

**Interim Government Finance Committee  
Thursday, June 7, 2018 - Roughrider Room**

**North Dakota Department of Transportation  
Russ Buchholz, Information Technology Division Director**

---

Mr. Chairman and members of the committee, I am Russ Buchholz, Information Technology Division Director at the North Dakota Department of Transportation (DOT). Per your request, I am here to discuss the results of a study on the allowing wireless telecommunication infrastructure within state highway rights of way.

The study was conducted over the past six months as staff members from DOT and Information Technology Department (ITD) met several times with representatives from the city of Fargo and Bismarck, Association of Counties, and Burleigh County. We discussed and researched how different municipalities and other states work with this type of distributed radio technology.

As a result of the study, DOT, in conjunction with ITD, recommend that the state draft legislation that will allow for the regulation of telecommunication infrastructure within state highway rights of way. The state should be proactive in drafting legislation to ensure the deployment of wireless telecommunication infrastructure is beneficial to the state of North Dakota and the general public. In the study document I've handed out to you, page 2 lists the benefits and negative impacts of allowing this type of infrastructure within the state highway right of way. Page 3, lists the items to consider during the drafting process.

The study recommends that a company should work with the adjacent land owner and only consider right of way access if there is no other alternative. This allows the private sector to benefit from this type of technology advancement. It also recommends that the company obtain a permit and that a fee structure be established.

More details and information can be found in the Study Report. This concludes my testimony, I'm available to answer questions. Thank you.

MEMO TO: Legislative Management

FROM: Department of Transportation  
Information Technology Department

DATE: May 29, 2018

SUBJECT: SB 2012, SECTION 14. STUDY REPORT TO LEGISLATIVE MANAGEMENT

Across the nation, current generation 3G and 4G services have increased mobile wireless data consumption through the use of smartphones, tablets, and mobile-enabled PC. The demand for mobile wireless data is expected to grow even more with the introduction of Internet of Things (IoT), such as wireless utility meters, smart medical devices, smart home appliances and security systems, and connected cars. Next generation services, such as 5G, has the potential to further increase the demand of mobile wireless data through the connection of smart devices. The introduction of these technological advances is driving the need for the deployment of wireless facilities, such as small cell infrastructure in high demand areas and macro cell towers to feed the small cell infrastructure.

Over the past couple years, wireless broadband technology deployment has been a topic of discussion throughout the nation. The Federal Communications Commission (FCC) has sent out notices of proposed rulemakings requesting comments on how federal, state, and local jurisdictions either promote or inhibit the streamlining of deployment of small cell technology. State and local governing bodies that have endured the expansion of small cell deployments are implementing policies and taking legislative action.

As a result of the North Dakota 65<sup>th</sup> Legislative Assembly Regular Session, the following Senate Bill was enacted.

SB 2012, SECTION 14. TELECOMMUNICATIONS INFRASTRUCTURE ON HIGHWAY RIGHTS OF WAY - LIMITATION - DEPARTMENT OF TRANSPORTATION AND INFORMATION TECHNOLOGY DEPARTMENT STUDY - REPORT. Prior to the department of transportation permitting any non-state owned, controlled, or leased wireless telecommunication infrastructure used for wireless transmission of voice, data, images, or other signals or information within state highway rights of way, the department of transportation and the information technology department shall study, during the 2017-18 interim, the benefits of allowing wireless telecommunication infrastructure within state highway rights of way and what, if any, requirements of allowing the installation may be in the public interest. The department of transportation and the information technology department shall report the results of the study to the legislative management by June 30, 2018.

