



PLANNING DEPARTMENT

P.O. Box 40 • Irrigon, Oregon 97844
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AGENDA

Morrow County Planning Commission
Tuesday, February 24, 2026, 6:00 pm
Bartholomew Building, Heppner, OR

[For Electronic Participation See Meeting Information on Page 2](#)

Members of Commission

Stacie Ekstrom, Chair

John Kilkenny, Vice Chair

Norma Ayala

Charlene Cooley

Stephen Henthorn

Karl Smith

Tripp Finch

Brian Thompson

Elizabeth Peterson

Members of Staff

Tamra Mabbott, Planning Director

Stephen Wrecsics, GIS Analyst

Michaela Ramirez, Administrative Assistant

Clint Shoemake, Planning Technician

Kaitlin Kennedy, Code Compliance Planner

1. **Call to Order**
2. **Roll Call**
3. **Pledge of Allegiance**
4. **Minutes:** (Draft) January 2, 2026 [pg. 4-12](#)
5. **Public Hearings** to begin at 6:00 PM (COMMISSION ACTION REQUIRED)
 - I. **Conditional Use Permit CUP-S-395-26: Amy Haak, Applicant; Jeanne Lewis, Property Owner.** The applicant is requesting approval of a Home Occupation Conditional Use Permit to allow operation of an in-home salon business. The subject property is identified as Tax Lot 3101 of Assessor's Map 2S27E. The parcel is zoned Exclusive Farm Use (EFU) and is located outside the City of Heppner's Urban Growth Boundary (UGB). Approval criteria include Morrow County Zoning Ordinance (MCZO) Article 3, Section 3.010 (Exclusive Farm Use), and Article 6, Section 6.050.G (Standards Governing Conditional Uses—Home Occupations). [pg. 14-29](#)
 - II. **Land Use Decision LUD-N-088-25: Tim Seck, Well Springs LLC, a subsidiary of MN8 Energy Development Company, Property Owner: April Miller LePage and Nolan Miller.** The request is to permit a standalone 230kV substation as a "utility facility necessary for public service" within a 13-acre building envelope on an approximately 633-acre parcel. The Miller substation is proposed on property described as tax lot 3000 of Assessor's Map 2N 23 located approximately 3 miles

east of State Highway 74 on the north side of Immigrant Lane, south of Interstate ²84, approximately 14 miles. Criteria for approval include MCZO Article 3 Section 3.010(D) and 3.010(F)(10). [pg. 31-77](#)

- III. **Land Use Decision LUD-N-089-25: Leif Van Acker, Kimley-Horn, Applicant, Property Owner Amazon Data Services, Inc.** The request is to site a data center campus on property zoned Airport Light Industrial (ALI). The property is described as tax lot 136 of Assessor's Map 4N 24E, located approximately 3.7 miles west of Boardman's Urban Growth Boundary, southeast of the Boardman Airport, and southwest of the Tower Road/I-84 interchange. Criteria for approval include Morrow County Zoning Ordinance (MCZO) Article 3 Section 3.076 Airport Light Industrial, ALI, Section 3.092 Airport Safety and Compatibility Overlay Zone, ASC, and Article 4 Supplementary Provisions. [pg. 79-337](#)

6. **Other Business:**

7. **Correspondence:**

- I. January Monthly Update
[pg. 339-345](#)

8. **Public Comment:**

9. **Adjourn**

Next Meeting: Tuesday, March 31, 2026, at 6:30 p.m.
Location: Morrow County Government Center, Irrigon, OR

ELECTRONIC MEETING INFORMATION

Morrow County Planning is inviting you to a scheduled Zoom meeting. Topic: Planning Commission
Time: February 24, 2026, 6:00 PM Pacific Time (US and Canada)

Join Zoom Meeting

<https://us02web.zoom.us/j/6554697321?pwd=dFMxR2xlaGZkK1ZJRFVrS1Q0SmRxUT09&omn=84249165172>

Meeting ID: **655 469 7321**

Passcode: **513093**

Find your local number: <https://us02web.zoom.us/u/kdmj6471tm>

Should you have any issues connecting to the Zoom meeting, please call 541-922-4624. Staff will be available at this number after hours to assist.

This is a public meeting of the Morrow County Planning Commission and may be attended by a quorum of the Morrow County Board of Commissioners. Interested members of the public are invited to attend. The meeting location is accessible to persons with disabilities. A request for an interpreter for the hearing impaired, or for other accommodations for persons with disabilities, should be made at least 48 hours before the meeting to Tamra Mabbott at (541) 922-4624, or by email at tmabbott@morrowcountyor.gov.

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**Draft Minutes of the Public Meeting of the
Morrow County Planning Commission
Tuesday, January 27, 2026, 6:00 pm
Morrow County Government Center
215 NE Main Ave, Irrigon, OR**

COMMISSIONERS PRESENT:

Stacie Ekstrom, Chair
Norm Ayala
Charlene Cooley
Karl Smith
John Kilkenny
Liz Peterson

COMMISSIONERS ABSENT:

Brian Thompson
Tripp Finch

ATTENDANCE via ZOOM:

Stephen Henthorn

STAFF PRESENT:

Tamra Mabbott, Planning Director
Michaela Ramirez, Administrative Assistant
Clint Shoemake, Planning Technician
Kaitlin Kennedy, Code Compliance Planner

Staff Zoom:

Stephen Wrecsics, GIS Analyst

1. CALL TO ORDER

Chair Ekstrom called the meeting to order at 6:00 PM

2. ROLL CALL**3. PLEDGE****4. APPROVAL OF DECEMBER 2, 2025, DRAFT MINUTES**

Recommended Action: Approve

Action: Unanimously Approved

Presented by: Planning Director Tamra Mabbott

Request: Co-Adoption of the City of Boardman Transportation System Plan (TSP), ATSP-162-26. The application is to co-adopt the Boardman TSP to apply to lands within the urban growth boundary. Criteria for approval include Morrow County Zoning Ordinance (MCZO) Article 8 Amendments.

Chair Ekstrom asked if there was anyone who needed to abstain, declare a conflict of interest, bias, or have any ex parte contact.

Commissioner Ayala recused herself from this item on the agenda.

Director Mabbott: asked the Planning Commission to enter Jonathan Tallman's email correspondence into the record as exhibits 1 and 2.

Commissioner Kilkenny: motioned to enter the exhibits into the record.

Commissioner Cooley: seconded the motion.

Chair Ekstrom requested that those giving testimony or comments to keep their comments to a minimum so that everyone got a chance to speak.

Carla McLane: spoke on how the city had presented the co-adoption to the public throughout the process. She also spoke about the comments given at public meetings and how they responded. She mentioned that other appendices support the co-adopt. She encouraged the Planning Commission to forward the co-adopt to the Board of Commissioners for their consideration for next month's meeting.

Chair Ekstrom asked the Commission if there were any questions for the applicant. There were none.

Chair Ekstrom asked if there were opponents who would like to provide testimony or evidence.

Testifying Parties:

Carla McLane, City of Boardman Planning Official, PO Box 229, Boardman, OR 97818

Cheryl Tallman, 706 Mt Hood Ave, Boardman, OR, 97818

Jonanthan Tallman, 706 Mt. Hood Ave, Boardman, OR 97818

Dawn Hert, Eastern Oregon Regional Representative, 105 Fir St., Suite 210, La Grande, OR 97850

Emily Guimont, Beery Elsner & Hammond, on behalf of the city of Boardman

Cheryl: read from her notes and said she was not there to oppose the project. She would like to request that the project be done with clarity and coordination because impacts are real on the ground, even though plans are described as conceptual. She spoke about businesses affected and that residents would like to see factual plans.

Jonathan: presented and displayed a billboard with attached documents (photos were taken). He stated that the TSP is on hold with NIDA. He mentioned there were particular records he had submitted that were not in the City of Boardman's packet. He spoke on conceptual plans, stated that he would like factual documents, and would like to see all projects put into one submittal.

Commissioner Kilkenny: asked Jonathan if he was talking about the Transportation Plan or the Heritage Trail.

Jonathan: responded that he was going to demonstrate through his props. He also asked that we leave the record open and continue the hearing according to the 7-7-7 rule because of the complexity of the process. He spoke about transmission lines on his property and how they were installed because of demand. He asked that all plans be done in good faith.

Chair Ekstrom asked the Commission if there were any questions for the opponent.

Commissioner Peterson: asked Jonathan what his issue was about a particular map.

Jonathan: responded that it was a conceptual map, not a factual map. Then spoke on a particular road and how it should be made to comply with the city code. He also spoke on a LUBA case he won.

Commissioner Peterson: asked about the conceptual map, indicating they were going to place an RV Park on his property.

Jonathan: responded yes and tried to move on with that plan, but it fell through.

Commissioner Peterson: asked Jonathan if what he was asking the Planning Commission today was that the city of Boardman move ahead with the plan, but he would like to see it done in the correct order.

Jonanthan Tallman: responded that he would like the city to make an ORS 35 offer so that the plan could move forward and be non-confrontational.

Commissioner Peterson: responded that the commission had no control over what happens within the city limits, but if the commission were to approve, we would be telling the city it is ok to go against the ORS.

Jonathan Tallman: stated there was a NIDA on the TSP. He said the city of Boardman should finish the NIDA and then come back to them once it was done. He said he may still take the approved plan to LUBA, he didn't want to pay lawyers anymore, and wanted everyone to work with him.

Director Mabbott: Jonathan submitted a Community Development Notice of Decision of 2021 and an aerial image with an A & B Notice. She asked the Commission to motion to add the exhibits to the record as exhibits 3 and 4.

Commissioner Peterson: made the motion to add the exhibits to the record.

Commissioner Kilkenny: seconded the motion.

Director Mabbott: stated that the Planning Commission meeting tonight was to make a recommendation to the Board of Commissioners to co-adopt the City's Transportation System Plan, which would apply to the Urban Growth area. She also wanted to point out that the record would remain open until the February 18th Board of Commissioners Hearing, and materials could be submitted up until that time. She said Mr. Tallman could also ask for the record to remain open until then. She then stated the plans would move forward until approval, then Mr. Tallman could make his appeals. She also spoke on the "Laurel Lane Vicinity Map" and pointed out that it was not near Mr. Tallman's property.

Commissioner Kilkenny: asked to present the Laurel Lane Vicinity Map and asked Jonathan if his objection was to the road going through his property.

Jonathan: he said what was on the map was conceptual and not factual. He stated that the plan was to segment the process.

Commissioner Kilkenny: wanted to understand what exactly he, Jonathan, wasn't in agreement with about the road.

Jonathan: responded that the documentation he had received was not factual and didn't want the city of Boardman to change the plans of where things were going to be placed.

Commissioner Kilkenny: asked Director Mabbott what he meant about the proposed road.

There was a discussion about which map. The map in question was on page 42.

Director Mabbott: stated that the plan was a general alignment and that the maps were conceptual, but at some point, the city of Boardman needed a road that connected.

Jonathan: stated the city of Boardman committed to the road in 2021 and didn't want to take it to LUBA. He did say LUBA remanded the decision on the road, and the city of Boardman gave him a letter of intent, but not according to the ORS-35 law.

Commissioner Peterson: asked to review ORS-35.

Counsel Kearns: gave a brief definition of ORS-35.

Jonathan: claimed that this was an inverse domain because the county was funding it. He claimed there wasn't proper representation.

Chair Ekstrom asked if there were any parties with neutral evidence. There were none.

Commissioner Henthorn: referred to the map on page 29. He asked if the city of Boardman could make plans with county roads before they were annexed into the city. He also pointed out the road that runs north and south and intersects at Anderson and Juniper, which runs through agricultural land. Then, the Planning Commission always prioritized agricultural land.

Director Mabbott: explained that both the county and the city had their own transportation plan and that tonight was about recommending that the Board of Commissioners adopt the plan presented tonight.

Commissioner Henthorn: asked if the Staff had notified property owners about what is being proposed, and that he didn't entirely disagree with Mr. Tallman. His concern was that the plan was conceptual and that the city of Boardman was making plans on county land. He said, if that was the case, why didn't the city of Boardman annex the proposed property.

Director Mabbott: explained that the county transportation plan provides no guidance for future development within the Urban Growth Boundary, and that was why the county co-adopts what the city would like to see. She also said properties are developed in fragments, so that there is some guidance on developing roadways.

Commissioner Peterson: asked if property owners had been notified of their proposed future.

