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August 14, 2014

Bill Storm, Environmental Review Manager
Minnesota Department of Commerce
85 7th Place East, Suite 500
St. Paul, MN 55101-2198

RE: In the Matter of the Application of Minnesota Power for a Route Permit for the Great Northern High-Voltage Transmission Line Project from Manitoba, Canada – Minnesota Border to the Blackberry Substation near Grand Rapids, Minnesota
PUC Docket No. E-015/TL-14-21

Dear Mr. Storm,

On June 20th, 2014 the Minnesota Public Utilities Commission (Commission) and the Department of Commerce (DOC) issued a Notice of Public Information and Environmental Impact Statement Scoping meetings and a request for public comment on the scope of the environmental impact statement (EIS) relating to the route permit application by Minnesota Power for the Great northern High-Voltage Transmission Line Project from Manitoba, Canada – Minnesota Border to the Blackberry Substation near Grand Rapids, Minnesota. The Minnesota Department of Transportation (MnDOT) has reviewed the application regarding the proposed project and submits the following comments in response to the Notice.

MnDOT appreciates the opportunity to comment on the scope of the EIS. MnDOT wishes to participate in the development of the EIS so that it will contain a thorough evaluation of the effects various route proposals may have on the state transportation system. MnDOT's fundamental interest is to ensure that the EIS identifies and quantifies, to the extent possible, any impacts the proposed high voltage transmission line (HVTL) may have on the safety of the transportation system, the effectiveness of the operations or maintenance of the state trunk highway system and any additional costs that may be imposed on the state trunk highway fund as a result of the location of the proposed HVTL.

MnDOT's approach to the HVTLs such as those involved in Minnesota Power's proposal is to work to accommodate these HVTLs within or as near as feasible to the trunk highway rights of way, based on an evaluation of the specific locations to ensure that appropriate clearance is maintained to preserve the safety of the traveling public and highway workers and the effective operation of the highway system now and in the foreseeable future. MnDOT has adopted a formal policy and procedures for accommodation of utilities on the highway rights-of-way (Utility Accommodation Policy"). A copy of MnDOT's policy can be found at http://www.dot.state.mn.us/utility/files/pdf/appendix-b.pdf

MnDOT's policy seeks to permit utilities to occupy portions of the highway rights-of-way where such occupation does not put the safety of the traveling public or highway workers at risk or unduly impair the public's investment in the transportation system. The EIS should assess the relationship of the placement of the proposed utility poles and the location of the highway activities for both the current traveled way and the future traveled way since future improvements to the highway may change the proximity of the proposed HVTL and make the line close enough to occupy a portion of the highway right-of-way.

Highway crossings by utilities, generally speaking, do not pose insurmountable difficulties in issuing a permit, and MnDOT routinely grants such permits to a variety of types of utilities. These permits usually have conditions associated with them, such as ensuring that the wires are high enough that they will not pose a hazard to highway users or maintenance employees. Highway crossings should occur as close to right angles as possible.

A review of route permit application shows that Route segments A through J2 of the proposed HVTL would cross TH 1, TH 11, US 169, TH 310, TH 38, TH 46, TH 6, US 71, TH 72, and TH 89. The crossings appear to consist of both perpendicular and slightly skewed in alignment. It should be noted that although Route segment I parallels TH 72 where there is a borrow pit in the area, the current alignment does not appear to be close enough to occupy a portion of MnDOT right of way.

The EIS should also evaluate the areas where Minnesota Power's proposed Route segments may be located near and/or co-located with existing transmission lines in relation to the State's trunk highway system. Multiple locations of HVTL's in close proximity to trunk highways might restrict MnDOT's ability to expand and maintain its highway infrastructure in the future.

Aeronautics

The Piney-Pinecreek Border Airport (48Y) is located just east of the proposed route alignments to the Great Northern Transmission Line. The airport is currently zoned through the Piney-Pinecreek Airport Zoning Ordinance dated December 10, 1981. The ordinance restricts both land development and airspace obstructions to Runway 15/33 approaches.

Great Northern Transmission Line route alignments depicted in the attached file "Piney FAA Expansion (2)" will be affected by Safety Zone C which restricts the height of all objects to the Horizontal Surface. The Piney-Pinecreek Airport Zoning Ordinance states "Zone C is subject only to height restrictions of the Horizontal Zone set forth in Subsection IV B ....."

The Horizontal Zone as defined in the Piney-Pinecreek Airport Zoning Ordinance, Subsection IV B is: "All that land which lies directly under an imaginary horizontal surface 150 feet above the established airport elevation, or a height of 1228.0 feet above mean sea level, the perimeter of which is constructed by swinging arcs of specified radii from the center of each end of the primary surface of each runway and connecting the adjacent arcs by lines tangent to those arcs. The radius of each arc is 6000 feet." The Piney-Pinecreek Airspace Map is attached.

In addition to the existing airport zoning ordinance is a long term planning document for Piney-Pinecreek Border Airport for the future development of the airport. The document is an approved Airport Layout Plan (ALP) dated November 9, 2000. The ALP depicts 48Y airport with a planned crosswind runway 6/24 and a length of 2,650 feet. It is the interest of the Office of Aeronautics to protect the public's investment in the existing and planned expansion of the airport.

The attached file, Piney FAA Expansion (2), depict route alignments A through E. Great Northern Transmission Line proposed route alignment A, B and C are not acceptable options. Route alignment E is the preferred option for aeronautical purposes, but Route option D, may also be considered a viable option when all height structures are under 150 feet (1228 feet MSL) within Safety Zone C.

As the route alignments are being defined, it will be necessary to contact the Federal Aviation Administration. The FAA is responsible for federal laws and regulation affecting the aviation industry. The FAA's regulations 14 CFR Part 77 (Objects Affecting Navigable Airspace) define certain airspace surfaces established with relation to the airport and each runway. See 14 CRF 77.13 and 77.25. The FAA rules require notice be provided to the FAA for review and determination of impacts to the airspace before construction of any structure that might penetrate any of the Part 77 surfaces. See 14 CFR 77.17 and 77.13.

MnDOT has been involved in meetings and monthly agency conference calls with Minnesota Power to discuss our agency's concerns and permitting requirements regarding the proposed transmission line. We request that Minnesota Power continue to coordinate with our agency on the final design and construction with regard to proximity to any MnDOT right of way.

Any HVTL construction work, including delivery or storage of structures, materials or equipment that may affect MnDOT right of way is of concern such that MnDOT should be involved in planning and coordinating such activities. If work is required within MnDOT right of way for temporary or permanent access, please coordinate with Wayne Scheer, District 1 permits at 218-725-2780 or Wayne.Scheer@state.mn.us , Stephen Frisco, District 2A permits at 218-755-6553 or Stephen.Frisco@state.mn.us or Earl Hill, District 2B permits at 218-277-7964 or Earl.Hill@state.mn.us.

MnDOT has a continuing interest in working with the Commission and the DOC to ensure that possible impacts to highways, airports, waterways, rail lines and the environmentally significant areas of highway right of way are adequately addressed. We appreciate the opportunity to provide these comments.

Sincerely,

Stacy Kotch
Utility Transmission Route Coordinator
Minnesota Department of Transportation

Enclosures: HVTL Impacts on Transportation (PDF)
Zoned Airspace Map (PDF)
Piney FAA Expansion Map (PDF)

cc: Deb Sorenson – MnDOT Office of Aeronautics
Wayne Scheer – MnDOT District 1 Permits
Stephen Frisco – MnDOT District 2A Permits
Earll Hill – MnDOT District District 2B Permits
Lydia Nelson – HDR Engineering

IMPACT OF HIGH VOLTAGE TRANSMISSION LINES ON TRANSPORTATION SYSTEMS

Minnesota's transportation infrastructure plays a vital role in supporting economic vitality and quality of life in the State. The Minnesota Department of Transportation (MnDOT) is responsible for developing and implementing plans to meet the present and future transportation needs of the public. The plans relate not only to the State highway system, but also to such modes of transportation as transit, aviation, rail, ports, bicycle and pedestrian.

The construction of electric power facilities such as high voltage transmission lines in close proximity to transportation infrastructure can have significant impacts on the safety, construction, maintenance, planning, and administration of the State's transportation infrastructure.

This document provides an overview of transportation-related considerations that should be taken into account in all applications under the Minnesota Power Plant Siting Act when the proposed utility facility may be sited in close proximity to transportation infrastructure. This document effectuates MnDOT's responsibilities under Minn. Stat. §216E.10, Subd. 3, to participate in the routing process when a HVTL route applications are submitted by utilities to the MPUC. This statement is intended to be included as part of the record considered by the Minnesota Public Utilities Commission (MPUC) in all applications under the Minnesota Power Plant Siting Act after the date indicated below.

In addition, MnDOT intends that this document shall be used by the Office of Energy Security (OES) in the preparation of all Environmental Impact Statements (EIS) or other environmental assessments prepared by OES to assist the MPUC in its route selection process.

This baseline statement of impacts on transportation infrastructure may be amended by MnDOT in the future as it deems appropriate by filing an updated document with the Minnesota Public Utilities Commission.

September 2010

MnDOT Baseline Statement

The Minnesota Power Plant Siting Act, Minn. Stat. Ch. 216E, delegates to the Minnesota Public Utilities Commission (MPUC) the responsibility for selection of locations for large electric generation plants and new high voltage transmission lines (HVTLs). A site permit or route permit must be obtained from the MPUC before a large electric power facilitiy can be constructed in the State of Minnesota. In addition to the site or route permit issued by the MPUC, a utility seeking to construct a new large electric generation plant or HVTL must also obtain from other state agencies any other permits that may be required to construct and operate such facilities.

Under Minn. Stat. §216E.10, Subd. 3, state agencies authorized to issue permits that may be required for construction of such facilities are directed to participate in the MPUC's routing and siting process. By virtue of this document, the Minnesota Department of Transportation (MnDOT) fulfills the directive in Minn. Stat. §216E.10, Subd. 3, to participate in the MPUC's routing and siting process. This document provides a baseline statement of transportation-related considerations that should be taken into account in all applications under the Minnesota Power Plant Siting Act when the proposed large electric power facilities may be sited in close proximity to transportation infrastructure. In addition to identifying the relevant legal and regulatory framework that applies to MnDOT when coordinating placement of utility facilities in close proximity to transportation facilities, this baseline statement will describe information that MnDOT believes is needed to make the route analysis clear and complete, conform to state and federal regulatory and permitting requirements, and meet documentation requirements when permits are necessary. This baseline statement is intended to be included as part of the record in all applications under the Minnesota Power Plant Siting Act after the date indicated above.

