheet. This is the minimum margin width required by County Recorder offices.
- S. Each sheet must include a title block containing the following information:

Surveyor’s information including; the Surveyor’s name or company name, address, contact information. Project identification (ex. job no.), the date the survey was completed and any revision data, the name(s) of the owner(s) of the land surveyed, other information as desired by the Surveyor.

Submittals: Upon BWSR’s approval of the draft Certificate of Survey, the Surveyor or Landowner must email the following items to the BWSR Easement Acquisition Specialist:

- A. One PDF file of the signed Certificate of Survey formatted for printing on letter paper (8 ½ inches x 11 inches).
- B. A digital shapefile of the conservation easement(s) boundary projected in the UTM Zone 15 North (NAD83 meters) coordinate system. The boundary shapefile will be incorporated into BWSR’s state-wide GIS geodatabase, therefore it must be supplied in the requested format. All components of the shapefile should be placed in a folder and emailed to BWSR as a zipped (.zip) file. See **Appendix E** for instructions on exporting a CAD drawing to a shapefile in the requested coordinate system.

APPENDICES

APPENDIX A: Requirements for Preparing Written Legal Descriptions

The Certificate of Survey must contain a separate, complete and accurate written legal description of each Easement parcel surveyed and for the ingress/egress easement, where needed.

The written legal description must comply with the following requirements:

- A. It must include a clear statement of the relationship between the described Easement(s) and the survey control or the basis of the unique location.
- B. Each Easement parcel must be separately identified and described using the same label as used on the Survey Drawing/Map (e.g., "Easement Parcel A", "Easement Parcel B", etc.).
- C. It must clearly indicate that the Easement Parcel is lying outside of the road right-of-way (when applicable).
- D. It must include the basis of bearings when bearings are used.
- E. Metes and bounds descriptions must include bearings or angles and distances in order to allow for the computation of a mathematical closure.
- F. It must include detailed descriptions of any natural or artificial monument referenced.
- G. It must have the words degrees, minutes, seconds, and references to fractions spelled out and not abbreviated.
- H. It must not contain any reference to the computed size of the Easement parcel.
- I. It must use Arabic numerals to designate distances, degrees, minutes, seconds, government lots, sections, townships, ranges, etc.
- J. The font and text font size must be clearly legible with a text font size of no smaller than 8 point used.

Additional format requirements for the written legal description shall be as provided in the following template.

CERTIFICATE OF SURVEY

Legal Description

Easement Parcel [A]

<Insert - Legal Description Text for the "Easement Parcel" [or "Easement Parcel A", if more than one Easement parcel]>

and shown as the "Easement Parcel [A]" on the survey map attached hereto and made a part hereof.

Easement Parcel [B] (if more than one Easement parcel)

<Insert - Legal Description Text for "Easement Parcel B" >

and shown as the "Easement Parcel [B]" on the survey map attached hereto and made a part hereof.

[repeat as necessary for the number of Easement parcels]

Ingress/Egress Easement [if applicable]

Together with a non-exclusive easement for ingress/egress over and across the following described land:

<Insert - Ingress/Egress Legal Description>

and shown as the 'Ingress/Egress Easement" on the survey map attached hereto and made a part hereof.

[End of Text Requirements]