Director Mabbott: explained that the county would follow the city's standards, and it would allow some guidance.

Commissioner Peterson: asked if the city was using residents' property for future plans.

Director Mabbott: responded yes, but it is not site-specific. If the county planned any development, it would confer with the City of Boardman to see how it could connect because any urban-scale development or high-intensity subdivisions would most likely follow city standards and be annexed into the city.

Commissioner Peterson: pointed out that the city of Boardman hadn't annexed the area yet, but was deciding the future of residents' land.

Director Mabbott: reminded Commissioner Peterson that this is not site-specific. She then stated that if someone were to subdivide, they would have to annex into the city, because the county does not have the capacity for high-density development in the Urban Growth Development area to support water and sewer. She then asked Dawn Hert to give a better explanation of why a county and city work together on a transportation plan in the Urban Growth area.

Dawn Hert: explained that it is not a requirement for the county to adopt or acknowledge a city plan, but there are benefits.

Commissioner Peterson: asked why the city couldn't just plan for its boundaries. Why did they have plans for the county's Urban Growth Boundary.

Commissioner Henthorn: also said he felt the same way about the plan.

Counsel Kearns: explained what it meant to adopt in the Urban Growth Boundary, and that counties are required to go along with adoptions. He explained that cities plan for urbanization.

Commissioner Kilkenny: asked what the arrows meant on map figure 4-2 (pg. 29).

Counsel Kearns: replied that it could mean future extension of those roads. He also said that is why the plans are conceptual, because cities try to anticipate how things will progress.

Commissioner Henthorn: spoke on the growth of cities and the rights of property owners.

Commissioner Peterson: asked what was presented was conceptual, it would become factual after development.

Director Mabbott: explained that the plan was conceptual and not precise, but the idea was to provide guidance. She then gave an example.

Commissioner Peterson: asked if, what if the landowner didn't agree, then what would happen. 1:08

Director Mabbott: explained that yes, they could say no. And spoke on what was conceptual and how the county would coordinate roads with the city for safety.

Commissioner Peterson: asked if someone wanted to subdivide, would it have to go through the Planning Commission.

Director Mabbott: replied yes.

Counsel Kearns: spoke about the map presented on page 29. He also explained that developers are required to provide access to serve the development. Developers are also required to demonstrate that public facilities exist and are sufficient to serve the development. He explained that this was a general plan and not a final plan.

Director Mabbott: pointed out that at the bottom of the map, the language stated that the map is a general idea and not a final plan. She also said the plans were conceptual and landowners would be given an idea of the city and county's future interest.

Counsel Kearns: replied that the government cannot acquire the property unless it was part of a development.

Chair Ekstrom asked if the applicant would like to present any rebuttal or evidence for testimony.

Carla McLane: responded that the City of Boardman would be constraining comments to the decision. She wanted to clarify that the city's TSP is not on hold and stated the city would suspend the NIDA until the county's co-adopt process was complete. Cities do have the right to adopt a conceptual plan, and she recommended that the Planning Commission recommend approval.

Emily Guimont: seconded Carla McLane's rebuttal

Chair Ekstrom asked anyone who would like to continue the hearing or hold the record open.

Jonathan: asked said yes, he would like to hold the record open.

Director Mabbott: stated that this was a legislative action and the commission is not obligated to keep the record open. She also said the record would remain open until the Board of Commissioners Hearing.

Counsel Kearns: explained the rules and requirements.

Chair Ekstrom then closed the public hearing. She then asked if anyone had questions for the staff.

Commissioner Smith: asked about a particular road going through property.

Commissioner Kilkenny: responded that what he was speaking about was the Heritage Trail and that was the next item on the agenda.

Commissioner Cooley: asked about the conceptual plan: will the plan come back for approval for county roads.

Director Mabbott: replied that if the roads weren't annexed by the city, then yes.

There was a discussion about the motion to be made.

Director Mabbott: asked Counsel Kearns if the Commission could say they didn't want to make a recommendation.

Counsel Kearns: responded, he thought that was possible, but felt the Board of Commissioners might want to know the reason why the Planning Commission couldn't reach a decision.

There was more discussion about the conceptual plan. 1:38

Recommended Action: The Planning Commission recommend to approve the BOC approve with Co-Adoption of the City of Boardman Transportation System Plan (TSP), ATSP-162-26.

Motion: The Planning Commission recommends that the BOC approve Co-Adoption of the City of Boardman Transportation System Plan (TSP), ATSP-162-26, and to respect the rights of all local private property owners.

Motion by: Commissioner Cooley

Seconded by: No one

Vote: None

Action: No action was taken, and the Planning Commission couldn't agree on a recommendation.

Director Mabbott: said she would write up a Memo to the Board of Commissioners about the motion.

Presented by: Planning Director Tamra Mabbott & Planning Technician Clint Shoemake

Request: Comprehensive Plan Amendment to update Chapter 9 Recreation Element and Adopt the 2026 Morrow County Columbia River Heritage Trail Concept Plan, AC-163-26. Morrow County is the applicant. Criteria for approval include Morrow County Zoning Ordinance (MCZO) Article 8 Amendments.

Chair Ekstrom asked if anyone needed to abstain, declare a conflict of interest, bias, or have any ex parte contact. There were none.

Director Mabbott: gave some background on what had been done with the Heritage Trail Plan in the last 18 months.

Clint: spoke about the trail's history and then spoke about the trails on the map presented. He explained the colors on the map on page 161 and then went on to explain the maps presented (pages 163, 165, 167, 169, 171, 173 of the packet).

Chair Ekstrom asked if the Planning Commission had any questions for Staff:

Commissioner Peterson: asked if the staff had spoken to Oregon Potato about the property possibly used in the plan.

Clint: responded that Oregon Potato had responded. They requested references to utilize their property be removed . 1:53:32

Commissioner Peterson: asked if all landowners approved of the trail plan.

Director Mabbott: responded that the majority of the property is public land.

Clint: pointed out the area considered to be private property. He also spoke about the BPA property in the plan.

Commissioner Peterson: asked about the property on the other side of the freeway.

Clint: said he wasn't sure, and they would have to bring that up. He also said he was hoping the Tower Road IAMP would help with that issue and reiterated that they would not move forward without any approvals from property owners.

Director Mabbott: asked the commission if the commission would make a motion to enter the exhibits into the record.

Commissioner Kilkenny: motioned to accept the comments into the record.

Commissioner Cooley: seconded.

All voted: Unanimously Approved

Clint: wanted to make sure it was clear that what he presented before the Planning Commission was only for the Heritage Trail. He referenced the alignment in the vicinity of the map, page 129.

Chair Ekstrom opened the Public Hearing for proponents' testimony.

Testifying Parties:

Stephanie Case, Irrigon, OR

Cheryl Tallman, 706 Mt Hood Ave, Boardman, OR, 97818

Jonathan Tallman, 706 Mt. Hood Ave, Boardman, OR 97818

Stephanie: spoke about how long the county had been working on the trail and loved everything about the project. She also said she represented Gilliam County and that they didn't have any trail connection. She also stated she was at the meeting as an Irrigon resident.

Cheryl Tallman: spoke on behalf of the Farmer's Cup. She specified that she wanted to make a point on agenda item 5.2, the county's recreation element update and adoption of the Heritage Trail Plan. She then spoke about how the plans were conceptual, and funding would move on to function as a real corridor. She asked that the county ensure the record clearly reflects that the trail would not affect private land.

Jonathan Tallman: read from his displayed bulletin board notes. He spoke about property rights and how they were important. He went on to speak about the funding and how the plan was conceptualized. He asked that the plan be presented as factual. His concern was that once the plan was funded, it would be changed.

Commissioner Peterson: asked who had received 2 million in funding.

Director Mabbott: No one had received the money; the county has been budgeting.

Commissioner Peterson: asked if there was a letter of commitment from Threemile or the Port of Morrow.

Director Mabbott: replied no, because the plan is informal and it's just an alignment. She also stated that there is no commitment until the property is developed.

Commissioner Kilkenny: said he assumed property owners were advised since it is a proposed plan.

Clint: responded that the referenced information was included in the packet. He also said Threemile and the Port of Morrow are committed to the concept, but have not committed any development.

Commissioner Peterson: once the plan has been finalized, will it come back to the Planning Commission.

Director Mabbott: responded only if it required a land use permit, and she would have to look at what the underlying zoning requirements were.

Commissioner Peterson: asked if the Bonneville Power Administration easement was part of the plan because she noticed it wasn't mentioned in the plan.

Commissioner Kilkenny: said he assumed that Threemile knew about the proposed line.

Clint: responded that he thought it was referenced in the packet.

Commissioner Peterson: wanted to clarify that the proposed plan did not go through Jonathan's property and that it was a quarter mile from Jonathan and Cheryl's property.

Clint: responded that there is nothing proposed on Jonathan and Cheryl's property.

Chair Ekstrom asked if anyone had neutral testimony.

Commissioner Ayala wanted to clarify that the Parks and Recreation Department holds its meetings every fourth Tuesday of each month.

Chair Ekstrom asked if the Commission had any questions for Staff.

Commissioner Cooley: asked how much the Boardman's Park and Recreation Department been involved with this plan.

Clint: replied that in the year and a half he had worked with the Planning Department, they had been very involved via email, phone, and in person.

Director Mabbott: explained that the Irrigon and Boardman Parks and Recreation have been in communication with planning staff.

Commissioner Cooley: asked about the part of the trail that went from the tugboat down to the marina.

Clint: responded and explained. He also said he and George Shimer spoke yesterday to make sure both of their maps matched.

Chair Ekstrom asked if there were any further questions. There were none.

Chair Ekstrom asked if anyone would like to continue the hearing or hold the record open.

Jonathan responded yes.

Chair Ekstrom then closed the Public Hearing.

She then asked if the Planning Commission had any questions for the Staff; there were none.

Recommended Action: Recommend the Board of Commissioners Adopt the 2026 Morrow County Columbia River Heritage Trail Concept Plan, AC-163-26.

Motion: Recommend the Board of Commissioners Adopt the 2026 Morrow County Columbia River Heritage Trail Concept Plan, AC-163-26.

Motion by: Commissioner Cooley

Seconded by: Commissioner Ayala

Vote: All voted

Action: Approved

Other Business:

Correspondence: November/December Planning Update

Public Comment:

Adjourned: Meeting adjourned at 8:27 PM

Next Meeting: Tuesday, February 24, 2026, at 6:00 p.m. The next meeting will be held in Heppner, OR, in the Bartholomew Building.

**Respectfully submitted,
Michaela Ramirez**

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**FINDINGS OF FACT
CONDITIONAL USE PERMIT
CUP-S-395-26**

REQUEST: Approval of a Conditional Use Permit to allow a home occupation (in-home salon) within the Exclusive Farm Use (EFU) Zone.

APPLICANT: Amy Haak
66782 Willow Creek Rd.
Heppner, OR 97836

OWNER: Jeanne Lewis
P.O. Box 1108
Heppner, OR 97836

PROPERTY DESCRIPTION: Tax lots 3101 of Assessor's Map 2S 27E

PROPERTY LOCATION: Approximately 4 miles east of Balm Fork Road and 4.25 miles east of the City of Heppner.

I. BACKGROUND INFORMATION:

This application requests approval of a Conditional Use Permit to allow a home occupation for an in-home salon business within an existing residential dwelling located on an approximately 162.63-acre parcel zoned Exclusive Farm Use (EFU).

The proposed salon will be conducted entirely within the existing dwelling and will be secondary and incidental to the primary residential and agricultural use of the property. No structural expansions or exterior alterations are proposed.

The applicant states the business will comply with all applicable home occupation standards, including:

- Operation within the dwelling
- Limitation on number of employees
- No outdoor storage
- Compliance with traffic, parking, signage, and noise standards
- Access via existing permitted driveway

**CUP-S-395-26
Findings of Fact**

S:\Planning\Conditional Use Permit\CUP South\2026\CUP-S-395-26; Haak HOP Salon

II. APPROVAL CRITERIA:

This application is subject to:

- MCZO Article 3, Section 3.010 (Exclusive Farm Use)
- MCZO Article 6, Sections 6.020, 6.025, 6.030, and 6.050

Criteria are listed below in **bold type**, followed by a response in standard type.

SECTION 3.010 EXCLUSIVE FARM USE, (EFU)

E. Conditional Uses. The following uses are permitted subject to county review, any specific standards for the use set forth in Section F, Article 6, the general standards for the zone, and any other applicable standards and review process in the ordinance.