The benefits of allowing wireless telecommunication infrastructure within the state highway rights of way consist of the following:

1. An efficient infrastructure deployment could improve communication throughout the counties, improving public safety across the state. Although cellular phone service does provide an important data-link for law enforcement, and will likely become more important as FirstNet is rolled out, it is not currently used for mission-critical public safety communications.
2. Small cell infrastructure provides additional network capacity without the need for additional macro tower sites within urbanized areas.
3. Current 4G technologies, and the rapidly approaching 5G technologies, are critical services necessary for state government, local government, private enterprise, and the citizens of North Dakota. An efficient wireless technology deployment would be advantageous to all.
4. Increased investments in North Dakota from broadband providers. Increased investments would improve the broadband capacity and coverage for consumption with the potential for improved competitive advantages for all North Dakota stakeholders.
5. Potential lower cost of broadband for governmental entities if public private partnerships are associated with wireless technology deployments within state highway right of way.
6. With a pro-active approach, the state could draft legislation/process/policies that would be advantageous to North Dakota.
7. Potential to reduce visual pollution by leveraging the use of existing towers or structures.

The negative impacts of allowing wireless telecommunication infrastructure within the state highway rights of way consist of the following:

1. Potential for third party companies to develop a wireless technology deployment consisting of small cell and/or macro cell towers that do not provide a telecommunication service.
2. Potential to open the door for private entities not providing a public utility service, wishing to utilize public right of way for private enterprise.
3. Potential for numerous wireless technology providers wanting to cover the same area, resulting in numerous deployments and a negative visual display.
4. Potential for loss of revenue to private landowners in regards to land acquisition for wireless technology deployment.

The Department of Transportation, in conjunction with the Information Technology Department, recommend that the state draft legislation that will allow for the regulation of telecommunication infrastructure within state highway rights of way. The state should be proactive in drafting legislation to ensure the deployment of wireless telecommunication infrastructure is beneficial to the state of North Dakota and the general public. The following should be considered during the drafting process:

- Currently, state, county, and local governments do not profit from issuing permits; they simply recover the costs. Whether permits or lease fees are utilized, an artificial limitation on fees may shift a cost burden to the taxpayers. An application fee structure is recommended to cover individual and multiple sites within a geographically grouped area. Upon approval of an application, an annual permit fee is recommended for sites located within state highway right of way. It is also recommended that a renewal timeline of approximately 5-10 years be utilized to verify proof that the holder continues to have legal authority to occupy the state right of way and is in compliance with any and all local, state, and federal regulations.
- State highway right of way does, at times, fall within city platted areas. Though some of the larger cities within the state have already passed policies that pertain to small cell technology infrastructure deployments, engagement with local entities should be considered when drafting legislation.
- As legal guardians of the public right of way, NDDOT must ensure all work performed is done safely, in a manner that will not damage existing facilities, that the work meets engineering standards above and below ground, and that the work complies with all federal and state requirements. In order to make sure these procedures are continually followed, and due to complexities that may arise, NDDOT needs a reasonable amount of time to process the permit applications (e.g. 60 days to 180 days, depending on the nature of the permit).
- As infrastructure ages, maintenance and inspections will likely be needed. Guidelines for periodic or annual inspections should be considered.
- In anticipation of multiple wireless technology providers requesting deployment in similar locations, joint tenancy or collocations is recommended in these circumstances.
- There are entities that provide wireless technology infrastructure that do not meet the defining criteria of a public utility as defined by the Public Service Commission in NDCC Section 49-02-01 and Chapter 49-21. Consideration should be given to defining a “wireless” telecommunication utility. NDCC Section 24-01-39 should be reviewed and modified as necessary to account for wireless telecommunication infrastructure.

The current policy for the North Dakota Department of Transportation (NDDOT) *“A Policy for Accommodation of Utilities on State Highway Right-Of-Way”* establishes requirements for underground and overhead line installations in respect to an actual wireline, which clearly defines a utility alignment. Utility alignments are differentiated in the policy as either a crossing installation or a longitudinal installation. Since wireless utility installations would not be considered crossing or longitudinal in respect to the highway centerline, clarification is warranted to address a single point location utility installation.

The NDDOT proposes adding the following language to the *“A Policy for Accommodation of Utilities on State Highway Right-Of-Way”* for the installation and maintenance of wireless telecommunication infrastructure and services.