MnDOT also intends that this document be used by the Office of Energy Security (OES) in the preparation of Environmental Impact Statements (EIS) or other environmental assessments so that those documents will contain a thorough evaluation of the effects various route proposals may have on the state transportation systems.

Minnesota's transportation network is comprised of a number of transportation systems. The Commissioner of Transportation has both direct and indirect roles with respect to the various transportations systems. In some areas, and in particular with respect to the state trunk highway system, the Commissioner is charged with direct responsibility for constructing, operating, maintaining and managing that system. Part II of this statement will focus primarily on the state trunk highway system, which is the transportation system that is most frequently impacted by a proposed HVTL route.

In addition to roadways, other transportation systems include transit, passenger and freight rail, trails, aviation and waterway transportation. In many circumstances, MnDOT provides support to other entities that play a lead role in moving people and freight throughout the state. For example, private businesses are directly charged with moving freight in Minnesota, and MnDOT provides support through its Office of Freight and Commercial Vehicle Operations and Office of Aeronautics. Part III of this statement will focus on some of the ways that other transportation systems may be impacted by a proposed HVTL route.

In addition to this baseline statement, MnDOT will, in appropriate circumstances, provide additional comments and recommendations related to specific locations in applications for site or route permits. MnDOT reserves the right to supplement or amend this baseline statement in the future as it deems appropriate by filing an updated document with the Minnesota Public Utilities Commission.

I. The EIS Process Under the Minnesota Power Plant Siting Act

Pursuant to Minn. Stat. Ch. 216E and Minn. Rules part 7850, the environmental review undertaken by the OES is the only environmental study that is completed relating to an application to construct a HVTL. In its participation in the EIS process, MnDOT's fundamental interest is to ensure that the EIS identifies and quantifies, to the extent possible, any impacts the proposed high voltage transmission line (HVTL) may have on the safety of the transportation system, the effectiveness of the operations or maintenance of the state trunk highway system, and any additional costs that may be imposed on the state trunk highway fund as a result of the location of the proposed HVTL.

Depending on the route and alignments that are ultimately selected, the applicants may ask MnDOT for permits to occupy portions of trunk highway rights-of-way. As the governmental unit responsible for preparation of the EIS, the OES should take into consideration how actions by other governmental units (e.g., actions by MnDOT to issue a permit to the applicant) may impact environmental or cultural resources. For example, the EIS should identify any environmental amenities that are in or adjacent to the MnDOT right-of-way, and it should provide an assessment of whether the intrinsic qualities of those environmental amenities could be impacted by the issuance of a MnDOT permit.

In addition to environmental amenities or values that may be impacted by activities associated with a permit issued by MnDOT, the EIS should also include a thorough evaluation of all impacts on highways associated with all potential alignments within each proposed route. As will be discussed in more detail below, these impacts may include changes to the level of safety for the traveling public, the level of safety to workers who construct, repair and maintain the highway system, and the additional expense that may be incurred by the public if it becomes necessary to relocate the HVTL or work around the HVTL once it is built.

II. Highway-related Matters

MnDOT is directly charged with constructing, operating, maintaining, and managing the state trunk highway system, which consists of Interstate highways, US Highways, and state highways established under the provisions of Article 14, Section 2 of the Minnesota Constitution. In addition to the state trunk highway system, Minnesota's roadway network includes county state-aid highways, municipal state-aid streets, county highways, town roads, and city streets. The state trunk highway system consists of nearly 12,000 miles of roadways and over 3,500 bridges. While state trunk highways account for only eight percent of all roadway miles in the State, they carry 58 percent of all traffic.

In these comments, MnDOT will address only the impacts of HVTL proposals on the state trunk highway system. For locations where a proposed HVTL may impact a different highway system, the appropriate local road authority should be consulted for input on the impact of the proposed HVTL on those roadways.

MnDOT has adopted a formal policy and procedures for accommodation of utilities on the trunk highway rights-of-way ("Utility Accommodation Policy"). A copy of MnDOT's policy can be found at http://www.dot.state.mn.us/utility/files/pdf/appendix-b.pdf .

MnDOT's approach to proposals to construct HVTLs on or near trunk highways is to work to accommodate these HVTLs within or as near as feasible to the highway rights-of-way, based on an evaluation of the specific locations to ensure that appropriate clearance is maintained to preserve the safety of the traveling public and highway workers and the effective operation of the highway system now and in the foreseeable future. MnDOT's Utility Accommodation Policy seeks to guide the balance between accommodation of utility operations in the highway rights-of-way and preserving the safe and efficient operation of the transportation system.

The provisions of the Utility Accommodation Policy are based on the framework of several interrelated state and federal laws that led to its creation. These comments will outline the legal and regulatory structure under which the Utility Accommodation Policy was adopted, and will then discuss the types of circumstances and concerns that must be considered when applying the Utility Accommodation Policy to a specific situation as MnDOT works to accommodate a utility in a highway right-of-way while preserving the safe and efficient operation of the highway.

A. Legal Framework Applicable to MnDOT's Utility Accommodation Policy

MnDOT's policy regarding accommodation of utilities is governed by both federal and state statutes and regulations.

1. Applicable Federal Laws

Certain highways in Minnesota are part of the National Highway System, which is established under 23.U.S.C. §103. The National Highway System and the Dwight D Eisenhower National System of Interstate and Defense Highways (Interstate System) are together known as the Federal-aid System. 23 U.S.C. §103(a). See also 23 C.F.R. Part 470. In addition to the highways on the National Highway System, other highways also receive federal funding. Together, the highways in the Federal-aid System plus the other highways that receive federal funding are known as "Federal-aid highways." 23 C.F.R. §470.103. Generally speaking, the Federal-aid highways in Minnesota include the Interstate highways, the US highways (e.g., US 10, US 52, and US 169), and the Minnesota state highways that comprise the trunk highway system.

Congress articulated the transportation policy of the United States in 23 U.S.C. §101(b). Among other things, Congress noted that "it is in the national interest to preserve and enhance the surface transportation system to meet the needs of the United States for the 21st Century," that "the current urban and long distance personal travel and freight movement demands have surpassed the original forecasts and travel demand patterns are expected to continue to change," and that "special emphasis should be devoted to providing safe and efficient access for the type and size of commercial and military vehicles that access designated National Highway System intermodal freight terminals." 23 U.S.C. §101(b)(3)(A), (B) and (E).

Federal law requires that "The real property interest acquired for all Federal-aid projects . . . shall be adequate for the construction, operation, and maintenance of the resulting facility

and for the protection of both the facility and the traveling public." 23 C.F.R. §710.201(e). In addition, all real property that is part of the Federal-aid highway system must be devoted exclusively to highway purposes unless an alternative use is permitted by federal regulation or the Federal Highway Administration ("FHWA"). This basic proposition is stated in 23 C.F.R. §710.403, which provides:

> "(a) The [State Transportation Department] must assure that all real property within the boundaries of a federally-aided facility is devoted exclusively to the purposes of that facility and is preserved free of all other public or private alternative uses, unless such alternative uses are permitted by Federal regulation or the FHWA. An alternative use must be consistent with the continued operation, maintenance, and safety of the facility, and such use shall not result in the exposure of the facility's users or others to hazards."

Similarly, 23 C.F.R. §1.23 restricts use of the highway right-of-way unless otherwise permitted. This section provides:

> "(a) Interest to be acquired. The State shall acquire rights-of-way of such nature and extent as are adequate for the construction, operation and maintenance of a project.
>
> (b) Use for highway purposes. <u>Except as provided under paragraph (c) of this section, all real property, including air space, within the right-of-way boundaries of a project shall be devoted exclusively to public highway purposes.</u> No project shall be accepted as complete until this requirement has been satisfied. The State highway department shall be responsible for preserving such right-of-way free of all public and private installations, facilities or encroachments, except (1) those approved under paragraph (c) of this section; (2) those which the Administrator approves as constituting a part of a highway or as necessary for its operation, use or maintenance for public highway purposes and (3) informational sites established and maintained in accordance with Sec. 1.35 of the regulations in this part.
>
> (c) Other use or occupancy. Subject to 23 U.S.C. 111, the temporary or permanent occupancy or use of right-of-way, <u>including air space</u>, for nonhighway purposes and the reservation of subsurface mineral rights within the boundaries of the rights-of-way of Federal-aid highways, may be approved by the Administrator, if he determines that such occupancy, use or reservation is in the public interest and will not impair the highway or interfere with the free and safe flow of traffic thereon."

(Emphasis added.)

Federal law recognizes accommodating the placement of utility facilities as a permissible exception to the general mandate that all of a highway right-of-way, including the air space above the right-of-way, must be used solely for highway purposes. Section 109(l) of Title 23 of the U. S. Code provides:

> "(1) In determining whether any right-of-way on any Federal-aid highway should be used for accommodating any utility facility, the Secretary shall—
>
> (A) first ascertain the effect such use will have on highway and traffic safety, since in no case shall any use be authorized or otherwise permitted, under this or any other provision of law, which would adversely affect safety;
>
> (B) evaluate the direct and indirect environmental and economic effects of any loss of productive agricultural land or any impairment of the productivity of any agricultural land which would result from the disapproval of the use of such right-of-way for the accommodation of such utility facility; and

> (C) consider such environmental and economic effects together with any interference with or impairment of the use of the highway in such right-of-way which would result from the use of such right-of-way for the accommodation of such utility facility."

The U.S. DOT has implemented this statutory directive by adopting the rules relating to accommodation of utilities found at 23 C.F.R. Part 645, Subpart B. These regulations require that each state transportation department submit its policies for accommodating utilities within highway rights of way to the FHWA. 23 C.F.R. §645.215(a). See also 23 C.F.R. §645.209(c). The FHWA will approve the policy upon determination that it is consistent with federal statutes and regulations, and any changes to the policy are also subject to FHWA approval. 23 C.F.R. §645.215(b) and (c). Once a state's policy has been approved by the FHWA, the state transportation department can approve requests by a utility to use or occupy part of the right-of-way of a highway that is part of the Federal-aid highway system if the request is encompassed by that policy. Exceptions to the policy can be granted, but if a state proposes to grant to a utility an exception to its utility accommodation policy, the exception is subject to review and approval by the FHWA. 23 C.F.R. § 645.215(d). This may be considered a federal action which would need to meet all requirements of the National Environmental Policy Act (NEPA), 42 U.S.C. §4321 et seq., to be in conformance with federal regulations.