4. Home occupations subject to F.21 and as provided in Article 6.

The proposed in-home salon qualifies as a home occupation and is an allowed conditional use in the EFU zone.

F. Use Standards

21. Home occupations and the parking of vehicles are allowed in the EFU zone, subject to OAR 660-033-0130(14) as follows:

a. Home occupations shall be operated substantially in the dwelling or other buildings normally associated with uses permitted in the zone in which the property is located.

The salon will operate entirely within the existing dwelling with no new structures proposed.

b. A home occupation shall be operated by a resident or employee of a resident of the property on which the business is located, and shall employ on the site no more than five full-time or part-time employees.

The applicant is a resident of the property and will operate the business in compliance with employee limitations. No additional employees are anticipated at this time or in the future.

c. The county may only approve a use provided in OAR 660-033-0120 as a home occupation if: (1) The scale and intensity of the use is no more intensive than the limitations and conditions otherwise specified for the use in OAR 660-033-0120, and (2) The use is accessory, incidental and subordinate to the primary residential use of a dwelling on the property.

The salon will occupy a limited portion of the dwelling and will remain secondary to the primary residential and agricultural use of the property.

Planning Commission may find that these criteria are met.

CUP-S-395-26

Findings of Fact

S:\Planning\Conditional Use Permit\CUP South\2026\CUP-S-395-26; Haak HOP Salon

SECTION 6.020. GENERAL CRITERIA

In judging whether a conditional use proposal shall be approved or denied, the Commission shall weigh the proposal's appropriateness and desirability, or the public convenience or necessity to be served against any adverse conditions that would result from authorizing the particular development at the location proposed and, to approve such use, shall find that the following criteria are either met or can be met by observance of conditions.

- A. The proposal will be consistent with the Comprehensive Plan and the objectives of the Zoning Ordinance and other applicable policies and regulations of the County.**
- B. If located within the Urban Growth Boundary of a city, that said city has had an opportunity to review and comment on the subject proposal.**
- C. The proposal will not exceed carrying capacities of natural resources or public facilities.**

The proposed home occupation is an allowed conditional use within the Exclusive Farm Use (EFU) Zone and complies with the applicable provisions of the Morrow County Zoning Ordinance. The salon will operate entirely within the existing dwelling and will remain secondary to the primary residential and agricultural use of the property. As proposed, the use is consistent with the Comprehensive Plan and the objectives of the Zoning Ordinance.

The subject property is not located within an Urban Growth Boundary; therefore, city review is not required.

The proposed use is small in scale and will generate minimal traffic and service demands beyond typical residential use. No expansion of public facilities or infrastructure is required. Where the use will take place inside an existing structure and no outside development is proposed, Planning Commission may find that the proposal will not exceed the carrying capacity of natural resources or public facilities.

Planning Commission may find that these criteria are met.

SECTION 6.025. RESOURCE ZONE STANDARDS FOR APPROVAL

- A. In the Exclusive Farm Use zone, a conditional use permit may be approved only when the County finds that the use will not:**

- 1. Force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; or**
- 2. Significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use.**

The property is currently used for agricultural and residential purposes (cattle grazing). The proposed in-home salon is a low-intensity use conducted within the residence and will not interfere with or alter surrounding farm practices.

Planning Commission may find that these criteria are met.

SECTION 6.030. GENERAL CONDITIONS

In addition to the standards and conditions set forth in a specific zone, this article, and other applicable regulations; in permitting a new conditional use or an alteration to an existing conditional use, the Commission may impose conditions which it finds necessary to avoid a detrimental impact and to otherwise protect the best interests of the surrounding area or the County as a whole. These conditions may include the following:

- A. Limiting the manner in which the use is conducted including restricting the time an activity may take place and restraints to minimize such environmental effects as noise, vibration, air pollution, glare and odor.**

The proposed salon will operate entirely indoors within the existing dwelling during normal business hours. All activities associated with the home occupation, including client services and any related equipment use, will occur within the enclosed structure. The use is not expected to generate noise, vibration, glare, odor, or air emissions beyond those normally associated with residential use. No outdoor commercial activity is proposed, and no amplified sound or exterior lighting beyond typical residential levels will be utilized.

Planning Commission may find that this criterion is met.

- B. Establishing a special yard or other open space or lot area or dimension.**

No modifications to yard or lot area are proposed.

Planning Commission may find that this criterion is met.

- C. Limiting the height, size or location of a building or other structure.**

No additional structures or expansions are proposed.

Planning Commission may find that this criterion is met.

- D. Designating the size, number, location and nature of vehicle access points.**

1. Where access to a county road is needed, a permit from Morrow County Public Works department is required. Where access to a state highway is needed, a permit from ODOT is required.

2. In addition to the other standards and conditions set forth in this section, a Traffic Impact Analysis (TIA) will be required for all projects generating more than 400 passenger car equivalent trips per day. A TIA will include: trips generated by the project, trip distribution for the project, identification of intersections for which the project adds 30 or more peak hour passenger car equivalent trips, and level of service assessment, impacts of the project, and mitigation of the impacts. If the corridor is a State Highway, use ODOT standards.(MC-C-8-98).

Access to the property is from Willow Creek Road using an existing driveway. No new access or changes to the current driveway are proposed. Morrow County

Public Works has been provided notice of this application for review and comment.

It is recommended as a Condition of Approval that the applicant provide evidence that the existing access is properly permitted and shall comply with any requirements from Morrow County Public Works.

The proposed salon is a small, appointment-based home occupation. Client traffic is expected to be limited and spread throughout the day. No deliveries beyond normal residential deliveries (such as mail or small package services) are expected.

Vehicles related to the home occupation will be standard passenger vehicles. No large commercial trucks or vehicles exceeding what the current agricultural access can safely accommodate are proposed.

The proposal will not generate more than 400 passenger car equivalent trips per day; therefore, a Traffic Impact Analysis is not required. Based on the expected level of activity, the existing access is adequate to serve the proposed use.

Planning Commission may find that these criteria are met.

E. Increasing the amount of street dedication, roadway width or improvements within the street right-of-way.

1. It is the responsibility of the land owner to provide appropriate access for emergency vehicles at the time of development. (MC-C-8-98).

No changes to street dedication, roadway width or improvements within the street right-of-way are proposed.

The Heppner Rural Fire Protection District has been provided with a copy of this application for review and comment. It is recommended and listed as a Condition of Approval that the applicant comply with any recommendations from Heppner RFPD regarding emergency vehicle access.

Planning Commission may find that these criteria are met.

F. Designating the size, location, screening, drainage, surfacing or other improvement of a parking area or loading area.

The site contains approved access to approximately one and one-half acres of gravel parking on the south side of Willow Creek Road. Existing improvements to the parking and loading area provide appropriate drainage and surface to support the proposed use.

G. Limiting the number, size, location, height, and lighting of signs.

Any signage shall comply with MCZO Section 4.070. This is recommended and listed as a Condition of Approval.

Planning Commission may find that this criterion is met.

- H. **Limiting the location and intensity of outdoor lighting and requiring its shielding.**
- I. **Requiring diking, screening, landscaping or another facility to protect adjacent or nearby property and designating standards for its installation and maintenance.**
- J. **Designating the size, height, location and materials for a fence.**
- K. **Protecting and preserving existing trees, vegetation, water resources, wildlife habitat or other significant natural resources.**

The proposed home occupation will be conducted entirely within the existing dwelling and will not involve outdoor activities, lighting, or structural changes. No additional screening, fencing, landscaping, or other protective measures are required. The use will not impact existing trees, vegetation, water resources, wildlife habitat, or other significant natural resources.

Planning Commission may find that these criteria are met.

- L. **Other conditions necessary to permit the development of the County in conformity with the intent and purpose of this Ordinance and the policies of the Comprehensive Plan.**

No additional conditions have been identified or appear to be warranted to ensure that the development conforms with the intent and purpose of the Ordinance and the policies of the Comprehensive Plan.

Planning Commission may find that this criterion is met.

- III. **AGENCIES NOTIFIED:** John Doherty, Heppner City Manager; Mike Gorman, Morrow County Tax Assessor; Eric Imes, Morrow County Public Works; Glen McEntire and Toni Connell Morrow County Building Official; Steve Rhea, Heppner Rural Fire Protection District.

- IV. **PROPERTY OWNERS NOTIFIED:** February 4, 2026

- V. **14-DAY COMMENT PERIOD ENDED:** February 18, 2026

- VI. **COMMENTS RECEIVED:**

- VII. **DECISION OF THE MORROW COUNTY PLANNING COMMISSION:** The Morrow County Planning Commission has **approved** Conditional Use Permit CUP-S-395-26 subject to the following **CONDITIONS OF APPROVAL:**

1. The applicant shall provide evidence that the access to be used is properly permitted and shall comply with any road improvement requirements from Morrow County Public Works.
2. The applicant shall comply with any recommendations from the Heppner Rural Fire Protection District regarding emergency vehicle access.

CUP-S-395-26
Findings of Fact

S:\Planning\Conditional Use Permit\CUP South\2026\CUP-S-395-26; Haak HOP Salon

3. Any signage associated with the home occupation shall comply with MCZO Section 4.070.

ATTACHMENTS:
Vicinity Map
Site Plan

Stacie Ekstrom, Chair

Date

DRAFT



P.O. Box 40 • 215 NE Main Ave. Irrigon, Oregon 97844
(541) 922-4624 • www.morrow.or.us/planning

PUBLIC NOTICE

February 4, 2026

Dear Adjoining Landowners, Public Agencies, and Interested Parties:

Under provisions of the Morrow County Zoning Ordinance, you are an “adjoining landowner,” public agency, or interested party who may have an interest in the land use hearings listed on the attached Public Notice.

The Morrow County Planning Commission will hold a public hearing on Tuesday, February 24, 2026, at 6:00 p.m. at the Bartholomew Building located at 110 N Court St, Heppner, OR 97836. For information on remote meeting participation via Zoom please visit the Planning Department website <https://www.co.morrow.or.us/planning>

A copy of the Preliminary Findings of Fact for each application will be available on February 17th. The Planning Commission meeting materials will be available on our website at <https://www.co.morrow.or.us>.

If you would like a paper or email copy of the application materials, or if you have information or concerns that you would like to share, please contact our office. You are invited to participate in the Planning Commission hearing or submit written comments prior to or during the hearing.

If you wish to be advised of the results of the hearings, please call the office at (541) 922-4624 or email Michaela Ramirez at mramirez@morrowcountyor.gov.

Cordially,

A handwritten signature in black ink that reads "Michaela Ramirez".

Michaela Ramirez,
Administrative Assistant

Enclosures: Public Notice
 Vicinity Map

**PUBLIC NOTICE
MORROW COUNTY LAND USE HEARING**

THE MORROW COUNTY PLANNING COMMISSION will hold the following hearings of public interest on Tuesday, February 24, 2026, at 6:00 p.m. at the Bartholomew Building located at 110 N Court St, Heppner, OR 97836. For information on meeting participation via Zoom, please visit the Morrow County website <https://www.morrowcountyor.gov/meetings>, click on the meeting date, and the Zoom link will be located within the agenda.

Conditional Use Permit CUP-S-395-26: Amy Haak, Applicant; Jeanne Lewis, Property Owner.

The applicant is requesting approval of a Home Occupation Conditional Use Permit to allow operation of an in-home salon business. The subject property is identified as Tax Lot 3101 of Assessor's Map 2S27E. The parcel is zoned Exclusive Farm Use (EFU) and is located outside the City of Heppner's Urban Growth Boundary (UGB). Approval criteria include Morrow County Zoning Ordinance (MCZO) Article 3, Section 3.010 (Exclusive Farm Use), and Article 6, Section 6.050.G (Standards Governing Conditional Uses—Home Occupations).

Land Use Decision LUD-N-089-25: Leif Van Acker, Kimley-Horn, Applicant, Property Owner Amazon Data Services, Inc. The request is to site a data center campus on property zoned Airport Light Industrial (ALI). The property is described as tax lot 136 of Assessor's Map 4N 24E, located approximately 3.7 miles west of Boardman's Urban Growth Boundary, southeast of the Boardman Airport, and southwest of the Tower Road/I-84 interchange. Criteria for approval include Morrow County Zoning Ordinance (MCZO) Article 3 Section 3.076 Airport Light Industrial, ALI, Section 3.092 Airport Safety and Compatibility Overlay Zone, ASC, and Article 4 Supplementary Provisions.

