Minnesota Department of Transportation

395 John Ireland Boulevard
Mail Stop 130
Saint Paul, MN 55155-1899

Phone: (651) 366-4791
Fax: (651) 284-0592
Dave.Seykora@state.mn.us

February 26, 2010

David Birkholz
Office of Energy Security
Minnesota Department of Commerce
85 7th Place East, Suite 500
St. Paul, MN 55101-2198

Re: CapX 2020 Monticello – St. Cloud Transmission Line Project
PUC Docket No. ET2/TL-09-246
OAH Docket No. 15-2500-20665-2

Dear Mr. Birkholz:

On January 11, 2010, the Minnesota Office of Energy Security (OES) issued a Notice of Availability of Draft Environmental Impact Statement and request for public comments on the Draft Environmental Impact Statement (DEIS) relating to the route permit application by CapX2020 for a 345 kV transmission line from Monticello to St. Cloud, Minnesota. The Minnesota Department of Transportation (Mn/DOT) has reviewed the DEIS regarding the proposed transmission line project and submits the following comments in response to the Notice.

Both the preferred and alternate routes evaluated in the DEIS have a number of locations that either cross or run parallel to highways that are part of the state trunk highway system and the National Highway System. Due to the significant magnitude of the impacts on these highways, the enclosed comments provide the background on Mn/DOT's Utility Accommodation Policy. Mn/DOT'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 enclosed comments also provide input on specific impacts associated with the proposed project discussed in the DEIS.

Mn/DOT appreciates the opportunity to comment and commends the applicants and OES for their communication efforts throughout this process. Mn/DOT 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. Mn/DOT'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.

Mn/DOT has adopted a formal policy and procedures for accommodation of utilities on the highway rights-of-way ("Utility Accommodation Policy"). A copy of Mn/DOT's policy can be

found at http://www.dot.state.mn.us/utility/files/pdf/appendix-b.pdf . The policy is also attached to the CapX2020 Application in Appendix I.

Mn/DOT's approach to the high voltage transmission lines ("HVTL") involved in the CapX2020 proposals 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. Mn/DOT'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 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 Mn/DOT works to accommodate a utility in a highway right-of-way while preserving the safe and efficient operation of the highway. The comments will provide as much specific information as is possible at this time on locations where the HVTL routes proposed by CapX2020 in this application either cross or run parallel to the trunk highway system. Finally, these comments will discuss a few specific portions of the DEIS.

I. Legal Framework Applicable to Mn/DOT's Utility Accommodation Policy

Mn/DOT's policy regarding accommodation of utilities is governed by both federal and state statutes and regulations. These comments will first describe the primary federal laws and then the state laws

A. 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 CFR Part 470. In addition to the highways on the National Highway System, other highways also receive federal funding. Together, the highways in the National Highway System, the Interstate System, plus the other highways that receive federal funding are known as "Federal-aid highways." 23 CFR §470.103. The Federal-aid highways in Minnesota that are impacted by the Monticello – St. Cloud CapX2020 route proposal that would run parallel to the highway include I-94, MN 23, MN 24, and MN 15. The Federal-aid highways that would be crossed by the route proposals include I-94, MN 24, MN 15, and MN 23.

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. 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. 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, including air space, 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.

B. Applicable Minnesota Laws

In addition to these federal laws, Mn/DOT's policy on utility accommodation must also conform to 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, subject to the directive that trunk highway funds may be used only for trunk highway purposes. All of the Federal-aid highways identified above as impacted by the Monticello – St. Cloud CapX2020 proposal are part of the trunk highway system.

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 obligations for utility facilities occupying portions of a trunk highway right-of-way. Section 161.45, 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 rules relating to placement of utility facilities in trunk highway rights of way. Under part 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 System highways. Part 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.

C. Mn/DOT's Utility Accommodation Policy

Mn/DOT 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. Mn/DOT'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 Officials (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. Mn/DOT'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 and approval by the FHWA is required for Mn/DOT 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.

Mn/DOT'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 the CapX2020 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.

Mn/DOT 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 prevent 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 Mn/DOT'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.