1. Wireless telecommunication infrastructure and services shall not be installed within the control of access lines of any freeway; except in special cases, such installations may be permitted under strictly controlled conditions.
2. Wireless telecommunication infrastructure and services shall not be installed within the median of divided highways.
3. Wireless telecommunication infrastructure and services may be installed on and along the right of way of non-freeway highways, provided the adjacent landowners will not allow the installation on their property. The applicant will need to submit a signed statement during the application process indicating that the applicant tried and was unable to secure permission from adjacent landowners for the installation of wireless telecommunication infrastructure and services. Installation of wireless telecommunication infrastructure and services within state highway right of way are to be located at, or as near as practical to the right of way line.
4. Any wireless telecommunication infrastructure and services installed utilizing a support structure shall be limited to a single-pole type of construction. Consideration shall be given to the height of a support structure. The NDDOT may request a support structure location be modified when the height (measured from natural grade to top of all appurtenances) exceeds the distance, on a horizontal plane, from the support structure location to the shoulder of the highway. A structural analysis shall be submitted and subject to approval. Guy wires and push braces must not extend into the highway right of way beyond the midpoint of the backslope.
5. Occupancy of wireless telecommunication infrastructure and services shall not interfere with the following:
  - a. Free and safe flow of traffic
  - b. Existing, planned, or future use of the right of way for highway purposes
  - c. Impair the existing highway or its scenic appearance
  - d. Any other requirement within the *“A Policy for Accommodation of Utilities on State Highway Right-Of-Way”*
6. It is the intent to promote collocation of wireless telecommunication infrastructure and services. At locations where more than one utility or type of facility is involved, joint-use single pole construction must be used if possible. All utility parties are subject to permitting requirements.

7. Wireless telecommunication infrastructure and services may utilize an existing or future state owned structure or support structure deemed for highway purposes, subject to the following:
  - a. The applicant shall conduct and submit a structural analysis to NDDOT for review and approval. The analysis must be approved by NDDOT before the applicant is allowed to utilize existing or future state owned structures or support structures.
  - b. The method of attachment is subject to NDDOT approval. All attachments shall be aesthetically pleasing and in compliance with all applicable codes and standards.
  - c. Attachments shall not interfere with the original use and operation of the state owned structure or support structure.
  - d. The applicant will be responsible for any and all services (e.g. power) required to operate the proposed infrastructure and services.
  
8. The applicant must obtain all necessary permits, licenses, and similar authorizations by other governmental entities for the installation of its wireless telecommunication infrastructure and services.
  
9. The NDDOT reserves the right to deny, but is not obligated to deny, any permit application if the location will impede upon any existing, planned, or future local, state, or federal communication regulation.
  
10. The applicant shall maintain all facilities installed within the state highway right of way in a manner that preserves the safety, integrity, and aesthetics of the state highway right of way. Maintenance records shall be kept and are subject to review upon request.
  
11. Upon termination of use or termination of the permit by either party, the wireless telecommunication infrastructure and services shall be removed by the applicant from the state highway right of way. All infrastructure shall be removed by a minimum of one foot below natural ground, including pole and footings.
  
12. The applicant shall comply with all applicable statutes, ordinances, rules, regulations, orders, and decisions issued by Federal, state or local government bodies or agencies, including without limitation, those issued by the North Dakota Public Service Commission and the Federal Communications Commission.
  
13. Wireless telecommunication infrastructure and services shall comply with all applicable laws, including all federal electromotive force (EMF) and radio frequency (RF) emission standards. The applicant shall not interfere with public safety communications.