Land Use Decision LUD-N-088-25: Tim Seck, Well Springs LLC, a subsidiary of MN8 Energy Development Company, Property Owner: April Miller LePage and Nolan Miller. The request is to permit a standalone 230kV substation as a "utility facility necessary for public service" within a 13-acre building envelope on an approximately 633-acre parcel. The Miller substation is proposed on property described as tax lot 3000 of Assessor's Map 2N 23 located approximately 3 miles east of State Highway 74 on the north side of Immigrant Lane, south of Interstate 84, approximately 14 miles. Criteria for approval include MCZO Article 3 Section 3.010(D) and 3.010(F)(10).

Copies of the staff reports, and all relevant documents will be available on or before February 13, 2026. For more information, please contact Kaitlin Kennedy at kkennedy@morrowcountyor.gov, Clint Shoemaker or Tamra Mabbott at tmabbott@morrowcountyor.gov, or by phone at (541) 922-4624.

DATED this 29th day of January 2026

MORROW COUNTY PLANNING DEPARTMENT

Publish Date: EO – February 4th, 2026; Gazette Times – February 4th, 2026



LAND USE APPLICATION
CONDITIONAL USE REQUEST

RECEIVED 24
JAN 28 2026

BY: MR

Internal Use
File Number Cwp-5-395-26
Date Received 1-23-2026 Deemed Complete 1-27-2026 Fee \$1000.00
PAID
CK1811

Applicable Zoning Ordinance Criteria _____

Applicant:

Name(s) Amy Haak

Mailing Address PO Box 411 Heppner, OR 97836

Phone 503-307-0266 E-mail danzinlew@hotmail.com

Legal Property Owner: (if different from applicant)

Name(s) Jeanne Lewis

Mailing Address PO Box 1108 Heppner, OR 97836

Phone 503-860-2478 E-mail Jeanne.4833@msn.com

Proposed Conditional Use:

Description of Request and the Proposed Use home salon located in existing home. Salon will be located in a spare bedroom accessible from seperate entrance off of main porch.

Property Description:

Township 2S Range 21E Section - Tax Lot 3101 Zoning Designation EFU

If Zoning Designation is EFU or FU, soil information is required with your statement.

Applicable Article, Section(s), and Subsection(s) MU20 article 6. section 6.050(G)

Home occupations

Physical Address 60782 Willow Creek Rd, Heppner, OR 97836

General Location Located on Willow Creek, approx. 4 miles east of Balmfork Rd.

Located within a UGB? NO If yes, which city? _____

Legal Access (e.g. road name) Willow Creek Rd.

Improvement Type and Condition of Road Willow Creek, gravel driveway

Fire Protection District or Method Heppner fire

Solid Waste Disposal Method Miller & Sons

Existing Use of the Property Residential

Please provide a statement with the following information:

1. A plot plan of the property with existing and proposed structures and roads and accesses
2. Existing and proposed water supply
3. Existing and proposed sewage disposal method
4. Utilities and other public services provided
5. Signs and/or lighting required

6. Parking/loading and fencing required
7. Drainage, is the land or any portion of it subject to flooding?
8. What, if any, change will there be in traffic use of the existing access?
9. Will the proposed use generate more than 400 automobile trips per day?
10. Will any new access be required? If yes, describe.
11. A description of how the proposal will be compatible with surrounding land uses.
12. Describe how the proposal will comply with the requirements of Morrow County Zoning Ordinance Article 6.

The applicant is responsible for providing all of the information to show compliance with the standards for approval. If you are unsure of the standards required by the code, the Planning Department can provide them. The plot plan and narrative should include enough detail to address specific issues about your particular application.

Signatures: I (we), the undersigned, acknowledge that I am familiar with the standards and limitations set forth by the Morrow County Zoning Ordinance and that additional information and materials may be required, as provided by the Zoning Ordinance and Comprehensive Plan. I propose to meet all standards set forth by the County's Zoning Ordinance and any applicable State and Federal regulations. I (we) certify that the statements and information provided with this application are true and correct to the best of my knowledge.

Signed: 
Applicant
Printed: amy Hack
Applicant
Date: 1/23/26


Legal Property Owner
Jeannie Lewis
Legal Property Owner
1/23/26

If this application is not signed by the property owner, a letter authorizing signature by the applicant must be attached.

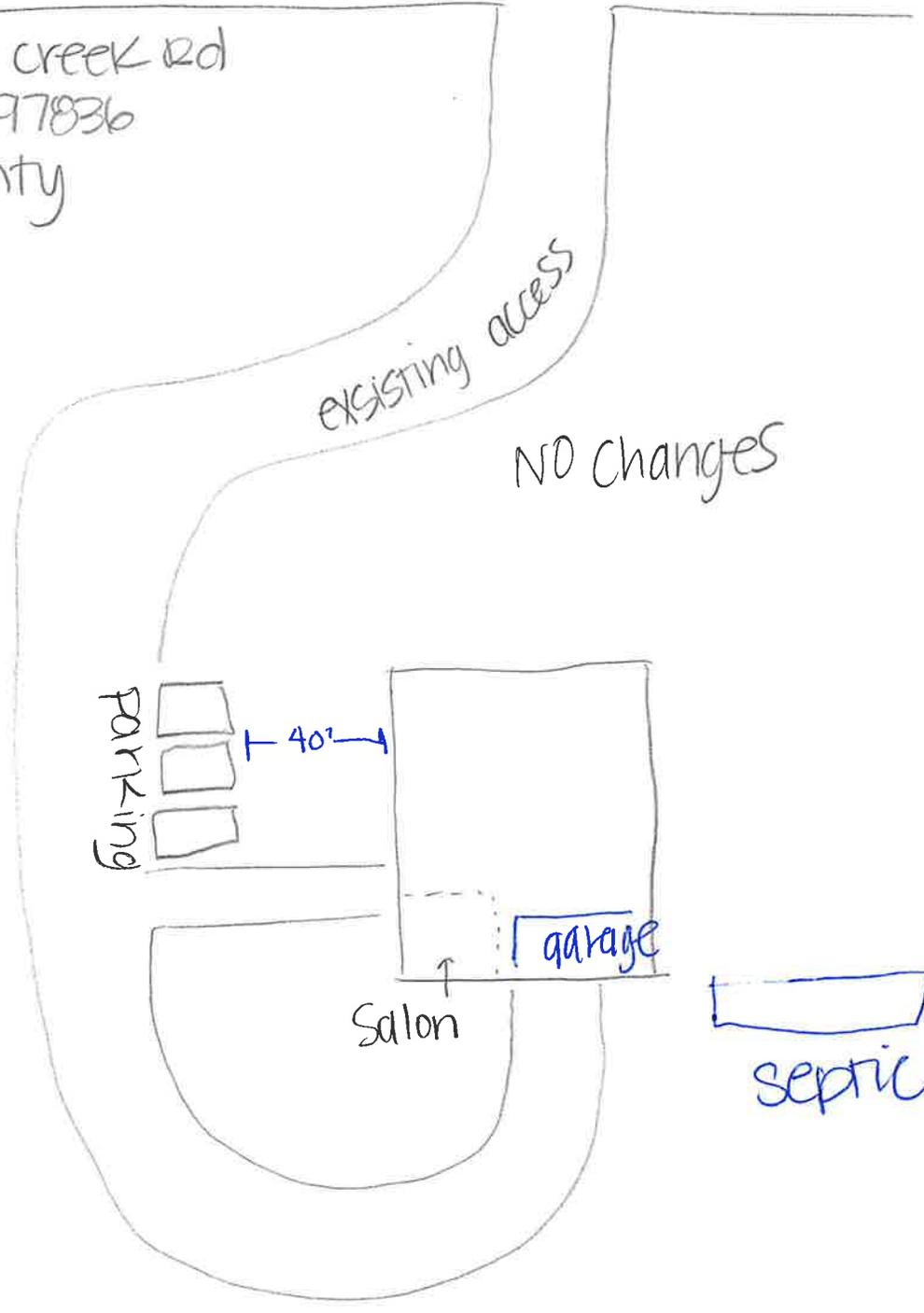
Morrow County Planning Department
215 NE Main Ave, PO Box 40, Irrigon, OR 97844
(541) 922-4624 FAX: (541) 922-3472

□ COMM
WELL

1.

WILLOW CREEK Rd

66782 WILLOW CREEK Rd
heppner OR 97836
Morrow county



2. No changes to water supply.
3. No changes to sewer disposal.
4. No changes to any utilities.
5. A small sign will be posted at the end of the driveway.
6. No changes to parking, loading or fencing. *gravel area*
7. No changes to drainage or land. No flood issues.
8. No changes to local traffic.
9. 1 to 5 vehicles per day with minimum traffic.
10. No changes to access.
11. No effect on current land use.
12. Property, land or access will not be affected. 1 to 5 vehicles per day will use existing driveway and parking.

G. 1-11

1. Salon will be secondary to home being my primary residence.
2. No alterations will detract from the outward appearance.
3. Small signage will be posted for direction use to clients.
4. No materials or tools will be used that would impact neighbors in any way.
5. No new deliveries will be required, only existing UPS and FedEx. None causing any disturbance.
6. Minimal retail sales of basic hair salon retail products to existing clients only. No storefront.
7. Owner and operator only. No employees.
8. It will comply.
9. No planned employees.
10. No effect on current AG use.
11. N/A

**MORROW COUNTY ASSESSOR
REAL PROPERTY ACCOUNT NAMES**

Account # 1790
Map 2S270000 03101
Owner LEWIS, JEANNE M
13060 SE BUSH PL
PORTLAND OR 97236-3326

Name Type	Name	Ownership Type	Own Pct
OWNER	LEWIS, JEANNE M	OWNER	

ASSESSOR'S MAP/TAX	OWNER 1	OWNER 2	MAIL ADDRESS	CITY	STATE	ZIPCODE
02S27E000001900	FLVNN, JOHN F TRUSTEE		55549 HWY 207 SPRAY	HEPPNER	OR	97836
02S27E000002604	FLVNN, JOHN F, TRUSTEE 50% ETAL		55549 HWY 207 SPRAY	HEPPNER	OR	97836
02S27E000003001	CITY OF HEPPNER		PO BOX 756	HEPPNER	OR	97836
02S27E000003100	BONAVIA TIMBER COMPANY, LLC		200 W DOUGLAS AVE STE 1010	WICHITA	KS	67202
02S27E000003101	LEWIS, JEANNE M		13060 SE BUSH PL	PORTLAND	OR	97236
03S27E000000600	BONAVIA TIMBER COMPANY, LLC		200 W DOUGLAS AVE STE 1010	WICHITA	KS	67202
03S27E000000800	RUNNING W RANCH, LLC		PO BOX 787	HEPPNER	OR	97836

CUP-S-395-26 | Amy Haak/Jeanne Lewis | EFU 750ft Notice Area.
 02S27E T13101
 S:\Planning\Conditional Use Permits\South\2026

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P.O. Box 40 • 215 NE Main Ave. Irrigon. Oregon 97844
(541) 922-4624 • www.morrow.or.us/planning

February 17, 2026

TO: Planning Commission
FROM: Tamra Mabbott, Planning Director *T.J.M.*
RE: LUD-N-088-25 Well Springs Solar LLC "Miller Substation"

The application is to permit a power substation as a "utility facility necessary for public service." The application was deemed complete on December 10, 2025. On December 11, 2025, staff began the Type II Administrative Review Process (MCZO Article 9) by mailing and emailing the Notice of Application to adjacent landowners and agencies. That letter allowed a 14-day comment period, during which a letter was submitted on behalf of landowners in opposition to the application.

As provided in MCZO Article 9, 9.046(H), the Planning Director referred this application to the Planning Commission for consideration and decision. Specifically, the referral to Planning Commission is founded on MCZO 9.046(H)(5), specifically, where "*the application involves the interpretation of ambiguous terms of the Morrow County development Code, the Morrow County Comprehensive Plan, state law, conflicting regulations, or otherwise requires the exercise of legal or policy judgment in evaluating the proposal.*"

Accordingly, the draft Findings of Fact are less conclusive than would otherwise be written, in order to allow the Planning Commission an opportunity to consider the record and the oral comments presented during the hearing on February 24th.

On the last page of the draft Findings, there are two options: one to approve and another to deny. Both decisions warrant additional Findings. Staff requests that Planning Commission action include authorization for staff to modify the Findings to support the final decision. The Findings would be written with the support and cooperation of the prevailing party.