II. Overview of Transportation-Related Impacts of HVTLs on Trunk Highways

The preferred and alternate routes proposed by CapX2020 in this matter either cross over or run parallel to trunk highways in a number of locations. When a route is ultimately selected by the Minnesota Public Utilities Commission (MPUC), CapX2020 will need to obtain a valid permit from Mn/DOT in any location where the HVTL will occupy any portion of the highway right-of-way.

In anticipation of the time when CapX2020 will submit applications for permits after a final route is selected, Mn/DOT has engaged in an ongoing dialogue with representatives of CapX2020 and the OES in an effort to identify information that will be needed to assess the permit applications and, to the degree that specificity is possible at this stage of the proceedings, areas where specific concerns will need to be addressed along various potential route/alignment scenarios. Mn/DOT believes these discussions have been beneficial for all participants. The discussions have been challenging due to the large number of locations where the proposed HVTL routes and the trunk highways potentially intersect, the variety of unique circumstances that exist along each of these potential locations, and the number of unknowns and uncertainties surrounding the selection of the actual locations where the CapX2020 utilities will eventually apply for permits from Mn/DOT.

One of the concepts that has been discussed with CapX2020 and the OES is the importance of recognizing that highway rights-of-way do not have a uniform width. The width of the 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 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.

Therefore, 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. Rather, Mn/DOT's approach is to evaluate the type of activities that regularly occur on and along 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 each 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) can 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. 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 past 5 years, Mn/DOT has 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 varies 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 traffic 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 alongside the highway. Mn/DOT'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.

On the Monticello to St. Cloud route, in addition to the existing interchange locations, there are 25 overpass bridges, 5 ditches or culvert bridges, and 1 pedestrian bridge located along the I-94 corridor between the proposed Monticello substation and the proposed Quarry substation. The abutments of these bridges are generally close to the I-94 right-of-way line. The location of the transmission line could impact future maintenance and construction activities on these bridges.

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.

Mn/DOT 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 17.33 feet of clearance to the bottom of the sign, and the top of such signs can be 30.5 feet 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. Mn/DOT 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. If living snow fences owned by Mn/DOT need to be removed or relocated to accommodate a utility placement, compensation for the removed vegetation is usually required as a condition for issuance of the permit.

3. Future Construction Activities

Mn/DOT continually evaluates the future needs for the trunk highway system and has construction projects in varying stages of development. Some have been designed and funded and are ready for construction. Others have been identified as needed or are anticipated due to development trends but have not yet been funded. The types of construction projects Mn/DOT performs that could be impacted by 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.

In addition to changes in the configuration of a highway, consideration must be given to the equipment used during the construction process. Construction projects often involve the use of large excavators and cranes similar in size to the equipment described above which Mn/DOT 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. The equipment used on construction projects also needs to be refueled at the job site, which requires consideration of the safety precautions necessary for this procedure.

The activities associated with vehicular traffic using the roadway surface 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. In addition to evaluating these zones of activity, Mn/DOT will also consider factors such as the width of the right-of-way, the topography of the land and the geometry of the roadway in a specific location when assessing the suitability of that location for an HVTL to occupy a portion of a highway right-of-way.

Location of a HVTL in close proximity to a highway right-of-way limits 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. In order for the Minnesota Public Utilities Commission to make a fully-informed selection of a route based on all the pros and cons of the various alternatives, these costs should be recognized and evaluated in the EIS evaluation of the impacts of the proposed routes. The EIS should include an evaluation of the risk of trunk highway funding 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.

III. Monticello to St. Cloud Route Proposals

In applying its Utility Accommodation Policy to a permit application, Mn/DOT must evaluate each proposed 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. Given the variability of these factors and the large number of potential locations, Mn/DOT is not able to provide specific answers at this time about whether it can grant permits for the potential locations where the various route proposals intersect with highway rights-of-way. As referenced earlier, Mn/DOT's approach to the CapX2020 proposal 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.

To the degree that specificity is possible at this stage in the process, Mn/DOT will provide additional information about a few of the locations proposed in the routes involved in the CapX2020 application.

A. Highway Crossing Locations Proposed by CapX2020

The Applicant's preferred and alternate route proposals contain about seven locations where the proposed HVTLs would cross over a trunk highway, as distinguished from circumstances where it would run parallel to the highway (not including the locations where the various routes propose to hop over and back on I-94 to attempt to avoid other perceived impediments).