2. Applicable Minnesota Laws

In addition to these federal laws, MnDOT's policy on utility accommodation must also conform to the laws of the State of Minnesota. Article 14 of the Minnesota Constitution establishes the state trunk highway system. It also establishes "a trunk highway fund which shall be used solely for the purposes [of constructing, improving and maintaining the trunk highway system]." Minn. Const. Art. 14, §5. Under Minn. Stat. §161.20, the Commissioner of the Department of Transportation is charged with the responsibility to carry out the directive of Article 14 to construct, improve and maintain the trunk highway system, and is authorized to acquire property and take other steps necessary to fulfill this responsibility.

Minnesota has several statutes relating to use of highway rights-of-way by utilities. Minn. Stat. §222.37, Subd. 1, provides in part:

> "Any . . . power company . . . may use public roads for the purpose of constructing, using, operating, and maintaining lines . . . for their business, but such lines shall be so located as in no way to interfere with the safety and convenience of ordinary travel along or over the same; and in the construction and maintenance of such line . . . the company shall be subject to all reasonable regulations imposed by the governing body of any county, town or city in which such public road may be."

Minn. Stat. § 161.45 provides additional specifications for utility facilities occupying portions of a trunk highway right-of-way. Section 161.145, Subd. 1 provides in part:

> "Electric transmission . . . lines . . . which, under the laws of this state or the ordinance of any city, may be constructed, placed or maintained across or along any trunk highway . . . may be so maintained or hereafter constructed only in accordance with such rules as may be prescribed by the commissioner who shall have power to prescribe and enforce reasonable rules with reference to the placing and maintaining along, across, or in any such trunk highway of any of the utilities hereinbefore set forth."

Subdivision 2 of §161.45 specifies the general rule that if the relocation of a utility placed in a trunk highway right-of-way is necessitated by a construction project on the trunk highway, the utility bears the costs associated with the relocation of its facility. However, if a utility facility is located on the Interstate System, then the cost of relocation of such facility is to be paid out of the state Trunk Highway Fund. See Minn. Stat. § 161.46.

Minnesota Rules part 8810.3100 through 8810.3600 contain the rules relating to placement of utility facilities in trunk highway rights of way. Under Section 8810.3300, a utility must obtain a permit for any construction or maintenance work in a trunk highway right-of-way, and special rules apply to interstate highways. Section 8810.3300, Subp. 4 provides in part as follows:

> "Utilities along the interstate highways shall be located outside the control-of-access lines except as outlined below. Where the control-of-access lines coincide with the right-of-way lines, the utilities shall generally be located on private property. Where the control-of-access lines and right-of-way lines do not coincide, utilities may in general be located in the area between them. All utilities shall be serviced and maintained without access from the ramps, loops, and through traffic roadbeds. Utilities may be serviced from frontage roads and roads other than another interstate highway which cross either over or under the interstate highway. At aerial crossings of an interstate highway, supporting poles may be located on interstate highway right-of-way if they are a minimum of 30 feet beyond the shoulders of all through traffic roadbeds; however, in no event shall they be located in a median unless its width is 80 feet or more. . . .
>
> There may be extreme cases where, under strictly controlled conditions, a utility may be permitted inside the control-of-access lines along an interstate highway. In each case there must be a showing that any other utility location is extremely difficult and unreasonably costly to the utility consumer, that the installation on the right-of-way of the interstate highway will not adversely affect the design, construction, stability, traffic safety, or operation of the interstate highway and that the utility can be serviced without access from through traffic roadbeds, loops, or ramps."

In addition, Subp. 6 of part 8810.3300 requires that, except for the negligent acts of the state, its agents and employees, the utility shall assume all liability for and save the state harmless from any and all claims arising out of the utility's work and occupation of a portion of the trunk highway right-of-way.

B. MnDOT's Utility Accommodation Policy

MnDOT has adopted a policy statement regarding the circumstances and methods under which it will grant permits to utilities to occupy a portion of a trunk highway right-of-way. MnDOT's Utility Accommodation Policy is in conformance with the federal and state statutes and regulations described above, and is also consistent with the American Association of State Highway and Transportation Official (AASHTO) publications, A Guide for Accommodating Utilities Within Highway Right-of-Way and A Policy on the Accommodation of Utilities Within Freeway Right-of-Way. MnDOT's Utility Accommodation Policy has been reviewed and approved by FHWA under 23 CFR §645.215(b). Therefore, with respect to Federal-aid highways, further review by the FHWA is required for MnDOT to grant an exception to the general application of the Policy, but FHWA review and approval is not necessary for permits granted within the scope of the Policy.

MnDOT's Utility Accommodation Policy recognizes that it is in the public interest for utility facilities to be accommodated on highway rights-of-way when such use does not interfere with the flow of traffic and safe operation of vehicles or otherwise conflict with applicable laws or impair the function of the highway. The Policy applies to all utilities, both public and private. Therefore it speaks in somewhat generic terms to cover as many anticipated situations as possible.

The Policy was developed with integrated sections, and two or more sections usually need to be read together when applying the Policy to the context of a utility accommodation circumstance. Some of the provisions most relevant to HVTL route applications include:

- Part I.F – articulates the general policy of accommodation of utilities;
- Part I.G – contains provisions for granting exceptions to the Policy;
- Part V – addresses the location requirements for utilities occupying a portion of a highway right-of-way that apply to most highways;
- Part VI – contains special rules for utility accommodation requests along freeways;
- Part X – contains specific requirements relating to overhead power and communication lines.

MnDOT is expressly required by 23 CFR §645.209(c) to include in its Utility Accommodation Policy some provisions that apply specifically to freeways. Freeways are characterized by the fact that they are subject to full control of access – i.e., preference is given to through traffic by restricting areas where any person, including vehicles that use the highway, may enter or leave the freeway. By implementing full control of access, through traffic can safely achieve higher speeds and encounter fewer stoppages or slowdowns of the flow of traffic. On freeways, all crossings at grade are prohibited, and fencing is installed along the right-of-way to restrict other persons (including snowmobilers, bicyclists, walkers, etc.) or animals from entering the freeway right-of-way. Freeways also require special design considerations, such as the wider clear zones adjacent to the roadway due to the higher speeds achieved by through traffic on freeways.

The control of access aspect of freeways is a key consideration underlying the special rules regarding utility accommodation requests on freeways. The Utility Accommodation Policy states: "The installation of new utility facilities shall not be allowed longitudinally within the right of way of any freeway, except in special cases under strictly controlled conditions." Under Utility Accommodation Policy Section VI.C, the utility seeking to establish that special circumstances exist to justify an installation on a freeway must demonstrate to MnDOT's satisfaction the following:

> "a. The accommodation will not adversely affect the safety, design, construction, traffic operations, maintenance, or stability of the freeway.
> b. Alternate locations are not available or are cost prohibitive from the standpoint of providing efficient utility services.
> c. The accommodation will not interfere with or impair the present use or future expansion of the freeway.
> d. The location of the utility facility outside of the right of way would result in the loss of productive agricultural land or loss of productivity of agricultural land. In this case, the utility owner must provide information on the direct and indirect environmental and economic effects for evaluation and consideration by the Commissioner of Transportation.

e. Access for constructing and servicing utility facility will not adversely affect safety and traffic operations or damage any highway facility."

Concurrence by the FHWA is also required before the permit for a longitudinal installation on a freeway can be granted.

C. Potential Impacts of HVTLs on Trunk Highways

The routes proposed by utilities or other affected persons frequently would either cross over or run parallel to trunk highways in a variety of locations. When a route is ultimately selected by the MPUC, a permit from MnDOT will be required in any location where the HVTL will occupy any portion of the highway right-of-way. The EIS prepared to assist the MPUC in this selection process should identify and evaluate all impacts that construction of a HVTL would have on the trunk highways, as well as the Trunk Highway Fund.

In conducting this evaluation, it is important to recognize that highway rights-of-way do not have a uniform width. Minnesota law provides a minimum width for roads (4 rods, or 66 feet) but otherwise leaves the width necessary for a road to the discretion of the road authority. Minn. Stat. §160.04.

The width of the highway right-of-way, and the distance from the centerline of the roadway to the boundary of the right-of-way, varies from highway to highway, and even from mile to mile along a given highway. The reasons for this variability are many, and include considerations such as the number of lanes the highway has, the time when the right-of-way was purchased, the topography and geology of the area, the negotiations with the individual landowners from whom the right-of-way was acquired, and the timing and nature of changes and upgrades to the highway that have occurred over the years. Due to this variability, a uniform policy that an HVTL can safely be located "X" feet or "Y" feet outside the highway right-of-way boundary line generally does not work well. A two-dimensional map does not provide sufficient information to determine a suitable alignment for a HVTL.

MnDOT believes that each situation requires an evaluation of the type of activities that regularly occur on and along the affected highways. These activities can be evaluated in three groups – (a) traffic that uses a highway, (b) maintenance, repair and related activities and structures associated with the ongoing operation of the highway, and (c) construction activities that are likely to occur in the foreseeable future. These functions or uses of the highway have a zone – i.e., a height and width – in which they take place either along the roadway surface or in the ditches, near bridges, intersections or interchanges where the maintenance and construction activities take place.

Once the zones of these recurring highway activities are identified, a safety buffer zone from the location of the energized wires of the HVTLs must be applied. The Occupational Safety and Health Administration (OSHA) and the National Electric Safety Code (NESC) provide guidance on the safety clearances for activities near various voltages of HVTLs. The OSHA or NESC safety buffer should be applied between the zones of transportation activities and the location of the energized lines.