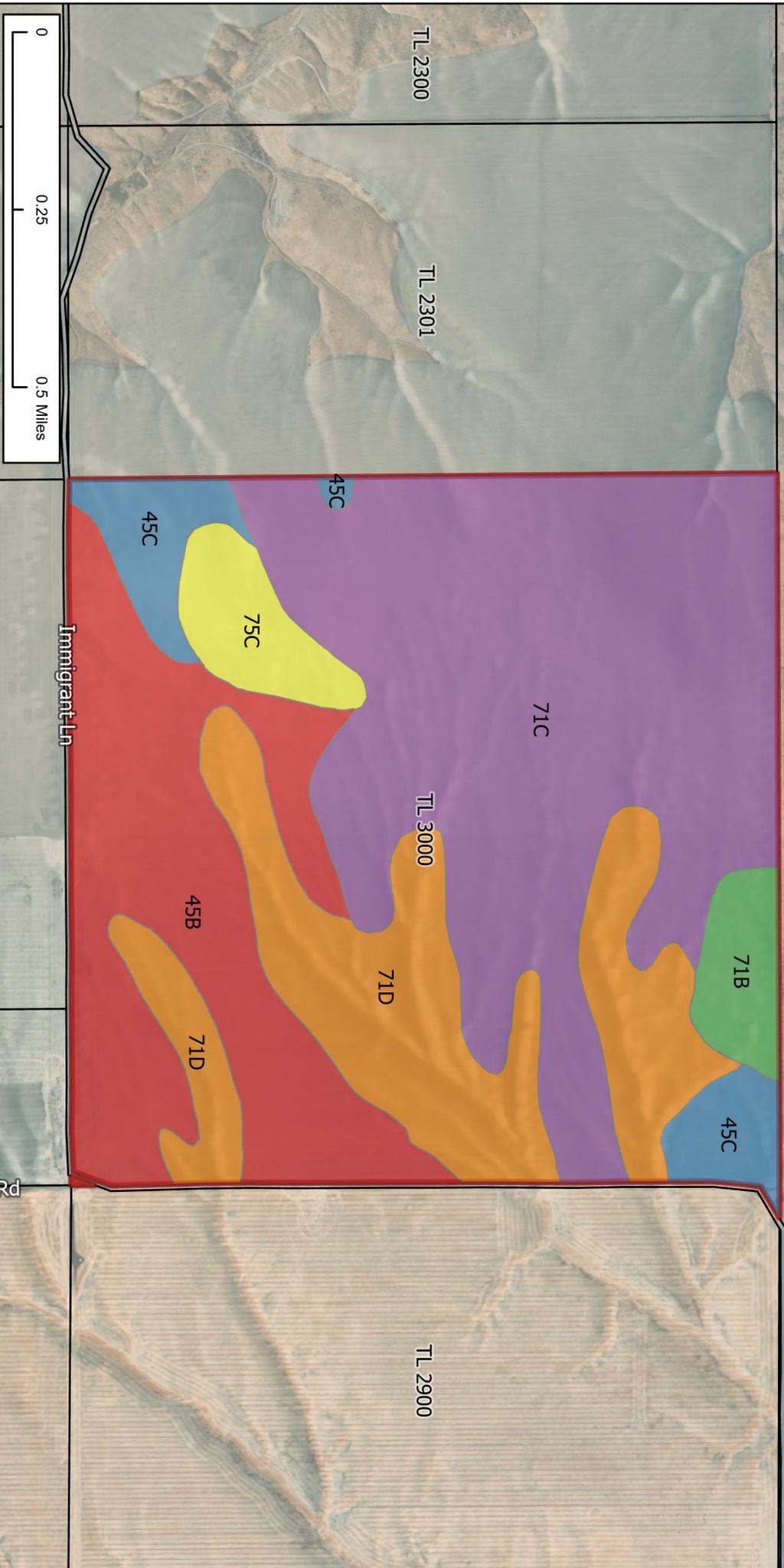
ASSESSOR'S MAP/TAX	OWNER 1	OWNER 2	MAIL ADDRESS	CITY	STATE	ZIPCODE
02N24E000001400	IMMIGRANT LANE, LLC		64982 BAKER LN	IONE	OR	97843
01N23E000000101	MILLER, JUSTIN C & MILLER, NICOLE MARIE		65096 BAKER LN	IONE	OR	97843
02N24E000001200	MORTER, RALPH L		66221 DIRT RD	IONE	OR	97843
02N23E0000002300	KREBS, CAMERON L		68171 KUNZE LN	BOARDMAN	OR	97818
02N23E0000003700	KREBS, CAMERON L		68171 KUNZE LN	BOARDMAN	OR	97818
02N23E0000000102	THREEMILE CANYON FARMS, LLC		75906 MARTY MYERS RD	BOARDMAN	OR	97818
02N24E0000000107	THREEMILE CANYON FARMS, LLC		75906 MARTY MYERS RD	BOARDMAN	OR	97818
01N23E0000000100	MILLER, APRIL, 1/2 & MILLER, LORI, 1/2		777 TAYLOR ST 1A	FORT WORTH	TX	76102
02N24E000001500	MILLER, APRIL, 1/2 & MILLER, LORI, 1/2		777 TAYLOR ST 1A	FORT WORTH	TX	76102
02N23E0000002301	MILLER, APRIL, 1/2 & MILLER, LORI, 1/2		777 TAYLOR ST 1A	FORT WORTH	TX	76102
02N23E0000002900	MILLER, APRIL, 1/2 & MILLER, LORI, 1/2		777 TAYLOR ST 1A	FORT WORTH	TX	76102
02N23E0000003000	MILLER, APRIL, 1/2 & MILLER, LORI, 1/2		777 TAYLOR ST 1A	FORT WORTH	TX	76102
02N23E0000003900	MILLER, APRIL, 1/2 & MILLER, LORI, 1/2		777 TAYLOR ST 1A	FORT WORTH	TX	76102
02N23E0000004000	MILLER, APRIL, 1/2 & MILLER, LORI, 1/2		777 TAYLOR ST 1A	FORT WORTH	TX	76102
02N23E0000004100	MILLER, APRIL, 1/2 & MILLER, LORI, 1/2		777 TAYLOR ST 1A	FORT WORTH	TX	76102
02N23E0000004200	MILLER, APRIL, 1/2 & MILLER, LORI, 1/2		777 TAYLOR ST 1A	FORT WORTH	TX	76102
02N23E0000004300	MILLER, APRIL, 1/2 & MILLER, LORI, 1/2		777 TAYLOR ST 1A	FORT WORTH	TX	76102

LUD-N-088-25 | Well Springs Solar LLC | EFU 1-Mile Notice Area.
 02N23E TL3000
 S:\Planning\LUD\North2025

USDA Soils Map

34

Symbol	Type	Irrigated	Non-Irrigated
45B	Ritzville silt loam, 2 to 7 percent slopes	2	3
45C	Ritzville silt loam, 7 to 12 percent slopes	3	3
71B	Warden silt loam, 2 to 5 percent slopes	2	4
71C	Warden silt loam, 5 to 12 percent slopes	3	4
71D	Warden silt loam, 12 to 20 percent slopes	4	4
75C	Willis silt loam, 5 to 12 percent slopes	3	3



Application Number:
LUD-N-088-25
 Assessor's Map and Tax Lot:
02N23E TL3000
 Property Owner:
Wells Spring Solar, LLC

Subject Property Size:
632.84ac Total
 Subject Property Zone:
EFU
 Applicable MCZO Section:
Section 3.010

Morrow County Tax Lots
 City Limits
 Urban Growth Boundary
 Subject Parcel

Coordinate System:
 NAD 1983 HARN StatePlane Oregon North, FIPS 3601
 Projection: Lambert Conformal Conic
 Datum: North American 1983 HARN
 Cartography By: Stephen Wiresics
 Friday, December 5, 2025
 Morrow County Planning Department

**PRELIMINARY DRAFT FINDINGS OF FACT
LAND USE DECISION APPLICATION
LUD-N-088-25**

REQUEST: The applicant's request is to site a 230-kilovolt stand-alone substation as a “utility facility necessary for public service” on land zoned Exclusive Farm Use (EFU).

APPLICANT: Tim Seck for Wells Springs LLC, a subsidiary of MN8 Energy Development Company

PROPERTY OWNER: April Miller LePage and Nolan Miller

PROPERTY DESCRIPTION: Tax lot 3000 of Assessor’s Map 2N 23, a 632-acre parcel.

PROPERTY LOCATION: The parcel is located east of the unincorporated community of Cecil, approximately 3 miles east of State Highway 74 on the north side of Immigrant Lane, south of Interstate 84, approximately 14 miles.

I. BACKGROUND INFORMATION:

The applicant requests permit approval to construct a standalone substation on a 13-acre portion of a 633-acre parcel of land in the Exclusive Farm Use Zone. After the application was deemed complete on December 10, 2025, Planning Department mailed a notice to surrounding property owners and agencies on December 11, 2025, as the first step in the Administrative Review process outlined in MCZO Article 9. During the 14-day comment period, the law firm Minnick Hayner submitted a letter on behalf of multiple landowners, identifying two criteria that the application did not meet. See attached letter dated December 22, 2025.

The Planning Director referred the application to the Planning Commission for a decision to guarantee the review remained on track for a timely local decision. The decision to refer to Planning Commission was also based on MCZO 9.046(H) where “the application involves the interpretation of ambiguous terms of the Morrow County Development Code, the Morrow County Comprehensive Plan, state law, conflicting regulations, or otherwise requires the exercise of legal or policy judgment in evaluating the proposal.” In this case, the application includes interpretation of state law and exercise of legal judgment.”

On January 20, 2026, Olivier Jamin of the Davis Wright Tremaine LLP law firm submitted a letter addressing the objections in the letter from James Hayner. See attached letter dated January 20, 2026.

At the time this land use application was submitted, neither a transmission line nor a development project was identified that is associated with the substation. Rather, the application indicated that the purpose of the substation was to “support integration of future renewable energy development in northwest Morrow County into the regional grid. The location is proximate to existing and future infrastructure as discussed herein.” Page 1, Section 1.0 Project Overview. See “Administrative Review Application Written Statement for a Substation” attached.

LUD-N-088-25

Preliminary DRAFT Findings of Fact

Since the time the application was filed with Morrow County, the developer, MN8, applied to the State of Oregon Energy Facility Siting Council (EFSC) for a 750-megawatt solar project. As part of the EFSC review and permitting process, the Notice of Intent (NOI) was sent to Morrow County along with other state and local agencies. The county role at the NOI phase of the EFSC permitting is to identify local, applicable criteria. Those criteria include land use and other policies, programs and applicable regulations in the county, such as the Solid Waste Ordinance, Access Permits with Public Works, Weed Abatement, etc. Morrow County received the NOI letter from EFSC on February 6, 2026, with a deadline of March 26, 2026, to submit comments. That county review and letter to EFSC will be forthcoming.

Although the subject application explicitly excludes an associated transmission line, an application for a transmission line is expected as part of the MN8 Well Springs Solar project. The three components of the large solar project have been filed separately, including the subject substation, the solar project noted above and a forthcoming transmission line application.

Given the legal arguments put forward, both in favor of the permit and opposed, the Findings below are general and do not attempt to reconcile the legal arguments noted in the written comments or expected at the February 24th hearing where lawyers from both sides will likely attend and provide further information for Planning Commission consideration.

Staff recommend that the Planning Commission consider these Findings, together with additional testimony and legal arguments, and then direct staff to write Final Findings to support a final decision. Staff would then write the Findings in consultation with the lawyer representing the prevailing party.

II. **APPROVAL CRITERIA:**

Morrow County Zoning Ordinance Article 3 Section 3.010, Exclusive Farm Use, EFU Zone. Oregon Administrative Rule (OAR) 660-033-0130 (16) and Oregon Revised Statutes (ORS) 215.275(4) are applicable but included in MCZO 3.010. Criteria are listed below in **bold type**, followed by a response in standard type.

SECTION 3.010, EXCLUSIVE FARM USE, EFU ZONE.

D. Uses Subject to Administrative Review

9. Utility facilities necessary for public service, including associated transmission lines as defined in Article 1 and wetland waste treatment systems, but not including commercial facilities for the purpose of generating electrical power for public use by sale or transmission towers over 200 feet in height as provided in Subsection F.10

The application declares that the proposed substation meets the definition of a “utility facility necessary for public service.”