Highway crossings generally do not pose insurmountable difficulties in issuing a permit. Mn/DOT routinely grants such permits to a variety of types of utilities. These permits 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. Mn/DOT also does not permit utilities to run diagonally across intersections, and prefers that crossings occur as close to right angles as possible. Under Section V.G.5 of the Utility Accommodation Policy, special handling may be required for crossings of scenic byways. Mn/DOT has a long history of working with utilities, including the members of CapX2020, to establish appropriate conditions in locations where the utility seeks to cross a trunk highway. With CapX2020, Mn/DOT 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.

B. Locations Parallel to Highway Rights of Way Proposed by CapX2020

Section 5.13 of the DEIS identifies the locations where each of the various potential routes under consideration run parallel to highways and roads. Many of the locations identified are roads or streets maintained by local highway authorities and are not part of the trunk highway system for which Mn/DOT is the responsible highway authority.

The highway locations identified in the DEIS that are part of the trunk highway system over which Mn/DOT has jurisdiction include the following:

- Applicant Preferred Route: I-94 and MN 23.
- Route A: I-94, MN 15, MN 23 and MN 24.

- Route B: MN 15, MN 23 and MN 24.
- Route C: MN 15, MN 23 and MN 24.
- Route D: I-94 and MN 23.

The segments of Minnesota state highways where the proposed routes would run parallel range from a half mile to two miles in length. There are some locations on these segments where signals may be added in the future, and MN 15 has a very narrow right-of-way width in the area that may be impacted by the proposed HVTL.

C. Additional Information of Several Specific Areas

Although Mn/DOT cannot at this time state with specificity where permits might be granted for each of the locations listed above, there are a few situations where some additional information can be provided that would assist in the development of the EIS.

1. Safety Rest Areas Along I-94

There are two safety rest areas located within the preferred route proposed by CapX2020. The Fuller Lake Safety Rest Area is located on westbound I-94 in Stearns County on the west side of Clearwater. The Enfield Safety Rest Area is located on eastbound I-94 in Wright County and lies 6 miles west of the junction of I-94 and MN 25.

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 CFR §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 CFR §752.5(e).

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. With this in mind, Mn/DOT 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. Moreover, safety rest areas along interstate highways are considered part of the highway right-of-way. 23 C.F.R. §645.207. Therefore any permit to go through a rest area along an interstate would require an exception to Mn/DOT's Utility Accommodation Policy and concurrence by FHWA.

2. Scenic Area Along I-94

Some potential alignments in the applicant's preferred route would require a waiver of Mn/DOT's Utility Accommodation Policy and federal regulations relating to areas of scenic enhancement and natural beauty. Specifically, the Fuller Lake Safety Rest Area is located in a congested location a short distance west of the I-94 and MN 24 interchange in Clearwater. Warner Lake County Park lies adjacent to the I-94 right-or-way directly opposite the west end of the rest area. It appears that alignments for the HVTL that follow the I-94 right-of-way might need to have poles placed either in the public park or in the highway/rest area right-of-way.

The federal regulation governing scenic areas appears to affect Mn/DOT's ability to grant a permit to CapX2020 for this location. The regulation, 23 CFR §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.

Mn/DOT understands that to grant an exception under this regulation, the conditions specified in all subparts of 23 CFR §645.209(h) would need to be met. At this time, it is not clear what alignment would be used and whether an exception to this regulation will be required and requested. Therefore, Mn/DOT is not able to say at this whether it is possible to find an alignment that can be issued a permit in or adjacent to the I-94 right-of-way in the vicinity of the Fuller Lake Safety Rest Area.

3. New Interchange on I-94

The DEIS briefly mentions the plans to construct a new I-94 to US 10 Interregional Connection. Approximately three years ago Mn/DOT completed an EIS concerning this project, and the preferred alternative identified for construction includes a new interchange approximately 1.6 miles southeast of the existing MN 24 interchange in Clearwater. The project will also include a new highway segment to the north, which will connect with US 10 approximately 1.2 miles west of the current MN 24/US 10 intersection. The highway will be constructed to freeway standards with full access control. The EIS for this project can be viewed at http://www.dot.state.mn.us/d3/projects/interregionalconnection/index.html . The project is currently anticipated to be constructed in the 2015 to 2023 time frame.