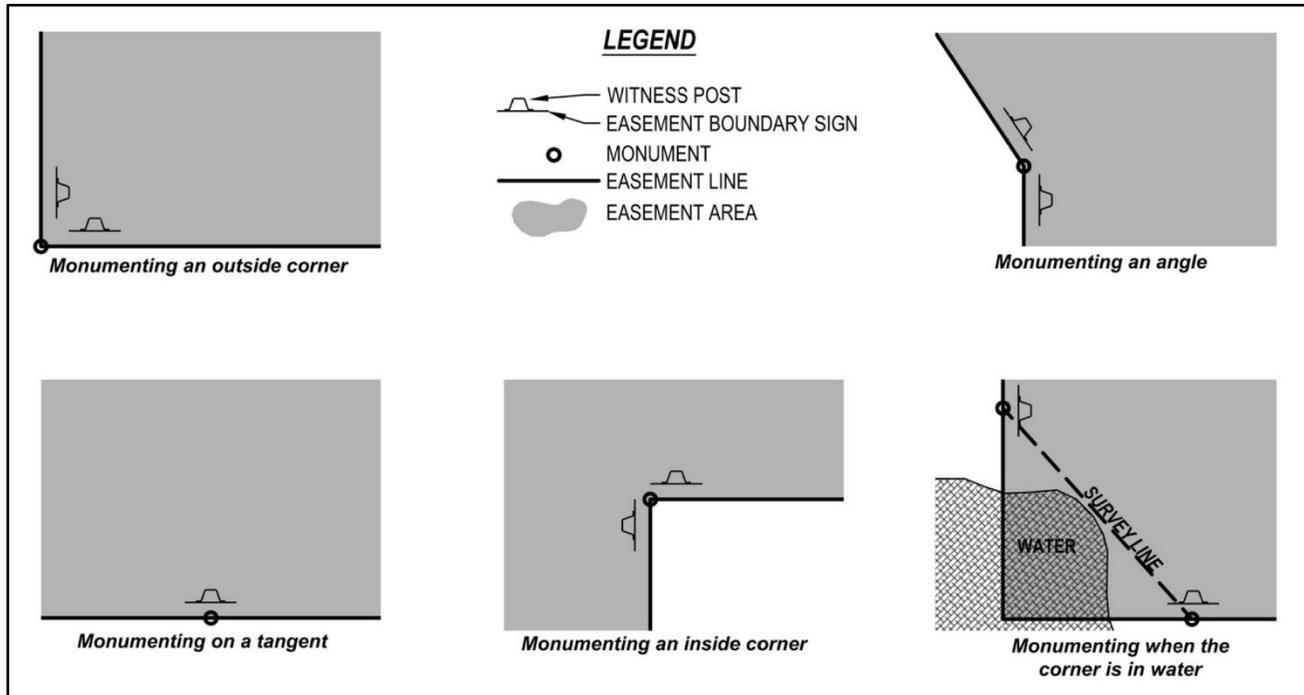
APPENDIX B: Requirements for Preparing Survey Drawings/Maps

Each sheet of the Certificate of Survey representing the survey drawings/maps must show or contain the following information:

- A. The scale of the drawing must be sufficient to legibly represent the required information. Either a portrait or landscape orientation may be used, but a portrait orientation is preferred.
- B. The North arrow must be orientated towards the top of the drawing. If that is not practicable, then North should be orientated toward the left side.
- C. All numeric dimensions and narrative designations must be oriented so they can be read from the bottom or right-hand side of the drawing.
- D. Any locatable encumbrance created by a Recorded Document (e.g., drainage, utility, or conservation easement) on the property being surveyed must be shown on the drawing with reference to the source information. Blanket encumbrances created by a Recorded Document must be identified in a note section on the drawing identifying the geographic scope of the encumbrance.
- E. Found and set monument locations must be shown on the drawing using distinct symbols that correspond with the legend. If additional monuments are to be set after preparation and delivery of the Certificate of Survey, those locations must also be shown using a distinct symbol.
- F. Basis of bearings and azimuth.
- G. All bearings or azimuths must be expressed to the nearest second.
- H. With the exception of right-of-ways or easements with fixed widths, all other distances must be expressed in feet and hundredths of a foot.
- I. Ditto marks and foot and inch symbols must not be used.
- J. All curved lines must show the central angle expressed to the nearest second, and radius and arc lengths expressed to the nearest hundredth of a foot.
- K. Each drawing must include an "Easement Parcel" label within the clearly defined Easement boundary. All separate non-connected Easement parcels included in the Certificate of Survey must be lettered consecutively beginning with the letter "A" and labeled as "Easement Parcel A", "Easement Parcel B", etc.
- L. The total Easement area to the nearest TENTH of an acre must be clearly shown below the Easement Parcel" label on each sheet containing the survey drawings. If more than one Easement parcel is described, the area of each Easement parcel must also be shown to the nearest TENTH of an acre.
- M. If applicable, the ingress/egress easement area must be labelled "Ingress/Egress Easement".
- N. Details of small congested areas may be needed. If more than one detail is necessary, label each detail consecutively beginning with the number "1".
- O. Considering the required drawing size, it may be necessary to separate the drawing portion of the Certificate of Survey with match lines. Match lines must be appropriately chosen, each one labeled consecutively by a letter beginning with the letter "A". Example: Match Line A, etc.
- P. When any parcel depicted on the drawings includes a water feature as a boundary, a dashed survey line must be used and labeled to represent the boundary line.
- Q. Observed evidence of possession or use by others in the parcel or across any perimeter lines of the Easement.
- R. Sufficient data to indicate the theory of location applied in formulating the opinions as to the probable location of the boundaries and corners of the Easement.