F. Use Standards:

10. A utility facility that is necessary for public service.

a. A utility facility is necessary for public service if the facility must be sited in the exclusive farm use zone in order to provide the service.

(1) To demonstrate that a utility facility is necessary, an applicant must show that reasonable alternatives have been considered and that the facility must be sited in an exclusive farm use zone due to one or more of the following factors:

(a) Technical and engineering feasibility;

A feasibility study was not submitted with the application; however, the application notes that the substation location was determined based on technical and engineering needs, such as generally flat ground surface and slopes, stable soils, and access to existing right of way. Placing the substation in a central area relative to future renewable energy development and infrastructure minimizes the length of future collector cable systems and generation-tie transmission lines, reducing energy losses and material costs. See page 3 of the application materials. Where the proposed substation is a stand alone development, there is no evidence that the substation is necessary and no evidence that the substation must be located in an EFU Zone. To remedy this, and to make a finding in support of this standard, a condition of approval is recommended that would require the applicant to submit a technical and engineering feasibility study demonstrating the need for the location on land zoned EFU and, obtain land use permits for the associated transmission lines and the solar project.

(b) The proposed facility is locationally-dependent. A utility facility is locationally dependent if it must cross land in one or more areas zoned for exclusive farm use in order to achieve a reasonably direct route or to meet unique geographical needs that cannot be satisfied on other lands;

According to the application, the proposed substation location is intended “to meet unique geographical needs that cannot be satisfied on other lands because the substation is strategically proximate to future renewable energy development and infrastructure.” The application goes on to say that “[s]ubstantial investment in future energy infrastructure is occurring in and around northwest Morrow County, including the recently approved Boardman to Hemingway Transmission line, PacifiCorp Apex and Litespeed Substations and their connecting transmission lines, and a Umatilla Electric Cooperative substation.” Where the proposed substation is a stand-alone development, there is no evidence that the substation is necessary and no evidence that the substation must be located in an EFU Zone. To remedy this, and to make a finding in support of this standard, a condition of approval is recommended that would require the applicant to submit a technical and engineering feasibility study demonstrating the need for the location on land zoned EFU and, obtain land use permits for the associated transmission lines and the solar project.

LUD-N-088-25

Preliminary DRAFT Findings of Fact

(c) Lack of available urban and nonresource lands;

The applicant states “there is a lack of non-EFU or urban lands in northwest Morrow County where future renewable energy and transmission development is anticipated. There are no other parcels available to the Applicant that are not EFU-zoned land.

(d) Availability of existing rights of way;

The applicant states the proposed “substation was sited in this specific location due to the availability of existing public road rights-of-way.” The location is parallel to Immigrant Road.

(e) Public health and safety; and

The applicant states that public health and safety are not contributing factors in selecting the proposed location.

(f) Other requirements of state and federal agencies.

Other requirements of state and federal agencies were not used in the determination of the siting of this substation.

(2) Costs associated with any of the factors listed in Subsection (1) may be considered, but cost alone may not be the only consideration in determining that a utility facility is necessary for public service. Land costs shall not be included when considering alternative locations for substantially similar utility facilities and the siting of utility facilities that are not substantially similar.

The applicant states that “cost is not the only factor in determining whether the substation is necessary for public service” and that the substation qualifies as a “utility facility that is necessary for public service.”

(3) The owner of a utility facility approved under Subsection (a) shall be responsible for restoring, as nearly as possible, to its former condition any agricultural land and associated improvements that are damaged or otherwise disturbed by the siting, maintenance, repair or reconstruction of the facility. Nothing in this Subsection shall prevent the owner of the utility facility from requiring a bond or other security from a contractor or otherwise imposing on a contractor the responsibility for restoration.

The application acknowledges that they will be responsible for restoring land. This is included as a Condition of Approval below.

(4) The county shall impose clear and objective conditions on an application for utility facility siting to mitigate and minimize the impacts of the proposed facility, if any, on surrounding lands devoted to farm use in order to prevent a significant change in accepted farm practices or a significant increase in the cost of farm practices on surrounding farmlands.

Planning Commission may consider clear and objective standards be added to the draft list below.

LUD-N-088-25

Preliminary DRAFT Findings of Fact

(5) Utility facilities necessary for public service may include on-site and off-site facilities for temporary workforce housing for workers constructing a utility facility. Such facilities must be removed or converted to an allowed use under the EFU Zone or other statute or rule when project construction is complete. Off-site facilities allowed under this Subsection are subject to Article 6. Temporary workforce housing facilities not included in the initial approval may be considered through a minor amendment request. A minor amendment request shall have no effect on the original approval. The applicant is not proposing any on-site or off-site workforce housing. This criterion is met.

(6) In addition to the provisions of Subsection F.10.a(1) through (4), the establishment or extension of a sewer system as defined by OAR 660-011-0060(1)(f) shall be subject to the provisions of 660-011-0060.

The applicant is not proposing the establishment or extension of a sewer system to this substation. This criterion is not applicable.

(7) The provisions of Subsection a do not apply to interstate natural gas pipelines and associated facilities authorized by and subject to regulation by the Federal Energy Regulatory Commission.

The proposed substation is neither a gas pipeline nor an associated facility. This criterion is not applicable.

b. An associated transmission line is necessary for public service upon demonstration that the associated transmission line meets either the following requirements of Subsection (1) or Subsection (2) of this Subsection.

(1) An applicant demonstrates that the entire route of the associated transmission line meets at least one of the following requirements:

(a) The associated transmission line is not located on high-value farmland, as defined in ORS 195.300, or on arable land;

(b) The associated transmission line is co-located with an existing transmission line;

(c) The associated transmission line parallels an existing transmission line corridor with the minimum separation necessary for safety; or

(d) The associated transmission line is located within an existing right of way for a linear facility, such as a transmission line, road or railroad that is located above the surface of the ground.

(2) After an evaluation of reasonable alternatives, an applicant demonstrates that the entire route of the associated transmission line meets, subject to Subsections F.10.b(3) and (4), two or more of the following criteria:

(a) Technical and engineering feasibility;

(b) The associated transmission line is locationally-dependent because the associated transmission line must cross high-value farmland, as defined in ORS 195.300, or arable land to achieve a

- reasonably direct route or to meet unique geographical needs that cannot be satisfied on other lands;
- (c) Lack of an available existing right of way for a linear facility, such as a transmission line, road or railroad, that is located above the surface of the ground;
 - (d) Public health and safety; or
 - (e) Other requirements of state or federal agencies.
- (3) As pertains to Subsection (2), the applicant shall demonstrate how the applicant will mitigate and minimize the impacts, if any, of the associated transmission line on surrounding lands devoted to farm use in order to prevent a significant change in accepted farm practices or a significant increase in the cost of farm practices on the surrounding farmland.
- (4) The county may consider costs associated with any of the factors listed in Subsection (2), but consideration of cost may not be the only consideration in determining whether the associated transmission line is necessary for public service.
- The application does not include a transmission line. The proposed substation does not qualify as an “associated transmission line.” This criterion is not applicable.

O. Yards. In an EFU Zone, the minimum yard setback requirements shall be as follows:

1. The front yard setback from the property line shall be 20 feet for property fronting on a local minor collector or marginal access street ROW, 30 feet from a property line fronting on a major collector ROW, and 80 feet from an arterial ROW unless other provisions for combining accesses are provided and approved by the County.
 2. Each side yard shall be a minimum of 20 feet except that on corner lots or parcels the side yard on the street side shall be a minimum of 30 feet.
 3. Rear yards shall be a minimum of 25 feet.
 4. **Stream Setback.** All sewage disposal installations such as outhouses, septic tank and drainfield systems shall be set back from the high-water line or mark along all streams and lakes a minimum of 100 feet, measured at right angles to the high-water line or mark. All structures, buildings, or similar permanent fixtures shall be set back from the high-water line or mark along all streams or lakes a minimum of 100 feet measured at right angles to the high-water line or mark.
- The site plan in Figure 2 shows that the substation will comply with these setback standards. There is not a stream on the property and therefore a stream setback is not applicable. The application complies with this criterion.

III. AGENCIES NOTIFIED: Department of Agriculture- Lisa Hanson; DLCD Salem – Hilary Foote, Jon Jinings, Dawn Hert; Department of Energy – Sarah Esterson; Fire Marshall– Marty Broadbent; U.S. Naval Weapons Air Station, Whidbey Island – Kimberly Peacher; Heppner RFPD – Steve Rhea; Lone RFPD – Virgil Morgan; Assessors Office – Mike Gorman; Building Official – Glenn McIntire / Toni Connell; Public Works – Eric Imes; Weed Coordinator – Corey Sweeney; Emergency Manager – Steve Freeland; CTUIR CRPP – Teara Farrow Furman ; Gilliam County – Judge Chris Patnote and Planning

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Director Stephanie Case; NRCS – Kevin Payne; ODFW – Steve Cherry, Melody Henderson and Jeremy Thompson.

IV. Public Comments:

- a. See attached letter dated December 22, 2025, from James K. Hayner, Attorney representing neighbors in opposition.
- b. See attached letter dated January 20, 2026, from Olivier Jamen, Attorney representing Well Springs Solar, LLC, the applicant.

V. PROPERTY OWNERS AND AGENCIES NOTIFIED: February 4, 2026

VI. PLANNING COMMISSION HEARING DATE: February 24, 2026

VII. DECISION OF THE PLANNING COMMISSION: The Morrow County Planning Commission has two options for this application.

Option A. Planning Commission finds Land Use Decision LUD-N-088-25 application does not comply with the applicable standards and hereby denies the application, based on revised Findings of Fact, or,

Option B. Planning Commission finds the application complies with the standards and hereby approves Land Use Decision LUD-N-088-25 application, based on revised Findings of Fact and subject to the following CONDITIONS OF APPROVAL:

PRECEDENT CONDITIONS OF APPROVAL:

1. Provide the Planning Department with an approved Morrow County Road Department access permit.
2. Obtain applicable land use permits for the associated transmission line.
3. Obtain Site Certificate from Energy Facility Siting Council (EFSC) for the associated Well Springs Solar project.

SUBSEQUENT CONDITIONS OF APPROVAL

1. Applicant shall be responsible for restoring, as nearly as possible, to its former condition any agricultural land and associated improvements that are damaged or otherwise disturbed by the siting, maintenance, repair or reconstruction of the substation.
2. The access road shall be constructed according to standards recommended by Morrow County Public Works.
3. The access road and the substation site shall be maintained free of noxious weeds, both during construction and post construction.

Stacie Ekstrom

LUD-N-088-25

Preliminary DRAFT Findings of Fact

S:/Planning/Land Use Decisions/2025/North/LUD-N-088 Miller Substation Wells Spring Solar LLC

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Chair, Morrow County Planning Commission

Date

ATTACHMENTS:

Vicinity Map

Site Plan

Application (with 12/11/2025 Notice Letter)

Letter from James K. Hayner, Attorney

Letter from Olivier Jamin, Attorney

DRAFT

LUD-N-088-25

Preliminary DRAFT Findings of Fact

S:/Planning/Land Use Decisions/2025/North/LUD-N-088 Miller Substation Wells Spring Solar LLC

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PLANNING DEPARTMENT

PO Box 40 • Irrigon, Oregon 97844
(541) 922-4624

PUBLIC NOTICE OF APPLICATION

Date: 12/11/2025

The Morrow County Planning Department has received the land use application described below:

FILE NUMBER(S): LUD-N-088-25 aka Miller Substation

SUBJECT PROPERTY OWNERS: April Miller LePage and Nolan Miller

MAP & TAX LOT: 2N 23 Tax Lot: 3000

ZONING: Exclusive Farm Use (EFU)

APPLICANT: Tim Seck, Well Springs LLC, a subsidiary of MN8 Energy Development Company

SUMMARY OF REQUEST: The Applicant requests to construct a standalone 230kV substation as a "utility facility necessary for public service" within a 13-acre building envelope on an approximately 633-acre parcel of land. The proposed Miller Substation will support integration of future renewable energy development in northwest Morrow County into the regional transmission grid.

STAFF CONTACT: Tamra Mabbott, Planning Director

Phone: (541) 922-4624

Email: tmabbott@morrowcountyor.gov

According to Oregon law, you are entitled to notice a pending Administrative Review application, a Type II decision. This notice has been sent to all property owners within 2000 feet of the subject property. The purpose of this notice is to provide nearby property owners, public agencies, and other interested persons with an opportunity to submit testimony and participate in the decision-making process before the decision is made.