NORTH DAKOTA DEPARTMENT  
OF TRANSPORTATION

*Thomas K. Soul*

DIRECTOR (TYPE OR PRINT)

*Thomas K. Soul*

SIGNATURE

*6 June 18*

DATE

NORTH DAKOTA INFORMATION  
TECHNOLOGY DEPARTMENT

*SHAWN RILEY*

CHIEF INFORMATION OFFICER (TYPE OR PRINT)

*Shawn Riley*

SIGNATURE

*5 June 18*

DATE

**APPENDIX A**

**SMALL CELL LEGISLATION BY STATE**

<b>STATE</b>	<b>STATUTE</b>	<b>SUMMARY</b>	<b>STATUS</b>
South Dakota		South Dakota isn't taking any action relating to small cell technology at this time.	
Minnesota	SF 561 <a href="https://www.revisor.mn.gov/bills/text.php?number=SF561&amp;version=1&amp;session_year=2017&amp;session_number=0">https://www.revisor.mn.gov/bills/text.php?number=SF561&amp;version=1&amp;session_year=2017&amp;session_number=0</a>	Provides for collocation of small wireless facilities; amending Minnesota Statutes 2016, sections 237.162, subdivisions 2, 4, 9, by adding subdivisions; 237.163, subdivisions 2, 4, 6, by adding subdivisions.	Passed
	HF 739 <a href="https://www.revisor.mn.gov/bills/text.php?number=HF0739&amp;session=ls90&amp;version=list&amp;session_number=0&amp;session_year=2017">https://www.revisor.mn.gov/bills/text.php?number=HF0739&amp;session=ls90&amp;version=list&amp;session_number=0&amp;session_year=2017</a>	Provides for collocation of small wireless facilities; amending Minnesota Statutes 2016, sections 237.162, subdivisions 2, 4, 9, by adding subdivisions; 237.163, subdivisions 2, 4, 6, by adding subdivisions.  **Allowed on public rights-of-way.	Passed
Montana			
Wisconsin	AB 130 <a href="https://docs.legis.wisconsin.gov/2017/related/proposals/ab130">https://docs.legis.wisconsin.gov/2017/related/proposals/ab130</a>	Authorizes a political subdivision to prohibit any person from placing a new mobile service support structure within, or within 750 feet of the boundary of, a residential zoning district that is the least dense of all such districts in the political subdivision. The bill also prohibits any person from placing such a structure within, or within 200 feet of the boundary of, the next two least dense residential zoning districts in the political subdivision. The bill defines density to be the number of housing units per acre in a political subdivision.	Failed
Wyoming		Wyoming created a lease agreement for small wireless facilities within state highway right of way. The lease agreement has a stipulation that all proposed facilities shall be designed to include collocation of at least two other non-related communication providers.	
Utah	SB 189 <a href="https://le.utah.gov/~2018/bills/static/SB0189.html">https://le.utah.gov/~2018/bills/static/SB0189.html</a>	Permits a wireless provider to deploy a small wireless facility and any associated utility pole within a right-of-way under certain conditions; permits an authority to establish a permitting process for the deployment of a small wireless facility and any associated utility pole under certain conditions; describes a wireless provider's access to an authority pole within a right-of-way; sets rates and fees; and describes the implementation of requirements.	Passed
Kansas		There have been attempts over the past several years to pass legislation in Kansas that would allow wireless communications, including cell towers, on highway ROW. Thus far, Kansas has lobbied successfully to be exempt from such legislation.	
Oklahoma	SB 1388 <a href="http://www.oklegislature.gov/BillInfo.aspx?Bill=sb1388&amp;Session=1800">http://www.oklegislature.gov/BillInfo.aspx?Bill=sb1388&amp;Session=1800</a>	Creates the Oklahoma Small Wireless Facilities Deployment Act; stating Legislative findings; defining terms; establishing procedures for the deployment of small wireless facilities and utility poles within a right-of-way; establishing the permitting process; establishing procedures for wireless	Passed