1. Traffic That Uses a Highway

Minnesota's trunk highways are designed to facilitate both personal travel and the distribution of freight throughout the state. Vehicles used in the distribution of freight can be

quite large. Moreover, certain routes have tendencies to carry more oversize vehicle traffic than others. By way of example, due to the large amount of freight it carries out of the Port of Duluth, US 2 is considered by MnDOT's Office of Freight and Commercial Vehicle Operations as a "Super Haul Truck Permit Corridor" that requires special design policies to facilitate its role in the distribution of freight across the state.

Pursuant to Minn. Stat. §§169.80 and169.81, vehicles that do not exceed 13 feet 6 inches in height and 8 feet 6 inches in width can be operated on Minnesota's highways without a permit. Vehicles with larger dimensions, excluding farm vehicles, must obtain a permit. Over the 5 year period ending September 30, 2009, MnDOT issued 233,376 permits for oversize vehicles to operate on state trunk highways. These do not include oversize farm machinery (which do not require a permit) nor movements of houses or other buildings such as grain bins. The number of building moves vary between 400 and 600 per year. Of the oversize vehicle permits issued, 73 were for vehicles over 18 feet 5 inches high, with the largest reaching nearly 37 feet high. An example of the type of oversize loads frequently transported over trunk highways are the blades, base sections and nacelles used in constructing wind turbines.

In addition to freight and building moves, other traffic on the roadway portion of trunk highways includes such activities as snowplows, which operate on both the roadway and the shoulder. Snowplows are about 13 feet tall, and when their boxes are raised to distribute sand and salt, their height can reach as high as 18 feet. The relative size of snowplows on a typical highway surface is depicted in the drawing enclosed as Attachment 1.

2. Maintenance, Repair and Operational Activities

In addition to the zone associated with vehicles traveling on a highway, there is another zone associated with maintenance and operational activities alongside the roadways. Examples of maintenance activities performed by highway workers, and the types of equipment commonly associated with those activities, include the following:

- guardrail and fence installation and repairs, using augers, loaders and skidsteers (which commonly have raised buckets for pulling posts, etc.).
- vegetation control, using mowers, bucket trucks for tree trimming, and equipment for applying herbicides.
- cleaning ditches, culverts and drains, using backhoes and excavators of various sizes that have boom arms that are used to scoop dirt and vegetation and deposit it into a dump truck that will be parked along side the highway. MnDOT's larger ditch dredging equipment has a horizontal reach as long as 60 feet and a vertical operating dimension of up to 47 feet.
- vehicular accidents on highways often require special equipment to retrieve vehicles and repair damage. For example, when large vehicles such as trucks or buses run off the road or go down large ditches or into wetlands, large equipment with booms or winches may be used to pull them out.
- bridge inspections, using snoopers which have articulating arms that can lift a worker out over the side and then underneath the bridge structure.

Occasionally there is a need for immediate medical transport from roadside locations due to accidents and illnesses. For these situations there are a number of air medical helicopters stationed throughout Minnesota that will land in the roadside environment. These aircraft require clear approach and departure paths as well as an area large enough for the

helicopter to land. Given the dimensions of the helicopters used in Minnesota, an area with a diameter of 90 feet should be considered the minimum requirement for landing. There should be two approaches to this area from different directions separated by an arc of at least 90° so that the aircraft can land and take off without a tailwind. Powerlines can be a particularly difficult obstruction for helicopter landings at night. The lines themselves are nearly invisible to the pilot, who must use the presence of poles as evidence that the lines exist. Most helicopters operating in this environment have line cutters installed on the aircraft to cut powerlines they encounter. Even so, helicopter crashes occur when powerlines get entangled in their rotor system or landing gear.

MnDOT also maintains a number of structures alongside highways necessary for the safe and efficient operation of the highway, each of which requires periodic installation, maintenance and repair work. Examples of these structures include:

- road signs. The largest signs tend to be on freeways. Signs that extend out over the travel portion of a freeway must have 17 feet 4 inches of clearance to the bottom of the sign, and the top of such signs can be 30 feet 6 inches tall and may require boom trucks, bucket trucks or cranes to install or maintain such signs. Roadside guide signs along freeways can reach 13 feet tall and tend to be located as far out in the clear zone as practical.
- light posts, traffic control signals and poles for traffic monitoring cameras exist at various locations along highways, and range in height from 20 to 50 feet.
- high mast light towers are used along some freeways, and range in height from 100 to 140 feet.
- noise walls, which can be up to 20 feet high, are becoming increasingly common along freeways.

The relative size of some of these structures on a typical highway surface is depicted in the drawing enclosed as Attachment 2.

Another type of physical item located along highways is snow fences, either structural or living. Some snow fences are in the highway right-of-way, and others are placed by agreement with adjoining landowners and may be 150 feet off the highway right-of-way. The EIS should evaluate whether the proposed HVTL may require the removal of or limitation of cost-effective snow protection activities such as living snow fences. The study should address specific limitations to vegetation related to the trunk highway use into the future. While MnDOT is usually able to work out arrangements with a utility owner regarding height and placement of vegetation used as a living snow fence in locations where a utility is placed, consideration should be given to whether living snow fences need to be removed or relocated to accommodate a utility placement. It should be noted that if living snow fences or other vegetation needs to be removed or relocated to accommodate a utility placement, compensation for the removed vegetation is usually required as a condition for issuance of a permit by MnDOT.

3. Future Construction Activities

In addition to the safety of the traveling public and highway maintenance workers, consideration must be given to the equipment used during the construction process. The equipment used on construction projects also need to be refueled at the job site, which requires consideration of the safety precautions necessary for this procedure. Construction projects

often involve the use of large excavators and cranes similar in size to the equipment described above which MnDOT uses for its maintenance activities.

The equipment used in bridge work is especially large, usually requiring cranes with long booms to lift material into place. On occasion, inquiries are made concerning the possibility of using a highway bridge to carry a HVTL across an obstruction such as a river. Section VII.A.12 of MnDOT's Utility Accommodation Policy addresses HVTLs attached to bridge structures and states that installations of greater than 35 kV are not permitted except in extraordinary circumstances.

If the HVTL were located adjacent to the bridge, sufficient clearance would need to be maintained to enable workers on bridge inspection units, known as "snoopers," to safely perform their work. Snoopers have arms with two articulation points that swing out over the side of a bridge and enable the workers to closely inspect the underside of the bridge. Snooper arms require 50 feet of clearance from the side of the bridge to perform their job. Any energized transmission lines would need to be located far enough from the side of the bridge to give the workers sufficient clearance to perform their work safely.

The activities associated with vehicular traffic using the roadway surface and maintenance activities performed by highway workers each have a zone in which they typically occur. The drawings enclosed as Attachments 1, 2 and 3 do not depict a specific location on a specific highway. Rather, they are illustrative of the zones or areas on any given highway where transportation-related activities may take place. The lighter shaded area above the roadway surface in the drawing enclosed as Attachment 3 depicts the zone or area in which vehicular traffic on the roadway may operate. The zone within which the activities associated with maintenance work take place is depicted by the darker shaded area on the drawing enclosed as Attachment 3.

4. Economic Impacts on the Trunk Highway System

The decisions made about the location of a HVTL in close proximity to a trunk highway can have enormous impacts on the Trunk Highway Fund and the future investments that MnDOT will be able to make in the safety, maintenance and construction of the trunk highway system.

MnDOT continually evaluates the future needs for the trunk highway system and has construction projects in varying stages of development. At any given point in time, some projects are under construction, others have been designed and funded and are ready for construction, while still others have been identified as needed or are anticipated due to development trends but have not yet been funded. The types of construction projects MnDOT performs that could impact the location of a HVTL range from relatively minor changes to the width of a highway to major reconstruction projects. Examples of such construction projects might include:

- widening a roadway by addition of travel lanes or turn lanes, installation of a roundabout, or widening a shoulder area;
- rebuilding a highway in a way that changes the location or grade of a roadway; and
- addition of an overpass or interchange on a freeway or other highway.

As noted above, Minn. Stat. §161.45, Subd. 2, specifies the general rule that if the relocation of a utility placed in a trunk highway right-of-way is necessitated by a construction

project on the trunk highway, the owner of the utility bears the costs associated with the relocation of its facility. However, if a utility facility located on private property outside the trunk highway right-of-way must be moved to accommodate a highway construction project, then the costs of relocation become part of the highway construction costs and are paid out of the Trunk Highway Fund. Likewise, if a utility facility is located on the Interstate System, then the cost of relocation of such facility is to be paid out of the state Trunk Highway Fund. See Minn. Stat. § 161.46.

Location of a HVTL in close proximity to a highway right-of-way can limit future expansion or reconstruction of highways due to the complex and extremely costly nature of either moving the transmission lines or moving the path of the highway. Due to their size, the cost of relocating even a few poles can cost millions of dollars. If the trunk highway fund must bear these costs, it will mean that projects that are important to the safety and efficiency of the State's transportation system may be delayed, scaled back, or eliminated.

The potential financial impact on the Trunk Highway Fund can often be minimized or eliminated by careful selection of the location of HVTL alignments, or even of individual poles. The EIS in each application should include an evaluation of the risk of liabilities, and the potential magnitude of such liabilities, that may be imposed on the Trunk Highway Fund resulting from various proposed alignments along trunk highway rights-of-way. It is also imperative that any alignment selected by the MPUC that is in close proximity to a trunk highway have sufficient width and flexibility for MnDOT to work with the applicant to find a location that will minimize the potential future financial impacts of the proposed routes.

D. Other Safety Issues Associated With HVTLs Near Highways

It is expected that weather events (tornado, ice or blizzard conditions, heavy winds, lightning, etc) could cause damage to HVTL towers or downed lines, which in turn could disrupt access to the trunk highway system. For example, in 1998 a severe tornado hit St. Peter, Minnesota and major roadways were closed due to power lines that were down. A similar event that affected Nicollet and St. Peter occurred in 2006 and again required closure of major roadways due to electric power lines on the ground. A third event that affected Hugo required closure of US 61 to secure the area.

The EIS and the record in each application should present information on the history of transmission line disruptions, including specific information on how often HVTL towers and/or lines are down and why. The evaluation should include the possible impacts to the transportation system of such events, including how a downed HVTL may affect emergency vehicle access, large equipment moves, defense actions, evacuation, and emergency landings, especially in locations where alternate highway routes are not readily available.

