Mn/DOT Right of Way Mapping - Frequently Asked Questions:

If you have a question not covered below, please Contact Us.

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- The right of way map file when a CAD (.DGN) format does not come up and into view within AutoVue. The error, "Page cannot be loaded." is reported. If I download the file to a local directory I don't have CAD software to open or view the file. Is there a workaround?
- Is there a symbol legend for the lines and points appearing on the maps?

How can I get a right of way map?
The easiest way to access Right of Way Maps is to visit our Right of Way Mapping & Monitoring website at the following link: http://gisservices.dot.state.mn.us/mndot-rwmm/. The link provides comprehensive solutions for self-service operation to find, view, and print right of way maps. The site's spatial index format simplifies finding a map if available for any particular site by just zooming into the area desired. Alternatively, advanced search, query, and analysis tools are also present.
TOP

How do I know if I have the most current map?
This can be difficult at times due to the variety of map files, formats, and indexes involved. Often two or more maps are required to have all of the most current information for a particular area. If comparing between two maps for the same area, normally the newest map has the widest right of way width and the highest parcel numbers of the applicable maps. The newest map generally has the highest file number but this may not always be the case. Another consideration are those maps that may be in production within either the Office of Land Management (OLM) LIS and R/W Mapping Unit, or as a Workmap in the districts. The Office of Land Management Project Coordination Unit or the district right of way personnel has the most current information on active acquisition projects.
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How current are the maps?
An estimated 98% of them are current. There are always maps in production on projects. Minor updates to old maps commonly occur as a result of ongoing adjustments or the maintenance of the State's highway system.
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For what purposes or intended use does the right of way map serve?
The right of way map functions as a general guide or pointer to other information or supportive documents used to acquire the highway right of way or release it from State authority. The map content consists of a minimum of information by design to help facilitate locating official documents or other reference information. Any features shown by location, symbol or description need to be confirmed by the appropriate legal document and/or representative authority. Contacting the appropriate Mn/DOT district office to confirm highway right of way existence or location is advised.   See:
http://www.dot.state.mn.us/landmanagement/pdfs/LIS_Brochure.pdf
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What information is shown on the maps?
The focus of information shown on the final r/w maps is the real estate that Mn/DOT administers and is responsible for. Real estate previously held by Mn/DOT is also portrayed for reference purposes. Listed below are map features in general order of their importance to Mn/DOT operations (items near the end of the list may not appear on some maps):

- New right of way, permanent and temporary easements, access control

- Parcel caption blocks, parcel flagging, area and type tabulation, plat number, control section number, and state project number
- Public Land Survey (PLS) lines (section, township, range, quarter, sixteenth lines, etc.)
- Existing right of way, permanent easements, and access control
- Subdivision lot and block lines and related subdivision information
- Property line of ownership
- Right of way of other road authorities
- Road names and width
- Railroad right of way and related information
- New right of way centerline
- Existing right of way centerline
- PLS government lot information
- Above-ground topography
- Commissioners Orders
- Vicinity and index map
- City names, river and lake names
- Road structure (curbs, shoulders, edge of road)
- Mile post markers
- Grid ticks

For more detailed information on these map features, feature themes or standards used in mapping see: http://www.dot.state.mn.us/caes/cadd/

http://www.dot.state.mn.us/surveying/SurvMapManuals/smmanuals.html

http://www.dot.state.mn.us/row/rowmanuals.html

Additionally, maps accessed using the Right of Way Mapping & Monitoring website can be displayed with a variety of additional features and data sets, e.g., aerial photographs.
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What are the typical map extents? Does a single map cover an entire highway?
Maps normally cover a construction project. Larger projects may involve more than one map. Very rarely does a single map cover an entire highway.
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What is the difference between a right of way plat and a right of way map?
The right of way plat is a legal document portraying proposed acquisition. The right of way map is an evolving graphic document (not a legal document) that shows what right of way was acquired and/or ultimately relinquished from Mn/DOT's administrative responsibility.
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Can I get information on historical right of way limits?
Yes. There are usually several maps for a given portion of highway. Each one reflects a different construction phase.
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Can I get right of way information shown on top of a digital photograph?
Mn/DOT does not offer this as a standard printed product or service. The Right of Way
Mapping & Monitoring website can provide this with limited quality see:
http://gisservices.dot.state.mn.us/mndot-rwmm/.
TOP