The footprint of the new interchange on I-94 will be larger than the right-of-way currently occupied by the freeway in that location. If the applicant's preferred route is selected, an HTVL alignment along the current right-of-way boundary would very likely require relocation of the HVTL in the not too distant future. Therefore, Mn/DOT believes that any alignment in this location should be based on the planned configuration of the new interchange.

IV. Specific Comments on Matters Discussed in the DEIS

The EIS should include evaluation of all of the issues described below as part of its assessment of the environmental impacts of each proposed route.

Section 5.6.2, Aesthetics – Potential Impacts. On pages 5-35 to 5-36 the DEIS describes the relative sensitivity of various viewers of the HVTL, with motorists being classified as low visual sensitivity viewers. This observation is incomplete without including the number of such viewers. This section of the DEIS should include a cross reference to the average daily traffic counts for selected road reported later in Tables 5-25 through 5-29. In addition, as noted in the 7th paragraph on page 5-37, motorists, bicyclists and other users of the Great River Road (Wright County Highway 75 and Stearns County Highway 75) should be considered recreationalists who have a higher level of sensitivity to visual impacts.

Section 5.6.2, Aesthetics – Potential Impacts. On page 5-36 the DEIS discusses the Wright County parks that are near the applicant's preferred route. The DEIS appears to have inadvertently overlooked discussion here of Stearns County parks, and in particular Warner Lake County Park which is located immediately adjacent to I-94 about a mile west of Clearwater. We note that this park is discussed later in Section 5.7.2.

Section 5.6.3, Aesthetics – Mitigation. This section includes a partial list of potential steps that can be taken to mitigate adverse aesthetic impacts. Some of the items recognize that once a route is selected, the applicant and Mn/DOT would work together to achieve mitigation in those locations where the route would run on or near a trunk highway right-of-way. With respect to Great River Road, by virtue of Minn. Stat. §161.142 the Commissioner of Transportation participates in the construction, improvement and maintenance of the Great River Road and therefore would also be involved along with the MN-MRPC in any discussions concerning mitigation associated with the Great River Road.

Section 5.7.2, Parks – Potential Impacts. As noted above, Warner Lake County Park borders the I-94 right-of-way. The discussion of Warner Lake County Park on pages 5-45 to 5-46 notes that specific alignments have not been determined, and then discusses only the three potential alignments illustrated by the applicant when discussing the possible impacts to the park. The DEIS should include evaluation of impacts to the park if alignments other than those illustrated by the applicant were to be selected. Such an evaluation would bear directly on the conclusion stated on page 5-48 that "No impacts on parks are anticipated."

Section 5.10.2, Scenic and Recreational Waterways – Potential Impacts. On page 5-58, a statement is made in a couple places that because the proposed route travels along I-94 where it is located in the scenic district, no additional impacts to vegetation would be expected at this location. These statements are confusing. The fact that an HVTL route overlaps the I-94 right-of-way in some locations does not necessarily mean that no removal of vegetation would be required.

Section 5.13, Highways and Roads. The discussion of highways and roads contains a significant amount of high quality data and description of the highway system and how it interacts with the proposed HVTL routes. Mn/DOT appreciates the attention paid to this important factor in the EIS process. There are, however, some matters that require adjustment, and some areas that appear to be overlooked in the discussion in this section of the DEIS.

