



DATA CENTERS AND HEAVY INDUSTRIAL USE DISTRICT

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Data Centers

- Data centers are facilities that house network computer systems (and supporting equipment) used for data storage and processing.
- Historically, data centers were located near major fiber routes, reliable power grids, and in areas with ample water supply.
- As demand for data, specifically in the areas of artificial intelligence (A.I.) and cloud computing increases, so does the need for communities to property plan for these types of land uses.

Electricity Considerations

- Data centers typically run continuously and consume large amounts of electricity.
- Waste heat is generated, which requires fans or some cooling method.
- Artificial Intelligence (AI) and cloud computing is a major driver of electricity consumption.

Water Considerations

- Water is necessary for most forms of electricity production.
- Many data centers and cryptocurrency mining operations use water as method for cooling equipment.
- El Paso officials have approved a Meta AI data center.
 - The center's water usage is projected to amount to approximately 146 millions gallons in one year (400,000 gallons per day).
 - Agreement allows META to use up to 1.5 millions gallons of water per day.

Noise Considerations

- Most complaints associated with data centers have involved low frequency humming sounds.
- Nuisance noise affects quality of life.
- City's current noise ordinance would apply to this use.

Federal and State Approach

- President Trump issued Executive Order 14318, *Accelerating Federal Permitting of Data Center Infrastructure*, with an aim to reduce permitting delays for large-scale data centers.
- Texas Senate Bill 6 (“kill switch bill”) imposes costs on large energy users (75MW) to fund infrastructure upgrades and enable remote disconnection in instances of emergency.
- Evolving regulatory landscape is expected as data center demand increases.

Local Data Center

- Burleson has one bitcoin mining operation located along Centre Drive, which is zoned for Industrial use.
- The City Council approved the commercial site plan for the project, *Alta Vista*, on September 16, 2019.
- The operation is housed within a brick building, with masonry screening walls, trees and required landscaping.
- An additional accessory structure and cooling tower have been added to the site; electrical transformer has been upgraded.

Local Data Center



Land Use Considerations

- The Code of Ordinances does not currently define terms such as ‘data center’ or ‘cryptocurrency mining and should be updated to account for such uses.
- The city must determine the appropriate “by-right” zoning district for this type of use (e.g. *Commercial, Industrial, or new Heavy Industrial Energy*)?
- Staff recommends a new zoning district be created to include such uses as: wind or solar farms, power plants, nuclear energy operations, large-scale data centers, etc.
- It is beneficial to establish these uses in a zoning district prior to receipt of a development application.
- Council reserves the right to approve any rezoning application; and
- Staff recommends to add to consider applications on a case-by-case basis through site plan zoning as the landscape for these uses are dynamic and everchanging.

Considerations

- Performance standards such as building height, landscape buffers, setbacks, screening, lot coverage, glare and lights, noise, etc. are items the Council should consider for heavy industrial/energy use projects.
- Example: demonstration of performance standards could be a Commercial Site Plan requirement.
- Compliance with the City's Comprehensive Plan and future land use map remain integral in the decision-making process.

Factors to Consider

- As the demand for data center increases, the City should consider:
- 1) appropriate siting near available utility infrastructure;
- 2) evaluate demands on electricity/water capacity;
- 3) regulate building scale;
- 4) glare, buffering, screening
- 5) require ambient noise mitigation; and
- 6) account for the need for enhanced safety and security measures around these facilities.

City's Authority

- What can the City legally regulate?
- As it stands, City is not pre-empted in its ability to regulate these types of land uses via zoning.
- City can use its discretion in the application of enhanced standards.
- Standards should be roughly proportionate to the impacts associated with the use.

Questions/Direction

- Does the Commission have any questions or direction on this topic?
- Council has directed staff to prepare a new zoning district for wind or solar farms, power plants, nuclear energy operations, large-scale data centers, etc.
- Staff will prepare a heavy industrial zoning ordinance for the Commission's discussion and recommendation.