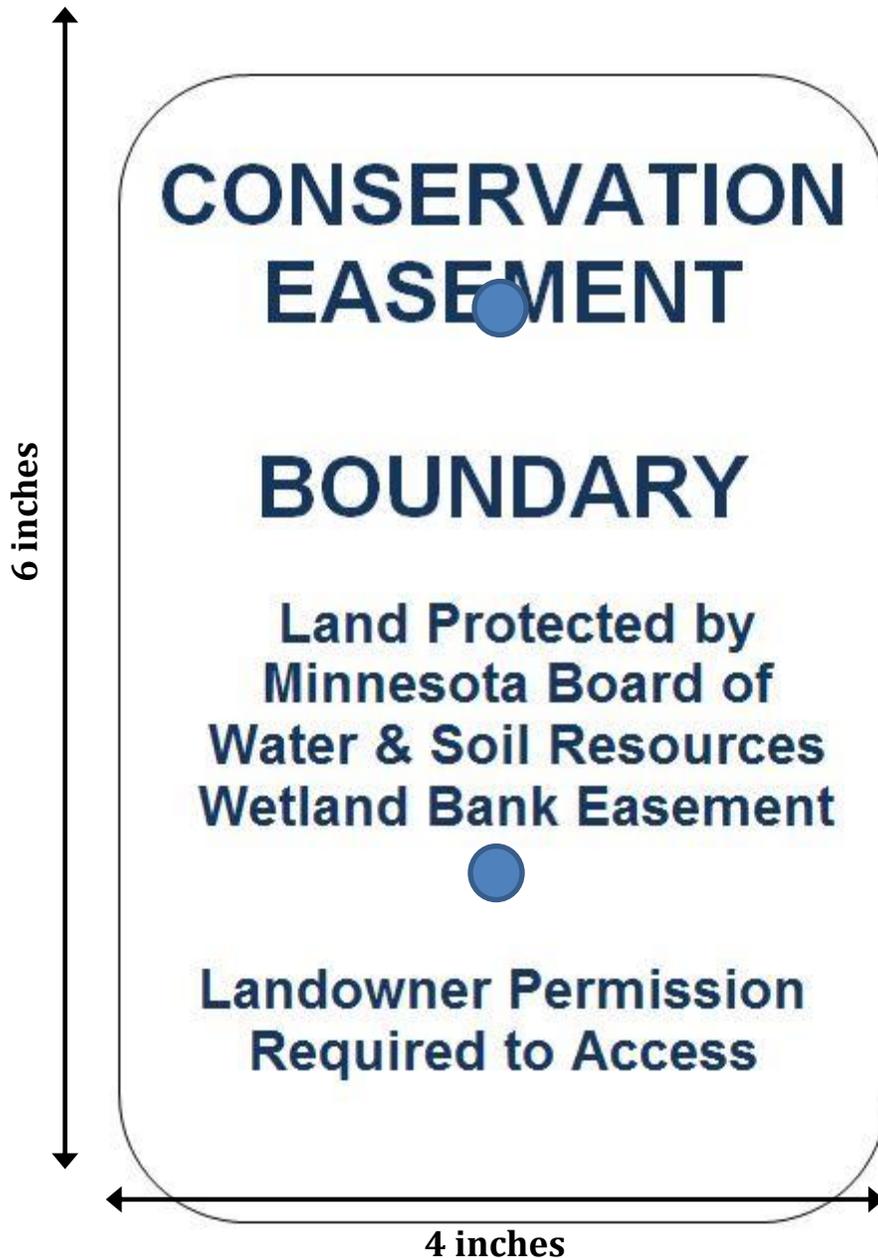
APPENDIX C: Requirements for Easement Boundary Monumentation and Signage