- Page 5-78 includes the statement "This strategy reduces the potential of having to relocate utility poles due to future roadway plans." This should be explained in some other way, as we do not understand the meaning of this sentence. The likelihood of needing to relocate poles due to future roadway plans rests on a variety of factors, including the nature of the changes to the roadway and the width of the right-of-way at that location.
- Pages 5-78 to 5-81 discuss highway expansion plans and improvement projects. While this is one important factor in maintaining the effectiveness of the operation of the trunk highway system, it is not the only factor. For example, depending on the topography and geology of the area in which the highway is located, the applicant may be required to use a different foundation than that described as the normal foundation in the DEIS, which in turn could impact the drainage in the ditch along the highway and require changes to highway maintenance procedures.
- Pages 5-82 to the top of 5-85 discuss some of the safety considerations relevant to locating a HVTL in close proximity to a roadway. Our discussion in earlier portions of this letter expand on those issues plus some additional safety considerations, which should be reflected in this part of the DEIS.
- The discussion of mitigation measures in section 5.13.3 focuses predominantly on temporary impacts associated with the construction of the HVTL rather than the permanent impacts the HVTL may have on the highway system. Mn/DOT considers the effects that the location a HVTL may have on the efficient operation and safety of a highway to be permanent impacts. The techniques for mitigation of these impacts merit a much more detailed discussion. The discussion of mitigation options for aesthetic considerations outlined in section 5.6.3 is an example of the scope of discussion that could be included regarding permanent highway impacts.
- We are uncertain of the meaning of the paragraph on page 5-89 that discusses "additional shielding of the transmission lines and equipment." What type of shielding can be done? What are the expected benefits? Who is responsible for installing, inspecting and maintaining such shielding?
- The second to last paragraph on page 5-89 briefly mentions mitigation of impacts to the highway system through selection of pole location. Whatever route is ultimately selected, Mn/DOT intends to work closely with the applicant when issuing permits to select prudent alignments for the HVTL and specific locations for the poles where the route coincides with highway rights-of-way. Sufficient flexibility to assure that impacts on the highway can be mitigated is imperative.

Section 5.16, Surface Water. It appears that the discussion of waters potentially impacted by the applicant's preferred route overlooks Fuller Lake. Also, Table 5-47 lists three crossings of the Mississippi River by Route D. This appears to be a typographical error, as page 5-40 states that Route D crosses the Mississippi River at two locations.

Section 5.23.2, Electric and Magnetic Fields and Stray Voltage – Potential Impacts. The discussion in this section is highly relevant to highway operations. Highway workers in the vicinity of HVTLs are likely to experience induced voltage. The presence of HVTLs will likely require Mn/DOT to implement a permanent training program to ensure that workers are aware

of and operate safely around HVTLs. Equipment and structures in highway rights-of-way will need to grounded, and inspected for proper grounding regularly. By way of example, Mn/DOT maintains wire fences all along the right-of-way boundaries of freeways, and these will need to be grounded in all locations where HVTLs are placed nearby.

Indirect and Cumulative Impacts. Mn/DOT reviewed the DEIS for discussion of indirect impacts and cumulative impacts. For instance, we looked for evaluation of indirect economic impacts associated with changes in land use and development along highways or other indirect effects of the proposed HVTL routes which may affect the transportation infrastructure. We did not find any sections of the DEIS that focus on indirect impacts or cumulative impacts. Without such discussion the EIS appears incomplete and we recommend that such discussion be added to the final EIS.

Finally, Mn/DOT wishes to underscore the importance of preserving sufficient flexibility for Mn/DOT to work with the applicant to determine an appropriate specific location for each pole to be placed along a trunk highway right-of-way. As the selection of the final route is made, in all locations where the route will cross or run parallel to a trunk highway it is imperative that the designated route be sufficiently wide so that Mn/DOT and the applicant can work collaboratively to address the circumstances at each location and determine a specific alignment that can be permitted consistent with the considerations described in this letter.

Mn/DOT has a continuing interest in working with the OES to ensure that possible impacts to highways and other transportation infrastructure are adequately addressed. We appreciate the opportunity to provide these comments. Please feel free to contact me if you have any questions regarding the information provided.

Sincerely,

David G. Seykora
Office of the Chief Counsel

cc: Deborah R. Pile, OES
Karen Hammel, OAG
Lisa Agrimonti, CapX2020
Darrin Lahr, CapX2020
Michael Barnes, Mn/DOT
Scott Peterson, Mn/DOT
Jon Chiglo, Mn/DOT
Val Svensson, Mn/DOT
Terry Humbert – Mn/DOT District 3