Can I order a printed right of way map?
Our preference is for customers to use the self-service website for printing their own maps. We
have very limited services available. Printing will be considered by special arrangement, charges
may be applied. See http://olmwebservices.dot.state.mn.us/maprequest/requestmain.aspx
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What file formats are available for digital map files?
Raster files are in TIF format. CAD files are in MicroStation DGN format.
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What are the earliest dated maps available?
The earliest maps date to the 1920's when Mn/DOT was at that time the State Highway
Department. About 1990 is when dates were beginning to be included on these maps.
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Do the right of way maps delineate right of way plats?
Yes, by parcel, except for the rare cases when parcels are not acquired by plat reference. .
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What kind of parcel information is shown?
The parcel number, owners name, control section, general ownership, acquisition size amounts,
owner balances, acquisition spot areas for each parcel, plat number, right of way widths.
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What kind of centerline information is shown?
Only the centerlines used to establish the right of way. The centerlines show stationing, point of
curvature and tangency, and curve data such as delta, radius, length, tangent, and degree of
curve.
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Do you have metadata on the right of way maps?
Yes, it can be found in our Right of Way Mapping & Monitoring application. The metadata is
associated with each data layer in the layer list on the left side of the application.
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Is the data in a GIS format?
The maps have been geo-referenced with an accuracy designed to primarily support the footprint
of the map for visual searching purposes. See the metadata for a more detailed explanation. The
world (TFW) file for any individual map can be downloaded using the Feature Hyperlinks option
in the Right of Way Mapping & Monitoring application. Shape files can only be handled by
special arrangement.
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What scale are the right of way maps? What coordinate system? What is the accuracy?
One inch equals 100 feet (usually), one inch equals 50 feet, one inch equals 200 feet, and metric equivalents. Coordinate systems vary over time and location. In earlier years these were project coordinates with a state plane origin. More recent maps are developed on the local county coordinate system. Accuracy varies. See metadata.
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Are raster maps created from the new CAD files?
No, we are not creating raster images from CAD files. Some situations may require use of multiple map files (meaning multiple formats) to assemble the complete picture of the area of interest.
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Do I find the most current map data at the district or at the Central Office?
It depends on the circumstances at the site. The most current map is generally found at the Central Office although sometimes districts make reference notations on older map prints until getting access to newer maps. If a road project is in development the district office would have the most current information.
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Can I save the map to a PDF format?
Yes, while viewing the map in AutoVue (click on the spectacles symbol to the right of the map file name) navigate to File-Convert. Select PDF under, "Convert to format". Browse to where you want to save the file to and give it a .pdf extension.
TOP

Why does the map appear blurred?
There are known pixellization problems when the Raster TIF image is viewed on the basemap. The map file itself is ok, there is a known bug in the application software. We are working to correct these issues. The image will need to be viewed using the raster viewing tool (AutoVue) (click on the link provided in when your cursor hovers over the map and the map tip comes reference shows) or download the file, then open it with a raster viewing tool.
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I can't find the map I'm looking for. What now?
There is the chance that the map you are looking for does not exist. There is the possibility that no right of way has been acquired along that highway, so no mapping was prepared. Or, it may be a situation where the highway was acquired from the township, city, or county. An example of the later is when Hennepin CSAH 18 became U.S.169. For such a change, the local authority may have the best or additional maps. For information on proposed projects, current construction, or the most current information, contact your local Mn/DOT district office.
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Can I use an address search to find right of way maps?
At this time address searching for a right of way map is not available.
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Some of the maps seem to be missing the title and vicinity map portion of the map?
Several hundred maps in the collection have attachments that may not appear with the map footprint or the rest of the map roll. These attachments were part of the original roll map and consist of title pages, inserts or other pertinent components. They were not initially made part of the map footprint because their content did not include actual ground features that would enable their spatial referencing. Often the missing part may contain a list of the Commissioner's Orders for the mapped area.
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Why do some maps contain overlapping sheets and others are edge to edge?

The roll maps originally drawn and maintained in their ink on linen format were photographed and scanned to create digital raster images. Each image was the same size and the photographs overlapped by approximately 10-15%. The patterns in the spatial index are quite evident. To improve the processing efficiency, a map's visual clarity, and the file management we are working to upgrade these digital images. The upgrade provides the result of an edge-to-edge format with sheet breaks occurring where match-lines exist in the original drawing. This enables better results when geo-referencing the image for the spatial index. Files in this format can typically be recognized by their long map footprint as compared to the standard sheet size versions. The clarity of each rescanned roll map improved as part of this effort doubling the resolution from 200 dpi to 400 dpi. About 20-25% of the maps have been rescanned to date. A map in this version will contain the original title block information from the map roll.
TOP

Why doesn't the CAD .DGN file that I downloaded look the same as the one in the web application?
This application makes use of the software application AutoVue to view MicroStation files. Users should be aware that at times AutoVue may not properly display MicroStation line styles. For example, a patterned line in the file could appear to be a solid line on the screen. The cause of the problem is known but the fix will not be implemented due to undesirable side effects and future changes in the mapping process that will eliminate the issue.
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Are the maps I download georeferenced?
Using the Right of Way Mapping & Monitoring application the map's corresponding world file (TFW) can also be downloaded to provide the associated spatial reference using the Feature Hyperlinks option.
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The right of way map file when a CAD (.DGN) format does not come up and into view within AutoVue. The error, "Page cannot be loaded." is reported. If I download the file to a local directory I don't have CAD software to open or view the file. Is there a workaround?

This error or other similar problems are known to exist for a very small percentage of the CAD files. The files work properly in the Bentley MicroStation environment however for reasons unknown the files will not open properly in the viewing tool - AutoVue. Sometimes the file will just continue to load but never completely finish. One option is to use Bentley's viewer tool. This is a free application that can be downloaded from the Bentley website. The downloaded application is 371 MB, however it is quick to set up and easy to use. One advantage of the application is that it provides the ability control the display of individual CAD file levels. Note, custom feature line styles will not appear unless the CAD file is viewed from within Bentley's ProjectWise environment, available only to customers internal to MnDOT. MnDOT offers no support for the Bentley viewer application. The application can be downloaded from: http://www.bentley.com/en-US/Products/Bentley+View/
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Is there a symbol legend for the lines and points appearing on the maps?

See Conventional Symbol Legend for a general guide to the meaning of the symbols shown. Variations in symbol form and meaning are possible due to the age of the maps spanning nearly 100 years. Standards within a CAD format alone have varied considerably during their 20+ year evolution. For more information on current CAD standards see CAD Standards
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