DATA CENTER ZONING ORDINANCE
INTRODUCTION AND PURPOSE

This document is intended to assist cities, counties, and townships in proactively preparing for and managing the siting and development of data centers within their jurisdictions. As interest in data center development continues to grow, it is critical that local governments have clear, thoughtful regulations in place before projects are proposed.

This model ordinance is the result of a collaborative effort among a diverse group of stakeholders representing local governments and industry across North Dakota. Contributing organizations include the North Dakota Association of Counties, North Dakota Planning Association, North Dakota Township Officers Association, North Dakota League of Cities, Greater North Dakota Chamber, and Tech ND. These groups worked together to ensure that the ordinance reflects both community interests and the practical considerations of data center development.

This document is not intended to be a 'plug-and-play' ordinance. Rather, it is a framework that must be reviewed, reformatted, and tailored to align with each jurisdiction's existing zoning code structure, terminology, and regulatory approach. Political subdivisions should integrate this language carefully to ensure consistency with their current ordinances and procedures.

The goal of this workgroup was to identify specific concerns associated with data centers—particularly their potential impacts on adjacent properties and community resources—and to develop a practical tool that communities can use to craft appropriate regulations. The intent is to help local governments balance the economic benefits of allowing data center development with the responsibility to protect the rights and quality of life of the community.

A key principle underlying this effort is that it is far more effective for communities to have these discussions and regulations in place prior to receiving a development application. Establishing clear expectations in advance provides certainty to both the community and potential developers, while reducing conflicts during the review process.

This ordinance framework includes provisions that:

- Require appropriate analysis of potential impacts, including sound studies prepared by qualified professionals for minor and major data centers;
- Require confirmation from utility providers that sufficient electrical power and water resources are available to support the proposed development;
- Establish where data centers are most appropriately located, recognizing that these uses are typically best suited for industrial zoning districts, where they are permitted uses;
- Require additional review in more sensitive areas, such as agricultural for minor and major data centers, by classifying them as special or conditional uses, ensuring public hearings and notices to neighboring properties;
- Allow for additional scrutiny of minor data centers in commercial areas to ensure compatibility with surrounding uses; and
- Require, with limited exceptions, that data centers be located within permanent, enclosed structures, which helps mitigate noise and ensures consistency with other land use and building requirements.
- Distinguish between micro, minor, and major data centers based on the facility's total connected electrical load or designed electrical capacity, because energy demand is directly related to the amount of computing equipment housed at the facility and the volume of data the facility can process.

This model ordinance is designed to serve as a flexible framework that political subdivisions can adapt to fit their local zoning codes and community needs. Its purpose is to encourage responsible development while ensuring that data centers do not negatively impact surrounding properties or strain critical infrastructure.

Data Center. A facility used primarily for the storage, management, processing, and transmission of digital data, which houses computer or network equipment, servers, and other equipment, appliances, and components related to digital data storage and operations.

Major Data Center. A data center where the total connected electrical load or designed electrical capacity of the facility exceeds 6 megawatts (MW).

Micro Data Center. A data center where the total connected electrical load or designed electrical capacity of the facility is 100 kilowatts (kW) or less.

Minor Data Center. A data center where the total connected electrical load or designed electrical capacity of the facility exceeds 100 kilowatts (kW) and is 6 megawatts (MW) or less.

Permissible Districts. A major data center and a minor data center are permitted uses in a zoning district classified as industrial.[1]

A major data center and a minor data center will be permitted only through a [special use permit/conditional use permit] in zoning districts classified as agricultural.

A minor data center may be permitted in zones classified as commercial or industrial mixed-use districts through a [special use/conditional use permit].

A micro data center is a permitted use in zones classified as industrial, agricultural, commercial, and mixed-use, or within the fenced perimeter of a utility or telecommunications use, only as a secondary use to the principal use on the property.

Section_____. Data Centers

A. Purpose

The purpose of this Section is to establish standards and regulations for the development and operation of Data Centers in accordance with the purposes stated in Section ____.[2]

B. Development Permit Requirements

In addition to standard Development Permit requirements, the following materials or entitlements that shall be required to effectuate a Data Center:

1. Identification of the owner/operator of the Data Center.
2. A narrative describing the proposed project, including designed electrical capacity

[1] Jurisdictions need to match zoning district language with their current zoning codes.
[2] This section should refer to the jurisdiction's general zoning purposes provision.

cooling method, anticipated design life, estimated daily trips during construction and operation, including heavy trucks and passenger vehicles, and general construction phasing plan, description of wastewater the facility will create and approach to managing discharges (if applicable).

3. Prior to approval for a major data center or a minor data center, the applicant shall submit an Acoustic Impact Report prepared and signed by a licensed professional engineer with demonstrated acoustical engineering expertise. The report shall:

    a. Identify all major sound-emitting source points (e.g., chillers, generators, cooling units, substations) and list the predicted sound pressure level produced by each major sound-emitting source type;

    b. quantify the cumulative predicted sound pressure levels from the project (of the specific project phase under review), accounting for concurrent operation of sources not including operation of backup sources;

    c. report the existing measured ambient cumulative sound pressure levels at the lease or owned project land boundaries; and

TWO OPTIONS FOR REPORTING REQUIRMENTS – JURISDICTIONS NEED TO PICK ONE PROVISION[3]

Option 1

    d. model and report the existing and predicted cumulative sound pressure levels for each Lot within one-half mile of the source point(s) as measured to the nearest point on a Lot Line ("Receptor Site").