Enclosures

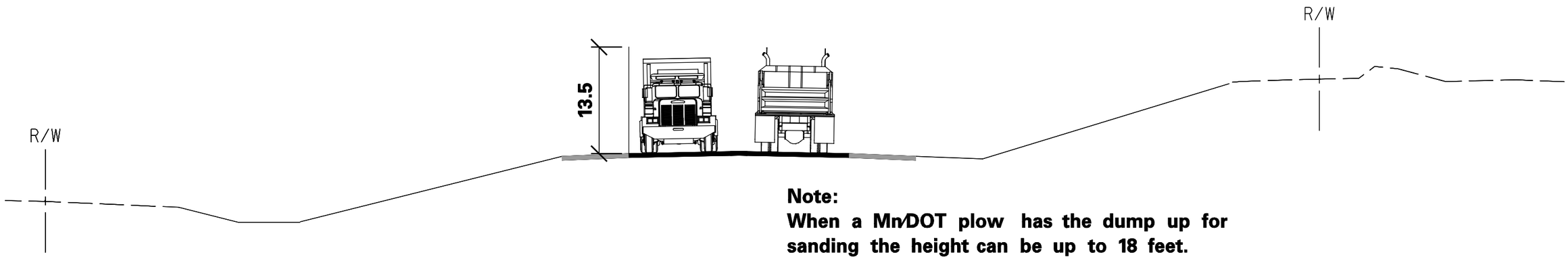
Attachments 1, 2 and 3

Federal Regulations (See Code of Federal Regulations)

2009 MN Statutes Ch. 161. (See MN Statute 161.45 and MN Statute 161.46)

I-94 to US 10 Interregional Connection (See D3 Interregional Connection)

Mn/DOT Utility Accommodation Policy (See http://www.dot.state.mn.us/utility/policy/index.html)