The following figures are examples of common easement boundary monument and sign scenarios. The examples shown reflect the most common situations that arise during installation. Refer to **Section 5** and **Appendix D** for further details.



Wetland mitigation site easement boundary signs must follow the specifications provided on the following page. The Surveyor and/or Landowner are responsible for acquiring Easement boundary signs from a sign manufacturer, with such signs conforming to the specifications provided herein.

Signs must be attached to each witness post using a galvanized nut and bolt for each pre-drilled hole in the Easement sign. The Surveyor must coordinate with the Landowner and BWSR regarding the appropriate number of Easement signs needed to conform to these requirements.



- Color: white background, no colored border.
- Text: dark blue lettering, centered, Arial font, larger lettering – font size 32, smaller lettering – font size 20.
- Material: aluminum -- new stock, shall conform to the requirements of ASTM B209 for alloy 5052-H38 or 6061-T6 aluminum.
- Thickness: .063 inches.
- Corner radii: ½ inch.
- Hole size: 3/8 inch pre-drilled holes for field post mounting; center of holes shall be approximately 3 inches apart from each other and 1 ½” from top and bottom edges and centered from the left/right edges.
- Paint/ink coating system: white background is an exterior grade enamel capable of withstanding 7-10 years of outdoor exposure; blue text layer is either (i) an exterior grade ink applied via the silk screen printing method or (ii) exterior grade premium vinyl lettering with an estimated outdoor field life of 7-10 years. No UV curable inks and no digital printing (i.e., flatbed inkjet printing) shall be used.

APPENDIX D: Addressing Common Boundary Issues

D.1. Property Line Conflicts/Encroachments

Evidence of possible encroachments of the property being surveyed for an Easement may indicate a disputed or uncertain boundary or potential property ownership conflict. Indications of encroachments include but are not limited to:

- Fence lines, fence posts, sign posts or other physical indications of occupation that conflict with the deeded property's surveyed boundary.
- Evidence of certain land uses, such as cropping that encroach onto or off of the deeded property's surveyed boundary.

In the course of establishing the Easement boundary (**Section 3**), if the Surveyor finds any evidence of encroachments onto or off of the property being surveyed, such evidence must be brought to the attention of the Landowner and BWSR. The Surveyor must provide sufficient detail regarding such encroachments so that the Landowner may appropriately evaluate the issue and decide whether to pursue possible remedies.

Under no circumstances shall the proposed easement area be located on land that is either (a) not owned by the party granting the Easement or (b) for which there is field evidence that the land may be subject to a conflict regarding its ownership.

D.2. Road Right-of-Ways

Neither the Easement, nor any ingress/egress easement area, shall include any land lying within the right-of-way of any public road. In some cases, existing and/or proposed private roads, drives, access lanes, etc. and their associated right-of-ways will also need to be excluded from the Easement. Questionable situations should be brought to the attention of the Landowner and BWSR for a decision on potential exclusions. When required exclusions for right-of-ways are not already legally established, the Surveyor must consult with the Landowner and determine a suitable right-of-way for said access feature. The survey map and written legal description must clearly reflect that any such road right-of-way area is outside both the Easement area and any ingress/egress easement area.