The EIS should also evaluate safety issues for workers or the traveling public associated with induced voltage including, but not limited to:

- the causes of induced voltage, and the distance from the size of transmission lines under consideration at which it can occur;
- methods for measuring electric voltage near such transmission lines;
- the amount of clearance needed to assure that workers and the public are safe from electric shock,
- methods for making highway related structures in the highway right-of-way safe from electric shock, and

- the amount of health risk for workers in close proximity to a HVTL who have special circumstances such as heart pacemakers, pregnancy or diabetes.

The record should also include an evaluation of the possibility of fuel ignition if vehicles are refueled under a power line. During highway construction and maintenance projects, MnDOT frequently refuels vehicles in the field. In addition, accidents in which vehicles carrying large amounts of fuel go far off the roadway into ditches are not uncommon, and some such incidents involve spillage of large amounts of fuel. The EIS should provide detailed information about the nature and extent of dangers associated with fuels near high voltage transmission lines.

E. Safety Rest Areas

Federal highway regulations define a “safety rest area” as: “A roadside facility safely removed from the traveled way with parking and such facilities for the motorist deemed necessary for his rest, relaxation, comfort and information needs. The term is synonymous with ‘rest and recreation areas.’” 23 C.F.R. §752.3(b). In the selection of rest area sites, the prime considerations are the “scenic quality of the site, its accessibility and adaptability, and the availability of utilities.” 23 C.F.R. §752.5(e).

In the federal regulations dealing with accommodation of utilities on Federal-aid highways, the definition of the term "right-of-way" specifies that: "Lands acquired under 23 U.S.C. 319 shall be considered to by highway right-of-way." Section 319 deals with landscaping and scenic enhancement, and 23 U.S.C. §319(a) provides:

> "(a) Landscape and Roadside Development. – The Secretary may approve as part of the construction of Federal-aid highways the costs of landscape and roadside development, including acquisition and development of publicly owned and controlled rest and recreation areas and sanitary and other facilities reasonably necessary to accommodate the traveling public, and for acquisition of interests in and improvement of strips of land necessary for the restoration, preservation, and enhancement of scenic beauty adjacent to such highways."

With respect to safety rest areas on freeways, it is important to note that they are, by definition, part of the highway right-of-way. Therefore they are subject to the provisions of Part VI of the Utility Accommodation Policy that prohibit longitudinal placement of utilities on freeway right-of-way except in special cases under strictly controlled conditions.

Safety rest areas contribute to the safety of the traveling public by providing fatigued drivers the ability to stop and rest. They also reduce the need for stops along highway shoulders and provide an escape from driving under hazardous weather and road conditions. Though their primary value is accident prevention, they also address many needs of commercial truck operators and help promote the state and state tourism.

MnDOT generally does not issue permits for alignments of HVTLs that would run between the rest area and the roadway or across the rest area property. Such alignments would not only impair the safety function served by the rest area, but could also unreasonably constrain future rest area expansion and limit current and future use of the site. All potential alignments for the HVTL will need to be evaluated for their impact on the safety rest areas.

MnDOT's Safety Rest Area Program is currently developing a strategic plan for redevelopment of the interstate rest area system in Minnesota. The plan may propose the development of rest areas in new locations along interstate highways in Minnesota, and may also propose the abandonment or reuse of some existing interstate rest areas. If MnDOT does build interstate rest areas in new locations or expand existing rest areas, the location of HVTLs would be a significant factor in evaluating the projects. If MnDOT were required to pay the cost to relocate transmission lines, the cost of construction of the facilities could increase dramatically.

F. Scenic Easements and Scenic Areas

Federal law prohibits new utility installations on highway right-of-way or other lands "within or adjacent to areas of scenic enhancement and natural beauty." 23 C.F.R. §645.209(h). Areas of scenic enhancement "include public park and recreation lands, wildlife and waterfowl refuges, historic sites as described in 23 U.S.C. 138, scenic strips, overlooks, rest areas and landscaped areas." Id.

In some HVTL route applications, the proposed route would run through a scenic area located adjacent to a trunk highway. The federal regulation governing scenic areas appears to restrict MnDOT's ability to grant a permit to a utility for such locations. The regulation, 23 C.F.R. §645.209(h), provides:

> Scenic areas. New utility installations, including those needed for highway purposes, such as for highway lighting or to serve a weigh station, rest area or recreation area, are not permitted on highway right-of-way or other lands which are acquired or improved with Federal-aid or direct Federal highway funds and are located within or adjacent to areas of scenic enhancement and natural beauty. Such areas include public park and recreational lands, wildlife and waterfowl refuges, historic sites as described in 23 U.S.C. 138, scenic strips, overlooks, rest areas and landscaped areas. The State transportation department may permit exceptions provided the following conditions are met:
>
> (1) New underground or aerial installations may be permitted only when they do not require extensive removal or alteration of trees or terrain features visible to the highway user or impair the aesthetic quality of the lands being traversed.
>
> (2) Aerial installations may be permitted only when:
>
> (i) Other locations are not available or are unusually difficult and costly, or are less desirable from the standpoint of aesthetic quality,
>
> (ii) Placement underground is not technically feasible or is unreasonably costly, and
>
> (iii) The proposed installation will be made at a location, and will employ suitable designs and materials, which give the greatest weight to the aesthetic qualities of the area being traversed. Suitable designs include, but are not limited to, self-supporting armless, single-pole construction with vertical configuration of conductors and cable.
>
> (3) For new utility installations within freeways, the provisions of paragraph (c) of this section must also be satisfied.

Although this rule generally prohibits new utility installations on highway right-of-way or adjacent scenic lands acquired or improved with Federal-aid highway funds, it permits exceptions in limited circumstances. In areas where proposed HVTL routes would come into contact with trunk highway rights-of-way, the EIS process should identify any scenic easements or scenic areas along highways and consider the impact of compliance with 23 C.F.R. §645.209(h) in the evaluation of the various route proposals.

G. Scenic Byways

Certain highways have been designated for special consideration under the National Scenic Byways Program. See 23 U.S.C. §162 and http://www.byways.org/learn/ . The Minnesota Scenic Byway Program was launched by a 1992 memorandum of understanding between the Minnesota Department of Transportation, the Minnesota Department of Natural Resources, the Minnesota Office of Tourism and the Minnesota Historical Society. The Minnesota Scenic Byway Program is designed to establish partnerships with communities, organizations and government agencies to match resources with grassroots marketing and economic development efforts. The program exists to: (a) identify highway routes of exceptional interest; (b)·promote travel and recreation on those routes; and (c) enhance and provide stewardship for the features that distinguish those routes.

The State of Minnesota has designated 22 routes as scenic byways. See http://www.minnesotascenicbyways.com/ . Scenic byways come into existence when local leaders and/or stakeholder group, which may be public, private or not-for-profit organizations, or collaborations between such groups, nominates a route for inclusion in the program through their state byway coordinator. After extensive state and national evaluation, designations are awarded. To receive designation as a scenic byway, a route must possess one or more of the following six intrinsic qualities: scenic, cultural, recreational, natural, historic and archaeological qualities. Six of the Minnesota scenic byways are also designated as National Scenic Byways. To be designated a National Scenic Byway, a road must possess characteristics of regional significance within at least one of the intrinsic qualities. One Minnesota Scenic Byway, the North Shore Drive, is one of only 27 routes in the nation that has also been singled out for designation as an All-American Road.

Another of the National Scenic Byways in Minnesota also has special significance. The Great River Road National Route, (GRR) is a national system of roads and parkways along the Mississippi River established by federal and Minnesota statutes. The GRR, which was initially established in 1938, is part of a multi-state byway that includes the ten states between the river's headwaters in Minnesota and the Gulf of Mexico. The Minnesota Mississippi River Parkway Commission (MN-MRPC), established by Minn. Stat. §161.1419, is the governing body for the GRR in Minnesota. Minn. Stat §161.142 requires the Commissioner of Transportation to construct and improve the GRR. The Commissioner of Transportation is an ex officio member of the MN-MRPC and, by law, must advise and assist the MN-MRPC in carrying out its functions and duties.

The GRR in Minnesota has six distinct destination areas: please see http://www.mnmississippiriver.com/ . The six destination areas are: (a) Headwaters Mississippi, encompassing approximately 30 miles from Lake Itasca to Bemidji; (b) Northwoods Mississippi, encompassing approximately 100 miles from Bemidji to Grand Rapids; (c) Crossings Mississippi, encompassing approximately 153 miles from Grand Rapids to Little Falls; (d) Scenic Mississippi, encompassing approximately 92 miles from Little Falls to Elk River; (e) Metro Mississippi, encompassing approximately 75 miles from Elk River to Hastings; and (f) Bluffs Mississippi, encompassing approximately 140 miles from Hastings to the Iowa border.

Each scenic byway is administered by a leaders group and/or stakeholder group. For each scenic byways impacted by a HVTL route proposal, the leader group should be contacted as part of the environmental review process. Among other information about the scenic byways, these groups can provide information about whether there are any scenic easements

or other limitations that apply to land uses in the vicinity of the scenic byways. The EIS should include an analysis of the physical and visual impact that a HVTL route may have on each of the six intrinsic qualities. A route with the least adverse impact on the byway routes and corridors should be identified, and mitigation measures should be recommended for unavoidable impacts on intrinsic qualities within the scenic byway corridors.

H. Applying MnDOT's Utility Accommodation Policy to Specific Circumstances

As referenced earlier, MnDOT's approach to proposals to construct HVTLs near highways is to work to accommodate these HVTLs within or as near as feasible to the highway rights of way, based on an evaluation of the specific locations to ensure that appropriate clearance is maintained to preserve the safety of the traveling public and highway workers and the effective operation of the highway system now and in the foreseeable future. While this is sometimes described as the HVTL "sharing" the highway right-of-way, it must also be recognized that the facilities owned by the utility will be "occupying" real estate that MnDOT acquired for and dedicated to highway purposes. When a utility such as a HVTL obtains a permit from MnDOT to occupy a portion of a highway right-of-way, the presence of that utility limits or prevents the area so occupied from being used for other purposes. The fact that HVTLs are designed to last for generations requires careful consideration of the future costs and impacts associated with the placement of each pole.

In applying its Utility Accommodation Policy to a permit application, MnDOT must evaluate the considerations described above for each pole location individually in relation to the topography of the land, the geometry of the roadway, the width of the highway right-of-way, the design of the HVTL structures, and other factors.