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

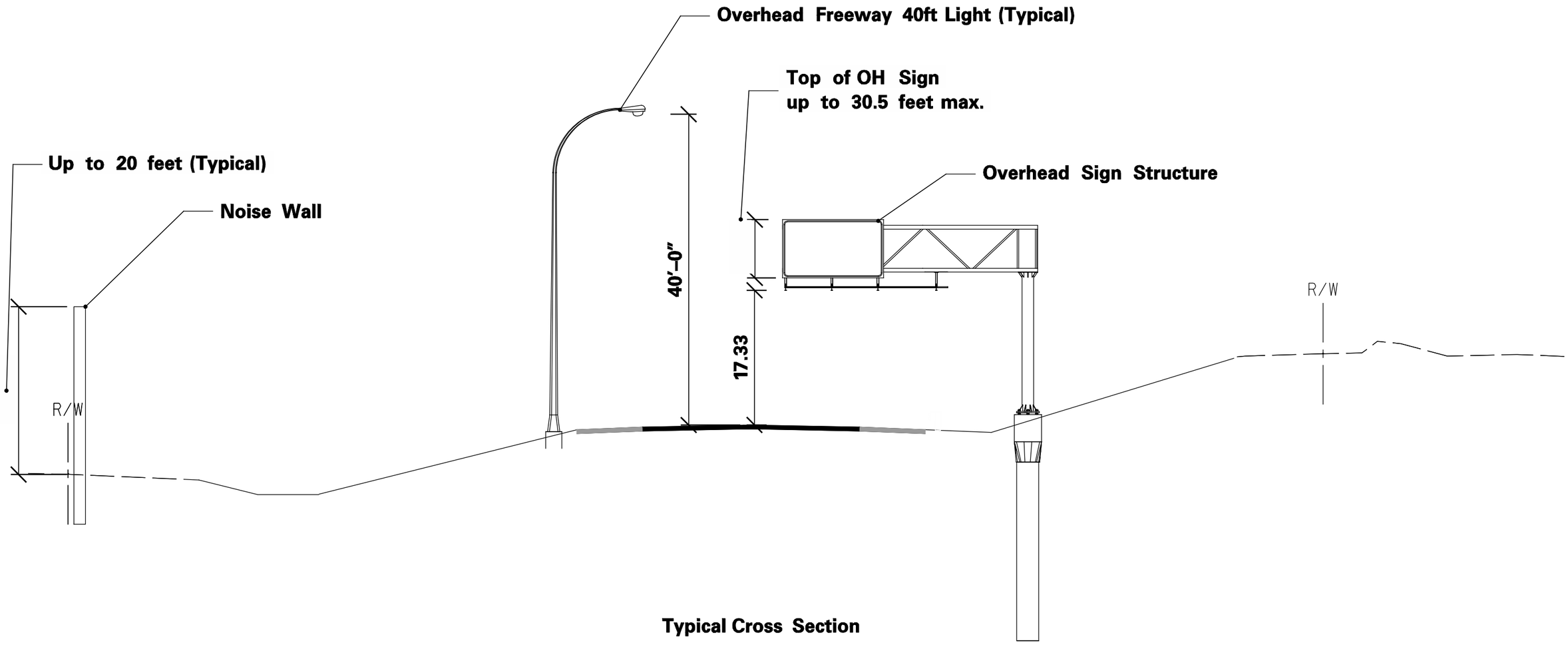
Typical Cross Section

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

TRANSPORTATION BUILDING
ST. PAUL, MINNESOTA 55155-1899

Vehicles

Attachment – 1

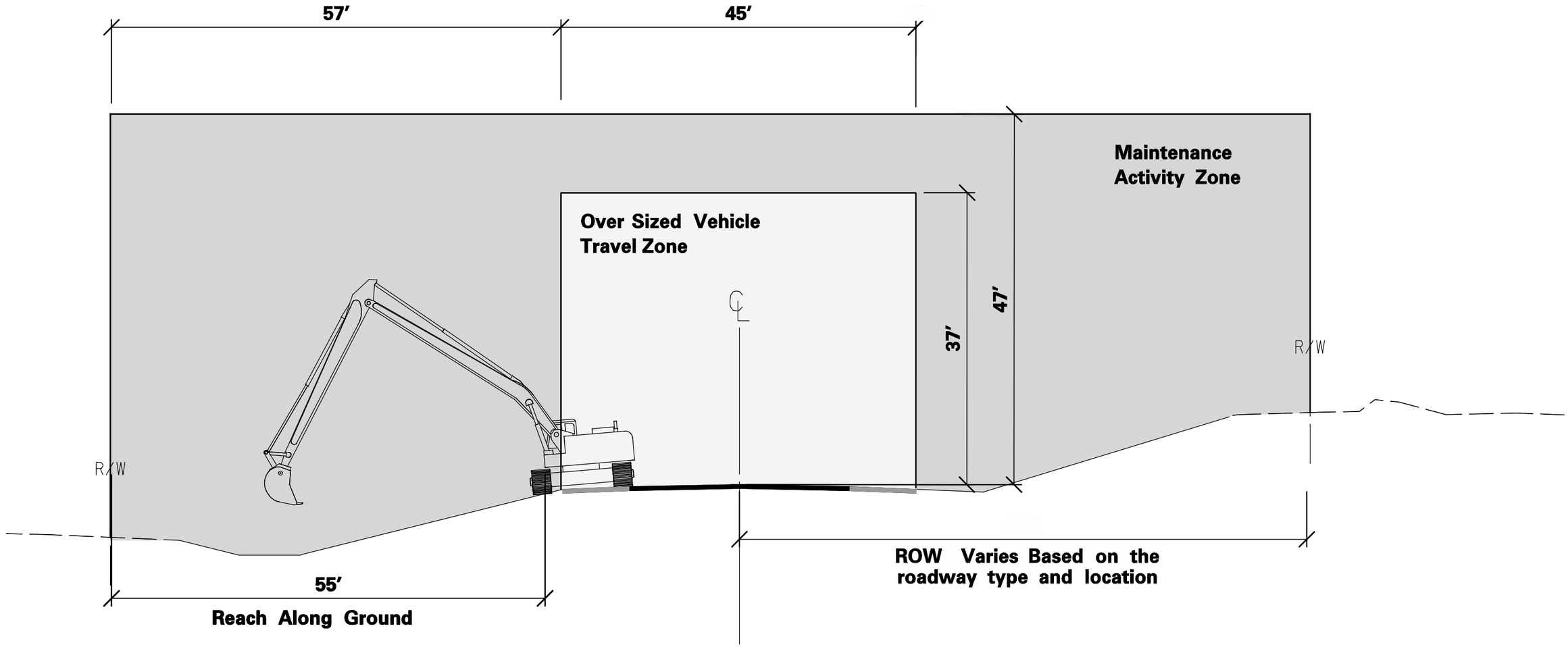


Typical Cross Section

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

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

TRANSPORTATION BUILDING
ST. PAUL, MINNESOTA 55155-1999

MnDOT Restriction Zone Examples

Attachment – 3