	<p>SB 1146  <a href="http://www.oklegislature.gov/BillInfo.aspx?Bill=sb1146&amp;Session=1800">http://www.oklegislature.gov/BillInfo.aspx?Bill=sb1146&amp;Session=1800</a></p>	<p>provider access to utility polls in certain areas; establishing permissible rates and fees for certain activities related to small wireless facility deployment; exempting certain entities from application of act; and authorizing certain entities to adopt requirements related to indemnification insurance, and bonding in implementation of this act.</p> <p>Companion bill.</p> <p>**Allowed on rights-of-way (highway) but not a federal interstate highway.</p>	<p>Pending</p>
Nebraska	<p>LB 389  <a href="https://nebraskalegislature.gov/FloorDocs/105/PDF/Intro/LB389.pdf">https://nebraskalegislature.gov/FloorDocs/105/PDF/Intro/LB389.pdf</a></p>	<p>Modernize telecommunication statutes to allow for greater investment by wireless communications providers in new technologies commonly referred to as small cells to expand coverage and deliver the benefits of fifth generation (5G) wireless capabilities to Nebraskans, improving public safety, helping businesses and schools remain competitive in a global economy, and creating jobs. Legislation is needed to facilitate efficient and uniform statewide siting practices for small wireless facilities. The bill defines small wireless facility to ensure that the streamlined siting process is not used for larger, tower structures. The bill maintains local government control over the permitting process, including authority to deny an application, and ensures that local authorities are compensated through reasonable and nondiscriminatory fees for permit applications and annual cost-based fees for small wireless facility attachments</p> <p>**Allowed on public rights-of-way (highway). See definition of right-of-way.</p>	<p>Indefinitely Postponed</p>
Ohio	<p>HB 478  <a href="https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA132-HB-478">https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA132-HB-478</a></p>	<p>Creates a regulatory framework for the installation of small cells regarding municipal public way usage law. Specifically, House Bill 478 includes the following guidelines regarding small cell technology:</p> <p>Uniform fees to attach to municipal-owned poles and a uniform process for obtaining permits.</p> <p>Tools for local governments to retain control regarding location, construction, and design for small cells.</p> <p>Competitive rules that apply to both cable operators and wireless service providers for the operation of small cell facilities.</p> <p>An operator may, as a permitted use not subject to zoning review or approval, collocate a small cell facility and construct, maintain, modify, operate, or replace wireless support structures in, along, across, upon, and under the public way.</p> <p>**Allowed on public ways (highways). See definition of public way.</p>	<p>Passed</p>
Colorado	<p>HB 17-1193  <a href="https://leg.colorado.gov/bills/hb17-1193">https://leg.colorado.gov/bills/hb17-1193</a></p> <p>Fiscal Note</p>	<p>Concerning the installation of small wireless service infrastructure within a local government's jurisdiction, and, in connection therewith, clarifying that an expedited permitting process applies to small cell facilities and small cell networks and that the rights-of-way access afforded</p>	<p>Passed</p>