For example, in a location where the elevation of the roadway is significantly different than the surrounding topography, the utility may need to construct access roads or paths to get maintenance equipment to the poles, and may need to reshape the land to establish flat maintenance landings on which to position its maintenance equipment. The size of the utility's maintenance landings could require regrading the drainage slopes near the highway, tree removal, or construction of retaining structures in the highway right-of-way. It is possible that factors such as these, which are unique to a specific location, could require MnDOT to deny a permit for that location. In the alternative, MnDOT may grant a permit and include conditions that the owner of the HVTL must comply with as part of the granting of a permit.

HVTL route proposals frequently contain locations where the proposed HVTLs would cross over a trunk highway, as distinguished from circumstances where it would run parallel to the highway. Highway crossings generally do not pose insurmountable difficulties in issuing a permit. MnDOT routinely grants such permits to a variety of types of utilities.

- Permits for highway crossings usually have conditions associated with them, such as placement of the poles so that they do not become a physical obstruction that might be struck by an errant vehicle or block the visibility of traffic.
- MnDOT does not permit utilities to run diagonally across intersections, and prefers that crossings occur as close to right angles as possible.
- MnDOT strongly discourages frequent crossings of a highway by a HVTL that is running essentially parallel to the highway.
- Under Section V.G.5 of the Utility Accommodation Policy, special handling may be required for crossings of scenic byways.

MnDOT has a long history of working with utilities to establish appropriate conditions in locations where the utility seeks to cross a trunk highway. MnDOT does not anticipate encountering such difficulties that there would be locations where it would be unable to grant permits, with appropriate conditions, for the highway crossings proposed in this matter.

A permit from MnDOT would be required for a pole that is proposed to be installed entirely inside the highway right-of-way boundary, or for a davit arm of a pole that extends out over the highway right-of-way and permanently occupies a portion of the right-of-way even if the pole itself is a few feet outside the boundary. In circumstances involving a freeway, concurrence by the FHWA would be required prior to issuance of a permit for these types of installations that run parallel to the freeway. A third situation occurs when lines sway in the wind (known as "blowout") and occupy air space within the highway right-of-way on an intermittent basis. This also requires a permit from MnDOT. While a permit is required for such a circumstance, MnDOT intends to apply its policy in a prudent manner consistent with the approach described earlier in these comments. MnDOT understands from discussions with utilities that some HVTL design adjustments may be possible in some circumstances that would minimize the amount of blowout or mitigate its impact on highway operations. MnDOT anticipates that it and the utility will evaluate the proposed location for each pole in close proximity to a trunk highway along the designated route to determine where the blowout of the lines over highway right-of-way may occur, and where it may be feasible for MnDOT to issue a permit to accommodate such utility locations.

Given the variability of such factors that may apply and the large number of potential locations, MnDOT is not able to provide specific information about whether it will be able to issue permits for a proposed HVTL route. As the selection of the final route is made, in all locations where the route will either cross or run parallel to a trunk highway it is imperative that the designated route be sufficiently wide so that MnDOT and the applicant can address the circumstances at each location and determine a specific alignment that can be permitted consistent with these considerations.

III. Other Transportation Systems

Pursuant to Minn. Stat. Ch. 174, the Commissioner of Transportation has the responsibility to develop, adopt, revise and monitor a statewide transportation plan that includes all modes of transportation, including highway, rail, air, waterways, transit, trails, bicycles and pedestrians. The Minnesota Statewide Transportation Policy Plan: 2009 – 2028, as well as other transportation plans and studies, can be viewed on the MnDOT web site – http://wwwdev.dot.state.mn.us/planning/stateplan/index.html .

With respect to many modes of transportation, MnDOT provides administrative and coordination support in moving people and freight throughout Minnesota. The comments below provide some information about how other transportation systems could be impacted by proposed HVTL routes.

A. Aeronautics

In some locations, proposed HVTL routes have the potential to negatively affect airport operations, navigational equipment, and land uses around airports.

The Commissioner of Transportation has general supervision over the statewide system of airports in the state. Minn. Stat. §360.015, Subd. 1. MnDOT does not own or maintain any airports. Rather, airports are usually owned by a local unit of government or privately. MnDOT must assist political subdivisions, cooperate with federal authorities and promote and protect the utility of all Minnesota public airports and the public investment in them as outlined in Minn. Stat. Ch. 360. While MnDOT's Office of Aeronautics provides services and support, the airport owner has the responsibility to meet federal and state aviation requirements.

Sections 360.061 to 360.074 address airport zoning regulations, including the authority, procedures, and administration of such zoning regulations. Section 360.063 requires the Commissioner to prescribe airport approach and turning standards and authorizes the Commissioner to indicate circumstances in which structures would be airport hazards. Under §360.067, the airport zoning authority may require that a permit be obtained before a new structure may be constructed.

The Commissioner may also perform acts, issue orders, and promulgate rules necessary to carry out the provisions of §§360.011 to 360.076. The rules regarding aeronautics in Minnesota are found at Minn. Rules part 8800, and Minn. Rules part 8800.1100 to 8800.1200 specifically address air navigation obstructions.

When tall structures such as transmission line poles are proposed to be constructed in proximity to an airport, federal law requires that a Notice of Proposed Construction or Alteration be provided to the Federal Aviation Administration (FAA). 14 C.F.R. Part 77. The criteria for such notice is available at the FAA website - http://forms.faa.gov/forms/faa7460-1.pdf . A "Determination of Hazard" or "No Hazard" from the FAA is not a permit to construct. Independent of the determination, permits from the local airport zoning authority are required. All public airports within five miles of the project must be notified and given an opportunity to comment on compatibility of transmission lines with airport operations and land use compatibility.

The MnDOT Office of Aeronautics establishes, operates and maintains electronic navigation aids to augment the federal system in Minnesota. The Very High Frequency Omnidirectional Radio Range (VOR) system must be protected. The FAA or MnDOT Office of Aeronautics must be notified to evaluate potential impacts of the proposed routes within five miles of a VOR.

B. Rail Transportation

In some locations, proposed HVTL routes may run in close proximity to rail lines and have the potential to impact rail operations.

The rail system plays a significant role in the movement of freight in Minnesota, carrying about 30% of all freight tonnage. With over 4,500 route miles of track, Minnesota has the eighth highest number of track miles in the nation. In contrast to transportation systems such as highways, which are generally owned and operated at public expense, freight rail carriers provide not only the service but also maintain and control the tracks and other facilities. With respect to freight rail, MnDOT's activities include developing statewide plans that guide investment and policy decisions and impact freight carriers, provide loans, grants and other support in delivering infrastructure improvements.

Minnesota has two active passenger rail lines (Amtrak's Empire Builder and the Northstar commuter rail service) and one light rail line (the Hiawatha corridor). MnDOT has responsibilities for planning, designing, and implementing passenger rail operations. A number of options for new passenger rail routes are being actively studied at the current time. The various routes under consideration are described in the Minnesota Comprehensive Statewide Freight and Passenger Rail Plan Final Report, which can be viewed on the MnDOT web site - http://www.dot.state.mn.us/planning/railplan/finalreport/MNRailPlanFinalReportFeb2010.pdf For example, the Plan includes discussion of the initial planning underway regarding a possible high speed passenger rail line between the Twin Cities and Chicago. Highway rights-of-ways may serve as corridor(s) for future electrified high speed passenger rail service. MnDOT recommends that electric utilities consult the Minnesota Comprehensive Statewide Freight and Passenger Rail Plan Final Report also when considering potential routes for future HVTLs.

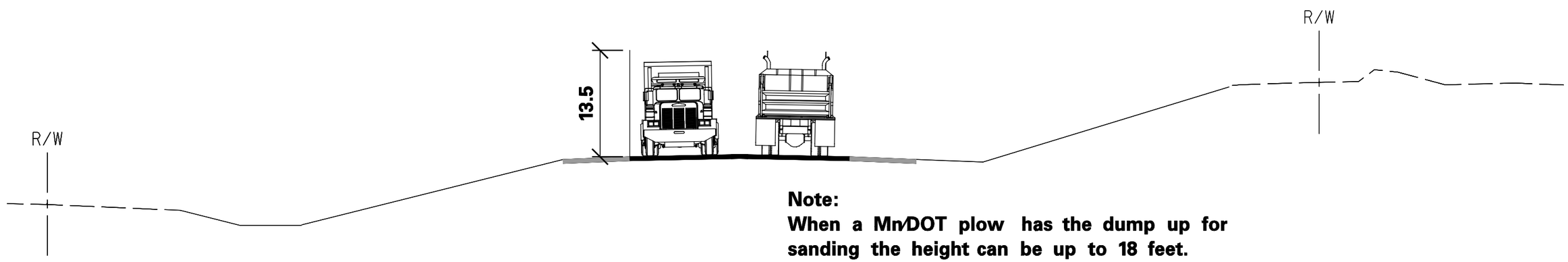
Railroads that could be affected by a HVTL route application should be part of the discussions to identify impacts of the proposed routes. Where a proposed HVTL may parallel highway rights-of-way and there is an existing freight railroad right-of-way adjacent to the highway, there may not be enough room for construction of the transmission lines outside of the clear zones for both the railroad and the highway. The clear zone is an area that must be free from obstructions or other hazards. The railroads may also have concerns with overhead crossings in their right-of-way, gate clearances, foundations, and electrical buildup on the rails. MnDOT can provide contact information of representatives at the relevant railroads if requested.

C. Rail Bank Property and State Trails

Under Minn. Stat. §222.63, Subd. 2, authority has been delegated to the Commissioner of Transportation in Minn. Stat. §222.63 to acquire and preserve abandoned rail lines and rights-of-way as part of the state rail bank. The state rail bank was created to acquire and preserve abandoned rail lines and right-of-way for future public use, including transportation purposes or trail use by another state agency or political subdivision. MnDOT has purchased several properties for inclusion in the state rail bank, including the abandoned rail lines on which the Lake Wobegon Trail and the Central Lakes Trail are situated.

In locations where a HVTL proposes to cross or to run longitudinally along the state rail bank right-of-way, the utility would need to obtain a permit from MnDOT for each such location. Minn. Stat. §222.63 authorizes MnDOT to establish a fee schedule for lease of the state rail bank property, and the utility would be subject to lease fees, as are other utilities that occupy a portion of state rail bank property.