APPLICABLE CRITERIA:

The above application is subject to the following criteria.

MCZO Section- 3.010 Exclusive Farm Use (EFU), subsection 3.010(D) Uses Subject to Administrative Review and 3.010(F)(10) Use Standards for a utility facility necessary for public service.

A copy of the application and materials, including all evidence relied upon by the Planning Department to make this decision, is available for inspection. A digital copy of the documents can be emailed to you, upon request, or a hard copy can be mailed to you by postal mail, upon request. Copies of this evidence can be obtained from the Planning Staff.

If you would like to provide comments on the proposed application, you may do so by submitting written comments to the Planning Department at the address listed below or via email.

Only comments regarding the relevant approval criteria are considered applicable evidence. Telephone conversations cannot be accepted as testimony; however, staff are available to answer questions. All written comments must be submitted to the Planning Department by 5:00 p.m. on (12/26/2025), 14 days from the date of this letter. Failure to raise an issue accompanied by statements or evidence sufficient to afford the decision maker and the parties an opportunity to respond to the issue, may preclude that issue to be appealed to the Land Use Board of Appeals (LUBA).

After the 14-day comment period closes, the Planning Director will issue a Type II administrative decision. That decision will be mailed to the applicant, adjoining property owners, anyone who submitted written comments, and anyone who has requested a copy of the decision.

If you have questions regarding this application, please contact the staff person above at the Morrow County Planning Department at (541) 922-4624 or tmabbott@morrowcountyor.gov. The Planning Department is located at Morrow County Government Center 215 NE Main Ave., Irrigon, OR 97844.

AGENCIES NOTIFIED: Oregon Department Agriculture– Lisa Hansen, Director; Department of Land Conservation and Development (DLCD) Eastern Oregon Representative– Dawn Hert and Hilary Foote, Farm Forest Specialist; Fire Marshal– Marty Broadbent; Oregon Department of Energy– Todd Cornett, Assistant Director and Sarah Esterson, Senior Policy Analyst; Natural Resource Conservation Service– Kevin Payne; Heppner Rural Fire Protection District– Steve Rhea; Lone RFPD– Virgil Morgan; Mike Gorman, Assessors Office;

Notice of Application LUD-N-088-25

Building Official – Glen McIntire; Steve Freeland, Emergency Management; Public Works – Eric Imes; Weed Coordinator – Corey Sweeney; Gilliam County Judge, Cris Patnode; Stephanie Case, Gilliam County Planning Director; Kimberly Peacher, Outreach Officer, NAS Whidbey Island; Steve Cherry and Melody Henderson, Oregon Department of Fish & Wildlife, Heppner; Jeremy Thompson, District Manager, Oregon Department of Fish & Wildlife, Pendleton; Watermaster, Ken Thielman, Oregon Department of Water Resources; Teara Farrow Furman, Cultural Resources Program Manager, CTUIR.

ATTACHMENTS:

Application

Site plan

Vicinity map

Adjoining Property Owners





LAND USE APPLICATION ADMINISTRATIVE REVIEW

RECEIVED 46
NOV 19 2025

BY: WR

Internal Use File Number <u>LUD-N-088-25</u>	Date Received <u>11/19/25</u>	Deemed Complete _____	Fee <u>600.00 P&P</u>
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PAID

Type of Application: (check one)

- Non-Farm Use
- Temporary Use
- Dwelling Authorization
- Agri-tourism
- Event(s)
- Other: utility facility for public service

Applicant:

Name(s) Tim Seck - Well Springs Solar LLC, a subsidiary of MN8 Energy Development Company LLC
 Mailing Address 1155 Avenue of the Americas, 27th Floor New York, New York 10036
 Phone (561) 440-2322 E-mail tim.seck@mn8.com

Legal Property Owner: (if different from applicant)

Name(s) April Miller LePage and Wells Fargo Bank N.A., as representing Lori Miller as her fiduciary agent
 Mailing Address April Miller LePage 770 Glen Creek Rd NW Salem OR 97304; Wells Fargo 77 Taylor Street 1A, Fort Worth TX 76102
 Phone _____ E-mail aprillepage@comcast.net nolan.miller@wellsfargo.com

Property Description:

Township 2N Range 23E Section 26 Tax Lot(s) 3000
 Physical Address N/A
 General Location The subject parcel is generally located east of Cecil, OR, south of Hwy 84, north and west of Immigrant Lane.

Proposal (identify what you are proposing): Well Springs Solar LLC is proposing to construct a standalone substation in Morrow County (see attached description).

Approval Criteria:

Zoning Designation EFU Zone Acres: 632.84
 Is any portion of the property within an Overlay Zone? No
 Applicable Article, Section(s), and Subsection(s): Article 3; Section 3.010

A Planner can assist you in identifying the review criteria that apply to your request. The review criteria are used to determine whether your application will be approved or denied. It is your responsibility to provide adequate written justification and any other evidence you feel is relevant to explain how your request complies with the review criteria. Failure to provide adequate justification may result in your application being denied, or deemed incomplete until additional information is provided. If additional space is needed, please attach a separate sheet of paper.

Physical Features: (describe the site)

Vegetation on the property Dryland crops
 Topography of the property (i.e. rocky, hilly, forested) Flat with some drainages
 Any significant features of the property (i.e. steep slopes, water bodies, etc.) No

Soil type(s): 71C (Warden silt loam), 71D (Warden silt loam), 45B (Ritzville silt loam), 75C (Willis silt loam), 71B (Warden Silt loam)

Is the land or any portion of it subject to flooding? No

Most current use of the property Dryland crops

Has the location been utilized as an integral part of the farming operation on the property? Currently farmed

Does the location have water rights for irrigation? No

What are the predominant farming types in the area? Dryland crops

Is the property currently under special assessment by the County Assessor's Office?? Yes

Existing Improvements:

What structures or development does the property contain? Will any structure be removed or demolished?
There are no existing structures onsite.

Describe the Access to the Property:

State Highway County Road Public Road USFS Private Easement

Road name Immigrant Lane

Improvement type and condition of road Gravel road: good condition

Will any new access be required? Yes - private driveway

Existing Services:

Fire protection district or method lone Fire District

Solid waste disposal method N/A

Utilities and other public services provided None

Please include a map or plot plan with the following information and locations:

- Existing and proposed water supply
- Existing and proposed sewage disposal method
- Existing and proposed structures
- Existing and proposed roads and accesses

Attach applicable submittal requirements in accordance with Morrow County Zoning Ordinance Article

5 How the proposal will be compatible with surrounding uses See attached narrative

How the proposal will protect and preserve existing natural resources such as trees, vegetation, water resources and wildlife habitat See attached narrative

Whether you believe diking, screening or other landscaping will be required to protect nearby properties and habitats See attached narrative

The applicant is responsible for providing all of the information to show compliance with the standards for approval. If you are unsure of the standards required by the code, the Planning Department can provide them. The plot plan and narrative should include enough detail to address specific issues about your particular application.

Through applying for this application I authorize the Morrow County Planning Director or designee to enter upon the property subject of the application to conduct a site visit necessary for processing the requested application. Morrow County shall contact the Land Owner prior to the site visit to arrange an appropriate time for the site visit.

Signatures: I (we), the undersigned, acknowledge that I am familiar with the standards and limitations set forth by the Morrow County Zoning Ordinance and that additional information and materials may be required, as provided by the Zoning Ordinance and Comprehensive Plan. I propose to meet all standards set forth by the County's Zoning Ordinance and any applicable State and Federal regulations. I (we) certify that the statements and information provided with this application are true and correct to the best of my(our) knowledge.

Signed: Tim Seck
Applicant
Printed: Tim Seck
Applicant
Date: 11/17/2025

DocuSigned by:
April Miller (now known as April Miller (not to print))
Legal Property Owner
Lori Miller By Wells Fargo Bank, N.A. as Agent By
Legal Property Owner
Lori Miller By Wells Fargo Bank, N.A. as Agent By Nolan Miller – Sr.

If this application is not signed by the property owner, a letter authorizing signature by the applicant must be attached.

Morrow County Planning Department
215 NE Main Ave, PO Box 40, Irrigon, OR 97844
(541) 922-4624 FAX: (541) 922-3472

Administrative Review Application Written Statement for a Substation

Miller Substation Project Morrow County, Oregon

Submitted to

Morrow County Planning Department

Applicant



Well Springs Solar LLC, a Subsidiary of
MN8 Energy Development Company LLC
1155 Avenue of the Americas, 27th Floor
New York, NY 10036

Prepared by



1750 S Harbor Way, Suite 400
Portland, OR 97201

November 2025

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1.0 Project Overview

Well Springs Solar LLC (Applicant) is proposing a stand-alone substation (Miller Substation) as a “utility facility necessary for public service” within a 13-acre building envelope on an approximately 633-acre property identified as map and tax lot Township 2 North, Range 23 East, Section 26, Tax Lot 3000 located in Morrow County, Oregon (see Figure 1). The subject property is located within the Exclusive Farm Use (EFU) zone. A substation is an allowed use subject to standards in the EFU zone under Morrow County Zoning Ordinance (MCZO) Section 3.010(D)(9). This application seeks administrative review to allow construction of Miller Substation. The substation will support integration of future renewable energy development in northwest Morrow County into the regional grid. The location is proximate to existing and future infrastructure as discussed herein.

2.0 Project Description

The 230-kilovolt (kV) Miller Substation will be located within a graveled, fenced area near an adjacent road right of way. Some of the substation components will be supported by concrete foundations. Additional substation equipment may include circuit-breakers, power transformer(s), bus and insulators, disconnect switches, relaying, battery and charger, surge arresters, alternating current and direct current supplies, control enclosure, metering equipment, grounding, and associated control wiring. Any additional equipment will be located within the fenced substation area. The 13-acre project boundary shown on Figure 2 is the expected extent of both permanent and temporary impacts for construction of the proposed substation. The fence line enclosing the substation components will be entirely within this project boundary.

3.0 Compliance with Applicable County Code, Oregon Administrative Rule, and Oregon Revised Statutes

3.1 Morrow County Zoning Ordinance

3.1.1 Article 3 Use Zones

3.1.1.1 Section 3.010 Exclusive Farm Use, EFU Zone

MCZO 3.010(D)

Uses Subject to Administrative Review. In the EFU Zone, the following uses and activities and their accessory buildings and uses may be permitted outright through the Site Plan Review process provided in MCZO 5.020, and subject to the provisions of this Section if determined by the Planning Director to satisfy the applicable criteria and provisions of law. Notice and an opportunity to file an appeal must

be provided in the manner described in ORS 215.416. These uses may be referred to the Planning Commission for review if deemed appropriate by the Planning Director.

9. *Utility facilities necessary for public service, including associated transmission lines as defined in Article 1 and wetland waste treatment systems, but not including commercial facilities for the purpose of generating electrical power for public use by sale or transmission towers over 200 feet in height as provided in Subsection F.10.*

Response: MCZO Article 1 defines “utility facilities necessary for public service” as

“[a]ny facility owned or operated by a public, private or cooperative company for the transmission, distribution or processing of its products or for the disposal of cooling water, waste or by-products, and including, major trunk pipelines, water towers , sewage lagoons, cell towers, electrical transmission facilities (except transmission towers over 200’ in height) including substations not associated with a commercial power generating facility, and other similar facilities.”

Miller Substation will be owned and operated by a private company for the transmission and distribution of electricity, and therefore falls within the definition of a Utility Facility Necessary for Public Service. Therefore, the Applicant has addressed Subsection F.10 below.

MCZO 3.010(F) Use Standards

10. *A utility facility that is necessary for public service.*

a. A utility facility is necessary for public service if the facility must be sited in the exclusive farm use zone in order to provide the service.

Response: The Miller Substation is sited strategically to offer an interconnection point for future renewable energy generation in northwest Morrow County.¹ This region of Morrow County is appealing to renewable energy projects due to its topography, solar aspect, lack of development, and proximity to existing and future energy infrastructure. Miller Substation will serve as a new point of power delivery to the regional grid. The Applicant demonstrates below that the facility is “necessary for public service” and needs to be sited in the EFU zone. First and foremost, most of northwest Morrow County is zoned EFU, with the next largest zone being “public” for the Boardman Bombing Range property, which does not allow for substations or transmission lines. Other zoning in the area is Space Age Industrial, Airport Light Industrial and General Industrial; however, the land within these zones is either already developed, contains irrigated agriculture, contains Boardman Airport, is owned by unwilling landowners, is approved for an “exascale data center campus”² or the Percheron Data Center³, or is already in close proximity to an existing or proposed substation (see Figures 1 and 3). Additionally, there is a development barrier between the Miller Substation site and the energy infrastructure, such as the Grassland Substation and proposed Apex

¹ “Northwest Morrow County” being defined herein as the land west of the Boardman Bombing Range and north of Lone.