Option 2

    d. model and report the predicted cumulative sound pressure levels based on known components out until equal to, or less than, levels established in _____, for normal operation, as measured to the nearest point on a Lot Line ("Receptor Site).[4]

Results shall be expressed in A-weighted decibels (dBA) as sound pressure levels with notation of any prominent tonality or impulsive events, and be supported by a description of operating scenarios, Receptor Sites, terrain/ground absorption, shielding, and meteorological assumptions. The report shall also include a map referencing all project structures, a summary table comparing predicted levels to applicable requirements, and recommended mitigation, if any, needed to achieve compliance. Penalties to the requirements shall be applied per ANSI S12.9 for identified tonal or impulsive sound sources or events.

[3] Option 1 is intended for urban areas that have more development, generally industrial zoned areas. Option 2 is intended for more rural areas that are generally zoned agricultural.

[4] Jurisdiction should refer to its own noise ordinance.

e. The requirements of this subsection may be waived with respect to an affected Receptor Site if the owner of that Receptor Site enters into a written waiver agreement with the applicant. Any executed waiver agreement shall be submitted with the application.

4. A site plan conforming with _____.[5]
5. A map of the project area showing all of the following Uses and Receptor Sites within one-half of a mile of the exterior boundaries of the property where the Data Center will be located:
    a. All existing Buildings currently occupied;
    b. Campgrounds;
    c. Manufactured Home or RV Parks; and
    d. Parks or recreational areas.
6. Applicant to develop, in coordination with local jurisdiction, a list of agencies necessary for project compliance with all applicable State and Federal laws, statutes, rules, and regulatory standards, and an anticipated schedule for necessary approvals.
7. Written verification from the electrical provider that sufficient capacity will be available to meet anticipated needs for electrical power.
8. Written verification from the water utility that sufficient capacity will be available to meet anticipated needs for water.
9. Prior to the issuance of Development Permits, the applicant shall enter into a Development Agreement if required by the local permitting jurisdiction.
10. Any other relevant studies, reports, certifications, or approvals as may be required by local permitting jurisdiction to ensure compliance with this Section and this Ordinance.

C. Use Standards

1. Noise perceived from Receptor Site(s), as measured from any source point(s), shall not exceed the sound pressure levels provided in_____ for normal operation. If necessary, noise mitigation shall be required to achieve compliance. Noise mitigation may include, but is not limited to, the use of low-noise fans, earthen berms, sound walls, or enclosures.[6]
2. The sound pressure levels stated above may be temporarily exceeded during emergency operations due to power grid interruptions.[7]
3. Testing and maintenance operations for emergency generators shall only occur between the hours of 7 AM and 9 PM. Only one generator may be tested at a time at the site.
4. A landscaped buffer yard shall be installed in accordance with _____of this

[5] Jurisdiction should refer to jurisdiction's code that defines the requirements of a site plan. If jurisdiction does not have a provision on site plans, there is a list of potential items to require in the appendix.
[6] Jurisdiction should reference its own noise ordinance.
[7] Only include provision if it is not addressed in noise ordinance.

Ordinance.[8]

5. All-weather access will be maintained by the owner/operator unless the access is dedicated and accepted by the local permitting jurisdiction.
6. A major data center or a minor data center must be entirely contained within a permanent, enclosed building constructed in compliance with the locally adopted International Building Code and International Fire Code, except that this requirement may be waived for a minor data center if collocated on property owned by a public utility and functionally integrated with an electrical substation, telecommunications node, or other utility infrastructure. Conventional mechanical systems that support a data center, including packaged HVAC condensing units, cooling towers, and emergency generators, may be placed outdoors only if they comply with applicable noise, screening, and mechanical-equipment placement standards and do not contain computing or data-processing equipment. A micro data center may be located within a permanent structure or within the fenced perimeter of a utility or telecommunications use when allowed as an accessory or secondary use.

[8] Refer to your own section if you have requirements, otherwise delete provision.

Appendix

Items jurisdiction might want to include in site plan requirements if it does not have established guidelines:

a. Scaled exhibit(s) providing property boundary linework;
b. Existing and proposed topographic data/linework;
c. Outline of all existing structures;
d. Location of all major proposed equipment and enclosures (examples may include generators, exterior cooling system components, etc.);
e. Location and layout of power generation systems;
f. Location of existing and proposed utility lines and major infrastructure (water lines, electrical lines, oil and gas pipelines, etc.);
g. Existing easements (should include easement width and recorded document numbers, either as a label or in a notes table);
h. An erosion control plan, if development disturbs an area of one acre or more;
i. Existing watercourses and Flood Hazard Zones;
j. Location of septic system;
k. Stormwater management components (such as retention areas, channels, etc.);
l. Wastewater discharge outlets, reservoirs and treatment facilities;
m. Above ground and below ground tanks;
n. Location of permanent parking area(s);
o. Outline of construction staging area(s);
p. Setback distances, in feet, between project components and the property boundary;
q. Fence locations with a note as to type and height; swing gate dimensions, if swing gates will be used;
r. Location of hard surfaces, gravel surfaces, and any otherwise improved surfaces;
s. Location of contiguous fire break;
t. Existing and proposed access points;
u. Location and specifications proposed for fences, walls, or light fixtures/poles;
v. Landscaping buffers and/or visual screening; and
w. Any additional information as requested by local permitting jurisdiction necessary for site plan approval.