Enclosures
Attachments 1, 2 and 3
Federal Regulations (See Code of Federal Regulations)
2009 MN Statutes Ch. 161 (See MN Statute 161.45 and MN Statute 161.46)
MnDOT Accommodation Policy (See MnDOT Accommodation Policy)
MN Statewide Transportation Policy Plan 2009–2028 (See http://wwwdev.dot.state.mn.us/planning/stateplan/index.html)
MN State Rail Plan (See http://www.dot.state.mn.us/planning/railplan/finalreport/MNRailPlanFinalReportFeb2010.pdf)
MN Scenic Byways (See http://www.minnesotascenicbyways.com/)
MN Great River Road (See http://www.mnmississippiriver.com/)



Note:
When a Mn/DOT plow has the dump up for sanding the height can be up to 18 feet.

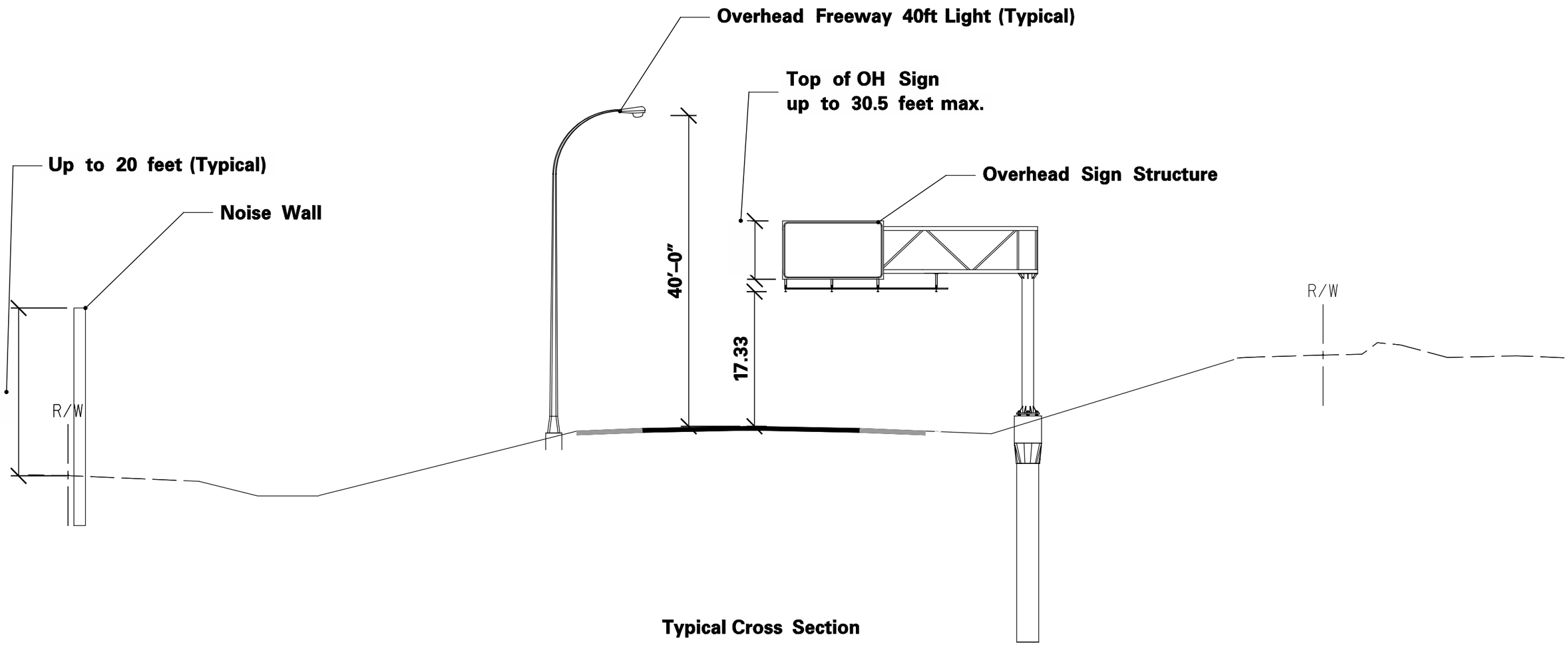
Typical Cross Section

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

TRANSPORTATION BUILDING
ST. PAUL, MINNESOTA 55155-1899

Vehicles

Attachment – 1



Typical Cross Section

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

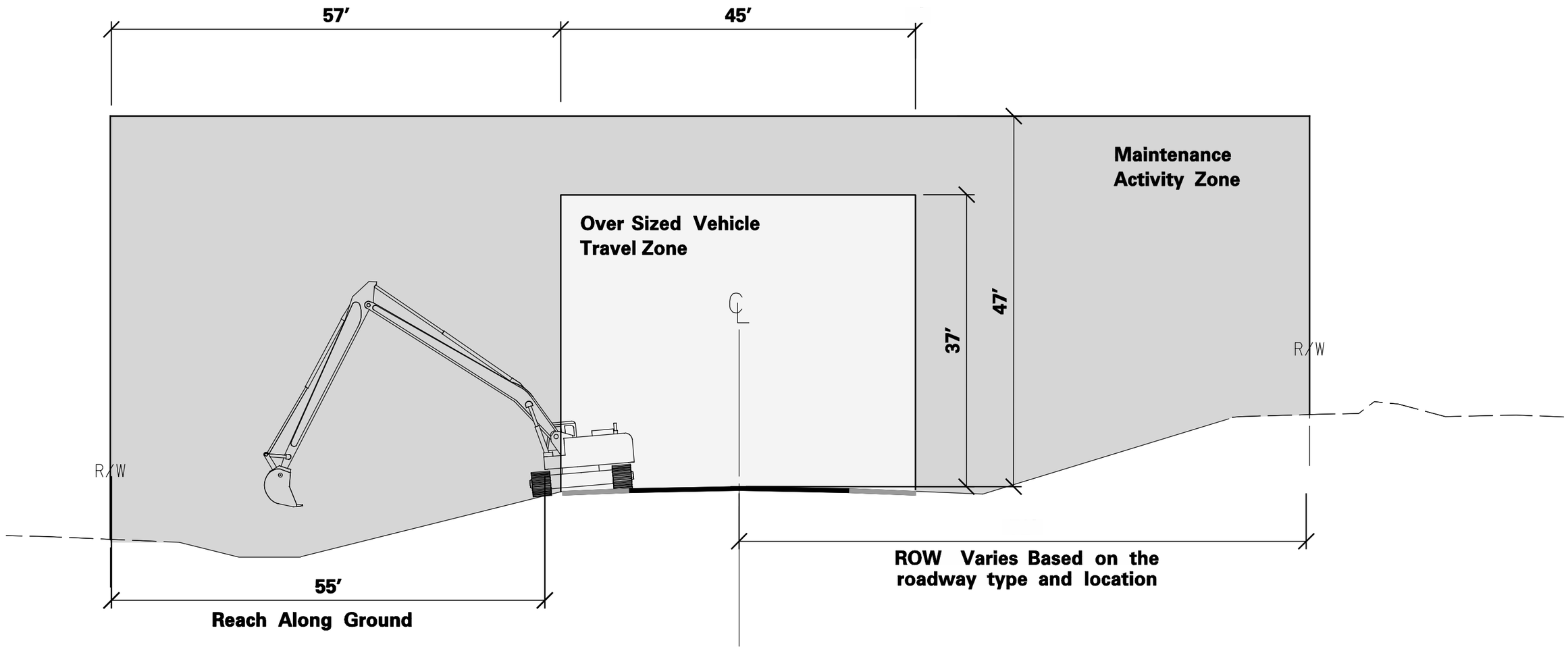
TRANSPORTATION BUILDING
ST. PAUL, MINNESOTA 55155-1899

MnDOT Structure Examples

Attachment – 2

Note:

All Zones vary based on roadway types and locations



Typical Cross Section

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TRANSPORTATION BUILDING
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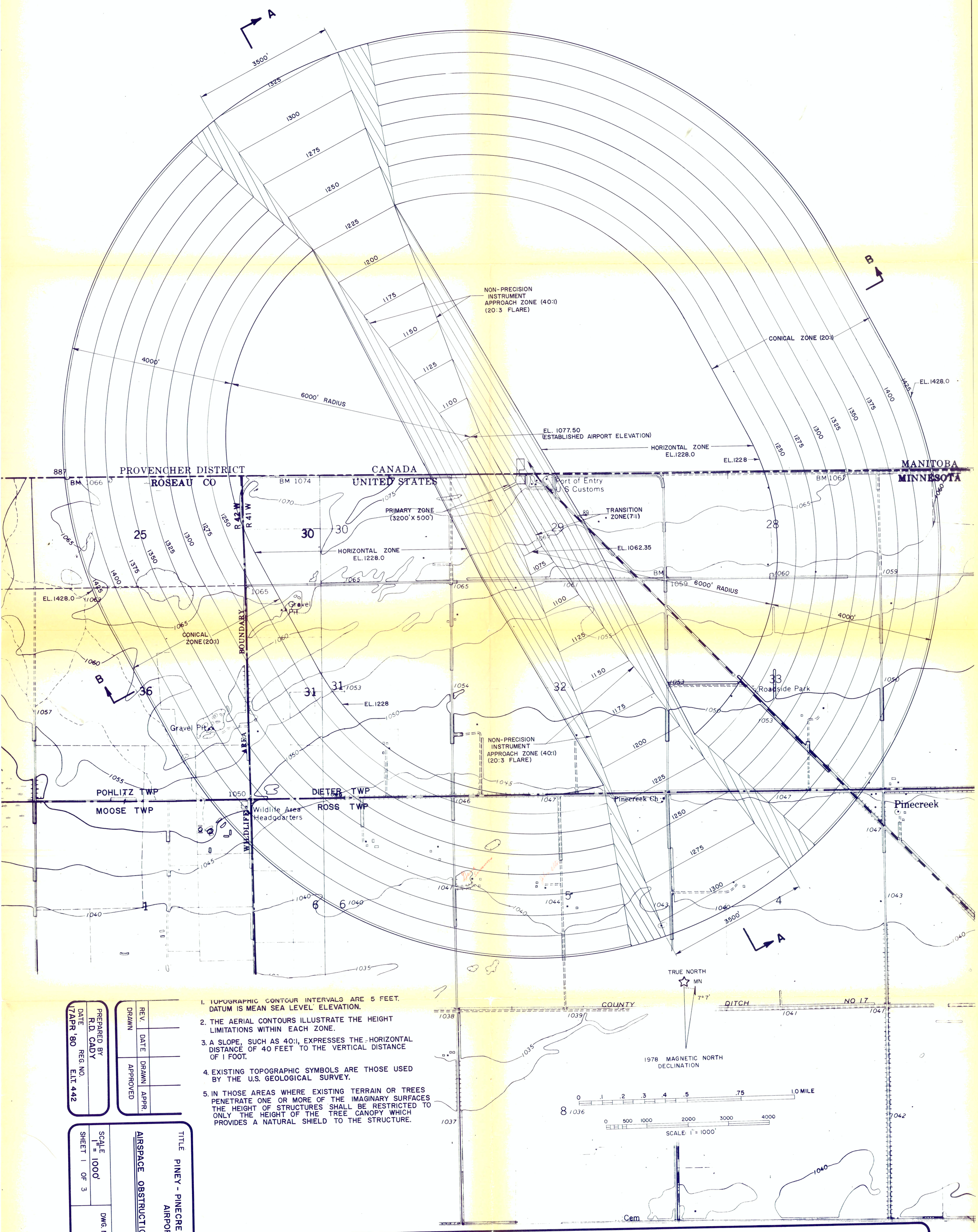
MnDOT Restriction Zone Examples