	<a href="http://leg.colorado.gov/sites/default/files/documents/2017A/bills/fn/2017a_hb1193_f1.pdf">http://leg.colorado.gov/sites/default/files/documents/2017A/bills/fn/2017a_hb1193_f1.pdf</a>	telecommunications providers extends to broadband providers and to small cell facilities and small cell networks.  **Allowed on rights-of-way owned by government entities.	
Iowa	SF 431 <a href="https://www.legis.iowa.gov/legislation/BillBook?ga=87&amp;ba=SF431">https://www.legis.iowa.gov/legislation/BillBook?ga=87&amp;ba=SF431</a>	Next step to improve Iowa's cell siting law, Senate File 431. Sets up the framework and rules for small wireless facilities.  **Allowed on public right-of-way. **Allowed on highway right-of-way with permit.	Passed
Washington	SB 5711 <a href="http://lawfilesexternal.leg.wa.gov/biennium/2017-18/Pdf/Bills/Senate%20Bills/5711.pdf#page=1">http://lawfilesexternal.leg.wa.gov/biennium/2017-18/Pdf/Bills/Senate%20Bills/5711.pdf#page=1</a>	Speed up the deployment of next-generation 5G networks in Washington, and make the state attractive for private investment in wireless and broadband technology. It will: <ul style="list-style-type: none"> <li>• Standardize permitting rules for installation of new telecommunications equipment.</li> <li>• Limit rates charged by public utilities for pole attachments and access to other infrastructure. Public utilities would be able to charge the same rates as private utilities.</li> <li>• Eliminate barriers to investment that could make other states more attractive as these private networks are developed.</li> </ul>	Pending
	WA HB 1921 <a href="http://lawfilesexternal.leg.wa.gov/biennium/2017-18/Pdf/Bills/House%20Bills/1921.pdf#page=1">http://lawfilesexternal.leg.wa.gov/biennium/2017-18/Pdf/Bills/House%20Bills/1921.pdf#page=1</a>	Companion bill.  **Allowed on right-of-way.	Pending
Arizona	HB 2365 <a href="https://apps.azleg.gov/BillStatus/GetDocumentPdf/452687">https://apps.azleg.gov/BillStatus/GetDocumentPdf/452687</a>	Makes Arizona the first state in the nation to pioneer comprehensive legislation that creates a streamlined process for telecommunications companies to deploy small cell technology across the state.  **Allowed on right-of-way. See definition of right-of-way.	Passed
Indiana	SB 213 <a href="https://iga.in.gov/legislative/2017/bills/senate/213#document-2d60bd03">https://iga.in.gov/legislative/2017/bills/senate/213#document-2d60bd03</a>	Change current statute to allow for the permitting of wireless support structures.  **Allowed on public right-of-way.	Passed
Michigan	SB 894 <a href="https://www.legislature.mi.gov/documents/2017-2018/billengrossed/Senate/pdf/2018-SEBS-0894.pdf">https://www.legislature.mi.gov/documents/2017-2018/billengrossed/Senate/pdf/2018-SEBS-0894.pdf</a>	Colocation guidelines.	Pending
	SB 637 <a href="https://www.legislature.mi.gov/documents/2017-2018/billintroduced/Senate/pdf/2017-SIB-0637.pdf">https://www.legislature.mi.gov/documents/2017-2018/billintroduced/Senate/pdf/2017-SIB-0637.pdf</a>	Provide regulation by state or local government authorities and municipally owned electric utilities of the activities of wireless infrastructure providers and wireless services providers and of wireless facilities, wireless support structures, and utility poles; to regulate rates and fees; to provide for collocation of wireless facilities and of communications service provider pole attachments; to provide for use of public rights-of-way; to regulate certain permitting processes and zoning reviews; to prohibit certain commercially discriminatory actions by state or local	Pending

		<p>government; to prohibit state and local government authorities from entering into exclusive arrangements with any person for the right to attach to certain utility poles; to authorize indemnification and insurance requirements; to authorize certain bonding requirements; and to provide for charges for electricity to operate small cell wireless facilities.</p> <p>**Allowed on "public right-of-way" (highway). See definition.</p>	
Missouri	<p>SB 837  <a href="http://www.senate.mo.gov/18info/pdf-bill/intro/SB837.pdf">http://www.senate.mo.gov/18info/pdf-bill/intro/SB837.pdf</a></p> <p>SB 1948  <a href="https://house.mo.gov/billtracking/bills/181/hlrbillspdf/4600H.01I.pdf">https://house.mo.gov/billtracking/bills/181/hlrbillspdf/4600H.01I.pdf</a></p> <p>HB 1991  <a href="https://legiscan.com/MO/text/HB1991/2018">https://legiscan.com/MO/text/HB1991/2018</a></p>	<p>Relates to the deployment of wireless facilities. Establishes the Uniform Small Wireless Facility Deployment Act.</p> <p>Modifies provisions relating to wireless facilities and related infrastructure.</p> <p>Modifies provisions relating to wireless facilities and related infrastructure.</p> <p>**Allowed on "public right-of-way" (highway). See definition.</p>	<p>Pending</p> <p>Pending</p> <p>Pending</p>