D.3. Riparian Barriers/Boundaries

Natural or manmade barriers, including but not limited to; ditches, streams, creeks, rivers, or other natural water bodies, will occasionally be used as boundary lines in the Easement's description. When riparian features are being used as a boundary line for the Easement, the following general guidance must be followed when establishing the Easement boundary:

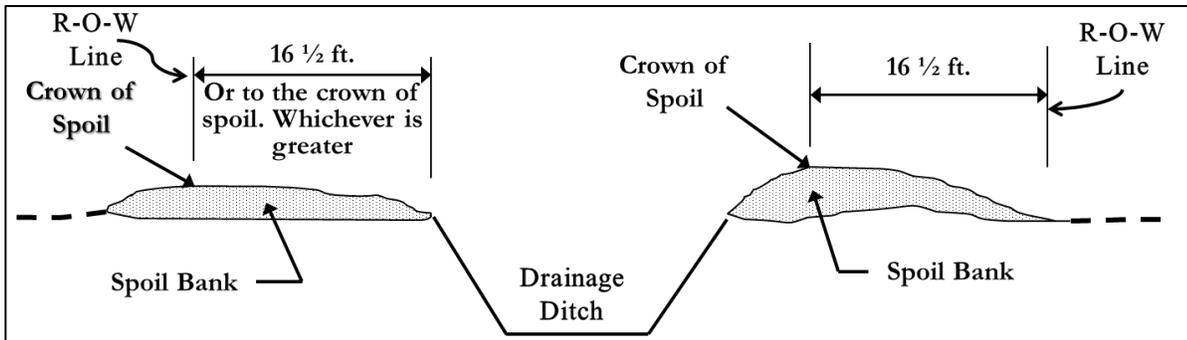
Streams, creeks, rivers, or other natural water bodies - for purposes of defining the Easement boundary, the Surveyor must create a survey line by traversing along the top bank of such stream, creek, river, or other water body. In the absence of a top bank, the Surveyor must traverse along a mark left by wave action at the preceding high water elevation, as determined by simple observation or at the ordinary high water mark established by the Minnesota Department of Natural Resources. In cases where the Surveyor is unable to determine the Easement boundary line, BWSR will be contacted for assistance.

In some instances, corner points for the Easement survey may be submerged. In this event, a mark left on the bank by wave action at the preceding high water, as determined by simple observation, shall be surveyed and the location for the Easement corners shall be mathematically offset from that line. Survey monuments and witness posts must be set at all locations where the survey line intersects and easement boundary line or property line, located on dry ground and tied to the computed points. See **Section 5** and **Appendix C** for further information.

Drainage ditches - for purposes of defining the Easement boundary, the Surveyor shall first determine, in consultation with the Landowner and BWSR, if any drainage ditches that border or traverse thru the

property are intended to be excluded from the Easement. In many cases, drainage ditches along or thru a planned Easement will be left as is and will continue to function and benefit surrounding properties. In such situations, there may be a desire to not include the drainage ditch or its right-of-way for access and maintenance within the Easement due to a conflict of easement rights.

In such situations, the Surveyor must determine the legally established right-of-way for the ditch and use said right-of-way line for the purposes of describing and establishing the Easement boundary. Where no legally established right-of-way exists, the Surveyor must determine a right-of-way using the guidance in the following diagram.



APPENDIX E: Instructions for Exporting Shapefiles from AutoCAD

All surveyed easement boundaries must be provided in a digital format and coordinate system that is compatible with BWSR's state-wide GIS geodatabase. In working with a community of engineering/surveying firms, it has come to our attention that some firms are having difficulty supplying compatible data.

The ability to provide a compatible shapefile will require the use of AutoCAD Map 3D, Civil 3D, or other suitable software (you do not need GIS software). The following instructions are intended to guide AutoCAD users through the steps of exporting an easement boundary into a Shapefile format (.shp) and converting the projected coordinate system into UTM Zone 15 North (NAD83 meters).

The following screen shots utilize AutoCAD Civil3D 2017, however, these instructions should work in other AutoCAD versions and be similar for other CAD programs, but may require slight variations in methods. In this example the easement boundary is shown as a blue polyline and will be exported into a ".shp" file type.