Attachment – 3



1. TOPOGRAPHIC CONTOUR INTERVALS ARE 5 FEET. DATUM IS MEAN SEA LEVEL ELEVATION.
2. THE AERIAL CONTOURS ILLUSTRATE THE HEIGHT LIMITATIONS WITHIN EACH ZONE.
3. A SLOPE, SUCH AS 40:1, EXPRESSES THE HORIZONTAL DISTANCE OF 40 FEET TO THE VERTICAL DISTANCE OF 1 FOOT.
4. EXISTING TOPOGRAPHIC SYMBOLS ARE THOSE USED BY THE U.S. GEOLOGICAL SURVEY.
5. IN THOSE AREAS WHERE EXISTING TERRAIN OR TREES PENETRATE ONE OR MORE OF THE IMAGINARY SURFACES THE HEIGHT OF STRUCTURES SHALL BE RESTRICTED TO ONLY THE HEIGHT OF THE TREE CANOPY WHICH PROVIDES A NATURAL SHIELD TO THE STRUCTURE.

REV.			
DRAWN	DATE	DRAWN	APPR.
APPROVED			

PREPARED BY R.D. CADY
DATE 17APR '80 REG. NO. E.I.T. 442

TITLE PINEY - PINECREEK BORDER AIRPORT
AIRSPACE OBSTRUCTION ZONING
SCALE 1" = 1000'
SHEET 1 OF 3
DWG. NO.

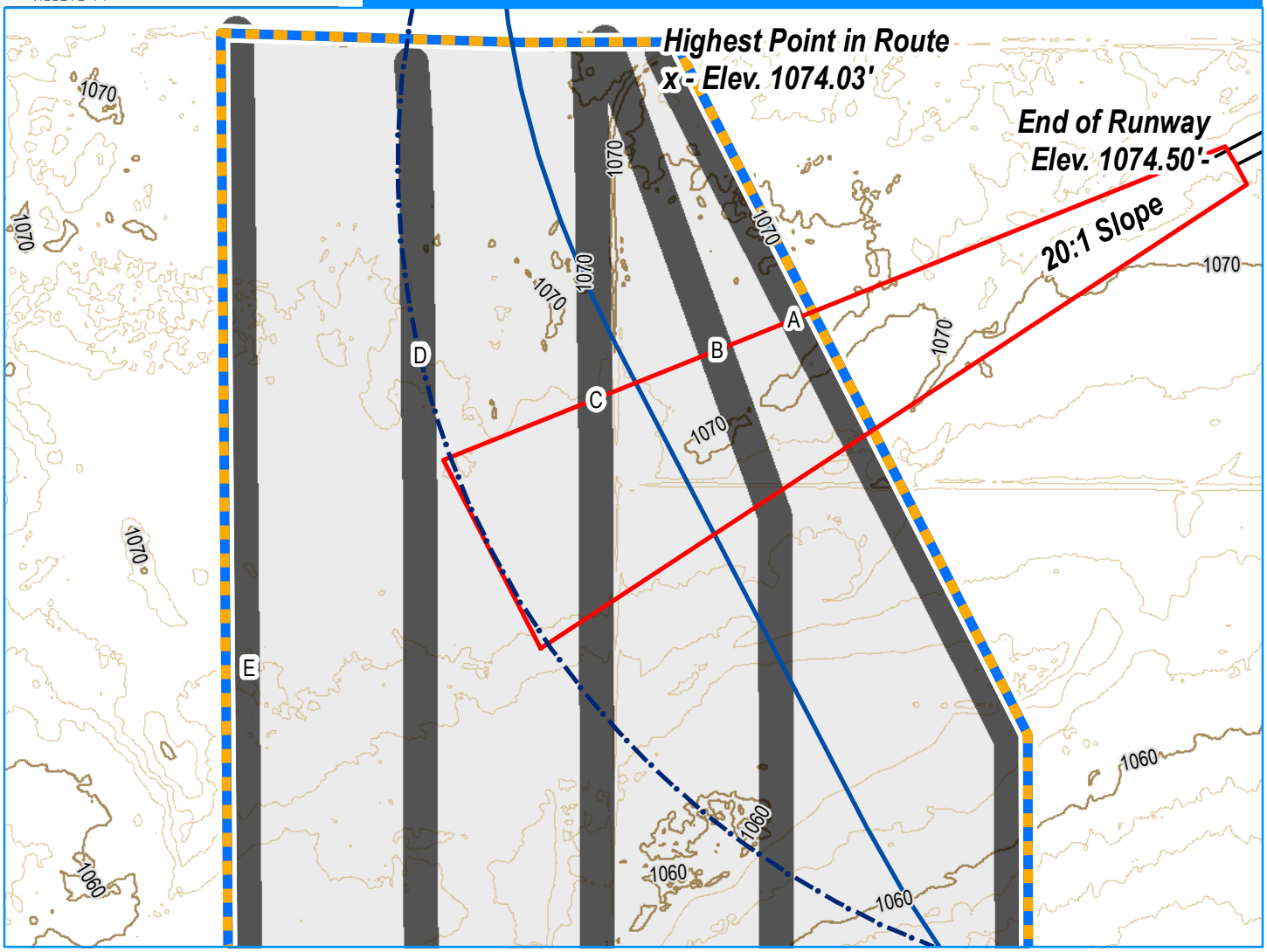
MINNESOTA DEPARTMENT OF TRANSPORTATION

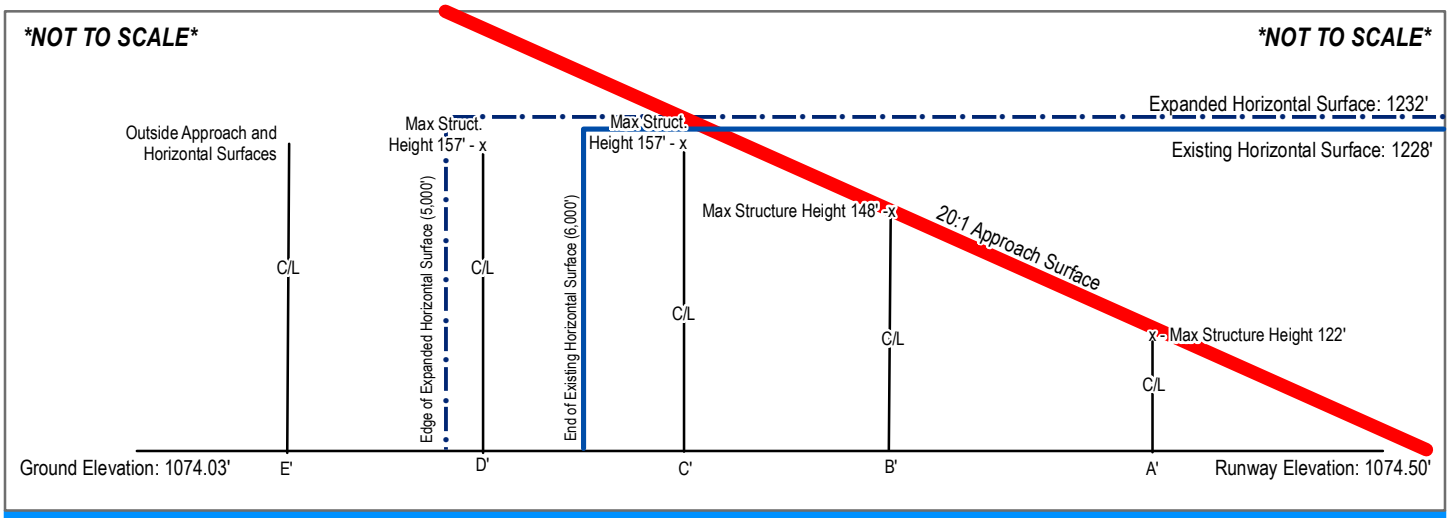
MINNESOTA DEPARTMENT OF TRANSPORTATION

AERONAUTICS DIVISION - AIRPORT DEVELOPMENT

417 TRANSPORTATION BUILDING, ST. PAUL, MN. 55155

Piney Pinecreek Airport (48Y)
(With Proposed Expansion)





Legend

- Public-use Airport
- Runway
- Approach Surface (20:1 Slope)
- Horizontal Surface (Existing) - 150' Ceiling
- Horizontal Surface (Expansion) - 150' Ceiling
- Proxy ROW
- Blue Route
- Orange Route

All Maximum Structure Heights are Based on the Highest Ground Elevation in the Route (1074.03')

0 1,000 Feet

Sources: ESRI,NLCD

\\mspe-gis-file\gisprojlarge\MinnPower\182035\map_docs\AGENCY\DOT\Piney_FAA_Expansion.mxd