² https://www.morrowcountyor.gov/sites/default/files/fileattachments/planning/page/16600/signed_ord-2025-02_w_attachments.pdf. Accessed October 2025.

³ <https://www.percherondatacenter.com/about>. Accessed October 2025.

Substation⁴, to the north in the form of the Boardman/Willow Creek Managed Area⁵, which butts up to the Boardman Bombing Range, also creating a development barrier to the northeast (see Figure 1). The Boardman/Willow Creek Managed Area is a conservation easement preventing direct connection to the proposed Apex Substation from the south. Further, there is not any property available under Applicant siting control on which the substation could be developed that is not zoned EFU. Therefore, the substation must be sited in the EFU zone so it can serve future renewable energy development anticipated for the area.

(1) To demonstrate that a utility facility is necessary, an applicant must show that reasonable alternatives have been considered and that the facility must be sited in an exclusive farm use zone due to one or more of the following factors:

Response: As provided by the factors discussed below, no reasonable alternative locations were available for siting the proposed Miller Substation.

(a) Technical and engineering feasibility;

Response: The siting of Miller Substation by the Applicant was determined based on technical and engineering needs, such as generally flat ground surface and slopes, stable soils, and access to existing public right-of-way. Placing the substation in a central area relative to future renewable energy development and infrastructure minimizes the length of future collector cable systems and generation-tie transmission lines, reducing energy losses and material costs. This reduces loss of electrical power and makes the overall electrical collection systems more efficient. The substation location is bordered on two sides by Immigrant Lane, an existing graveled public road, with a public right-of-way providing direct access to Heppner Highway.

The site's soil and drainage must be carefully considered for placement of a substation. It must be stable enough to support the heavy substation equipment, and a good drainage system is necessary to prevent water accumulation, which can cause equipment damage. Further, to prevent costly damage from flooding, the substation should not be placed in a flood-prone area. The proposed substation area is composed of Ritzville silt loam (45B) soils (NRCS 2025). Ritzville silt loam soils are characterized as well drained, having no frequency of flooding or ponding, and having more than 80 inches of depth until restrictive features (such as bedrock) are met (NRCS 2025). Slopes at the site are generally flat ranging from 1 to 2 percent (USGS 2025). A geotechnical desktop review was completed and determined the proposed substation location met the necessary siting conditions. These technical and engineering factors all support locating the substation at the proposed site.

(b) The proposed facility is locationally dependent. A utility facility is locationally dependent if it must cross land in one or more areas zoned for exclusive farm use in order to achieve a reasonably direct route or to meet unique geographical needs that cannot be satisfied on other lands;

⁴ Approved by Morrow County Land Use Decision, Application No. LUD-N-70-24, dated August 27, 2024.

⁵ Boardman Area, COA 154, <https://www.oregonconservationstrategy.org/conservation-opportunity-area/boardman-area/>. Accessed October 2025.

Response: The proposed substation is located to meet unique geographical needs that cannot be satisfied on other lands because the substation is strategically proximate to future renewable energy development and infrastructure. As discussed above, the majority of northwest Morrow County is zoned EFU. The substation will need to be located close to anticipated future renewable energy projects and their associated transmission lines that will go through this area in order to step up power, which will then be transported to the grid.

Substantial investment in future energy infrastructure is occurring in and around northwest Morrow County including the recently approved Boardman to Hemingway Transmission Line⁶, PacifiCorp Apex and Litespeed Substations and their connecting transmission lines⁷, and a Umatilla Electric Cooperative (UEC) Substation.⁸ There is also the PacifiCorp Blueprint Transmission (Blueprint) Project which aims to establish a new transmission line corridor running north-south through central Oregon, approximately Klamath Falls to Richmond to Hermiston.⁹ A portion of this line is proposed to connect the “Full Circle” Substation, near Redmond, to the proposed Apex Substation, west of the Boardman Bombing Range and adjacent to the approved Carty Generating Station.¹⁰ Further, there is an extensive list of energy facilities reviewed by the Oregon Energy Facility Siting Council (EFSC) that are proposed, approved or operating west and east of the proposed Miller Substation.¹¹ The portion of Morrow County between these energy facilities—south of the proposed Apex Substation and north of Ione—is entirely within the EFU zone. The Boardman Bombing Range does not permit substations. As previously mentioned, there is a conservation easement preventing direct connection to the proposed Apex Substation from the south, which leaves this southern portion of northwest Morrow County without needed energy infrastructure to transport future energy generation to the grid. There are no other parcels in this area that are not zoned EFU on which the substation could be sited. For these reasons, the proposed substation is locationally dependent.

(c) Lack of available urban and non-resource lands;

Response: As mentioned above, there is a lack of non-EFU or urban lands in northwest Morrow County where future renewable energy and transmission development is anticipated. There are no other parcels available to the Applicant that are not EFU-zoned land.

⁶ Approved by the Oregon Energy Facility Siting Council, <https://www.idahopower.com/energy-environment/energy/planning-and-electrical-projects/current-projects/boardman-to-hemingway/schedule-and-permitting/>. Accessed October 2025.

⁷ Approved by Morrow County Land Use Decision, Application No. LUD-N-70-24, dated August 27, 2024.

⁸ Approved by Morrow County Land Use Decision, Application No. LUD-N-62-24, dated April 24, 2024.

⁹ <https://www.oasis.oati.com/woa/docs/PPW/PPWdocs/PacifiCorp Local Transmission System Plan 2024-2025 Q4 Draft Report.pdf>. Accessed October 2025.

¹⁰ <https://www.oregon.gov/energy/facilities-safety/facilities/Pages/CGS.aspx>. Accessed October 2025.

¹¹ **East of Miller Substation:** Sunrise Solar and Storage Projects (Approved); Wagon Trail Energy Center, LLC (Approved); Wheatridge Renewable Energy Facility I (Operating); Wheatridge Renewable Energy Facility I (Proposed); Wheatridge Renewable Energy Facility II (Operating); Sunstone Solar Project (Approved); **West of Miller Substation:** Shepherds Flat South & Central (Operating/Under Construction); Montague Wind (Operating); Oregon Trail Solar (Approved/Under Construction); Leaning Juniper IIA & IIB Wind Power Facility (Operating);

(d) Availability of existing rights of way;

Response: The proposed substation was sited in this specific location due to the availability of existing public road rights-of-way. As shown on Figure 2, the proposed substation is located parallel to Immigrant Lane, a public County right-of-way. The substation will take access from Immigrant Lane and will not require construction of additional rights-of-way for access.

(e) Public health and safety; and

Response: The Applicant is not contributing this as a factor for determining why the facility needs to be located in the EFU zone.

(f) Other requirements of state and federal agencies.

Response: The Applicant is not contributing this as a factor for determining why the facility needs to be located in the EFU zone.

(2) Costs associated with any of the factors listed in Subsection (1) may be considered, but cost alone may not be the only consideration in determining that a utility facility is necessary for public service. Land costs shall not be included when considering alternative locations for substantially similar utility facilities and the siting of utility facilities that are not substantially similar.

Response: Costs were not the only consideration in determining whether the substation is necessary for public service. As discussed above, the substation qualifies as a utility facility that is necessary for public service based on the Applicant's findings to MCZO 3.010(F)(10)(a)(1) above.

(3) The owner of a utility facility approved under Subsection (a) shall be responsible for restoring, as nearly as possible, to its former condition any agricultural land and associated improvements that are damaged or otherwise disturbed by the siting, maintenance, repair or reconstruction of the facility. Nothing in this Subsection shall prevent the owner of the utility facility from requiring a bond or other security from a contractor or otherwise imposing on a contractor the responsibility for restoration.

Response: The Applicant acknowledges that they are responsible for restoring any agricultural land disturbed by the siting of the substation. The Applicant will develop a weed management plan in compliance with the regulations and directives provided by the Morrow County Weed Program Manager. The weed management plan will include best management practices to effectively prevent and mitigate the presence of noxious weeds during construction and operation of the substation.

(4) The county shall impose clear and objective conditions on an application for utility facility siting to mitigate and minimize the impacts of the proposed facility, if any, on surrounding lands devoted to farm use in order to prevent a significant change in accepted farm practices or a significant increase in the cost of farm practices on surrounding farmlands.

Response: The Applicant acknowledges the County may impose clear and objective conditions as part of their decision on this application.

(5) Utility facilities necessary for public service may include on-site and off-site facilities for temporary workforce housing for workers constructing a utility facility. Such facilities must be removed or converted to an allowed use under the EFU Zone or other statute or rule when project construction is complete. Off-site facilities allowed under this Subsection are subject to Article 6. Temporary workforce housing facilities not included in the initial approval may be considered through a minor amendment request. A minor amendment request shall have no effect on the original approval.

Response: No temporary workforce housing is proposed as part of the construction of the substation. This criterion is not applicable.

(6) In addition to the provisions of Subsection F.10.a(1) through (4), the establishment or extension of a sewer system as defined by OAR 660-011-0060(1)(f) shall be subject to the provisions of 660-011-0060.

Response: This application does not include a request for the establishment or extension of a sewer system. This criterion is not applicable.

(7) The provisions of Subsection (a) do not apply to interstate natural gas pipelines and associated facilities authorized by and subject to regulation by the Federal Energy Regulatory Commission.

Response: This application does not include a request for interstate natural gas pipelines or associated facilities. This criterion is not applicable.

b. An associated transmission line is necessary for public service upon demonstration that the associated transmission line meets either the following requirements of Subsection (1) or Subsection (2) of this Subsection.

Response: This application does not involve an associated transmission line. MCZO 3.010(F)(10)(b) is not applicable.

MCZO 3.010(O) Yards

In an EFU Zone, the minimum yard setback requirements shall be as follows:

- 1. The front yard setback from the property line shall be 20 feet for property fronting on a local minor collector or marginal access street ROW, 30 feet from a property line fronting on a major collector ROW, and 80 feet from an arterial ROW unless other provisions for combining accesses are provided and approved by the County.*
- 2. Each side yard shall be a minimum of 20 feet except that on corner lots or parcels the side yard on the street side shall be a minimum of 30 feet.*
- 3. Rear yards shall be a minimum of 25 feet.*

Response: As shown on Figure 2, the subject property fronts on a local minor collector and the substation project boundary is set back at least 30 feet from the adjacent right-of-way and all property lines.

4. *Stream Setback. All sewage disposal installations such as outhouses, septic tank and drainfield systems shall be set back from the high-water line or mark along all streams and lakes a minimum of 100 feet, measured at right angles to the high-water line or mark. All structures, buildings, or similar permanent fixtures shall be set back from the high-water line or mark along all streams or lakes a minimum of 100 feet measured at right angles to the high-water line or mark.*

Response: As shown on Figure 2, no streams are located within 100 feet of the substation project boundary.

MCZO 3.010(P) Transportation Impacts

1. *Traffic Impact Analysis (TIA). In addition to the other standards and conditions set forth in this section, a TIA will be required for all projects generating more than 400 passenger car equivalent trips per day. Heavy vehicles – trucks, recreational vehicles and buses – will be defined as 2.2 passenger car equivalents. A TIA will include: trips generated by the project, trip distribution for the project, identification of intersections for which the project adds 30 or more peak hour passenger car equivalent trips, and level of service assessment, impacts of the project, and, mitigation of the impacts. If the corridor is a State Highway, use ODOT standards.*

Response: The proposed substation will not be open to the public and will only be visited by staff to perform maintenance or repairs on an as-needed basis. As a result, no TIA will be required.

3.2 Applicable Oregon Administrative Rule (OAR)

3.2.1 OAR 660-033-0130(16) Utility Facility Necessary for Public Service

(a) A utility facility established under ORS 215.213(1)(c) or 215.283(1)(c) is necessary for public service if the facility must be sited in an exclusive farm use zone in order to provide the service. To demonstrate that a utility facility is necessary, an applicant must:

(A) Show that reasonable alternatives have been considered and that the facility must be sited in an exclusive farm use zone due to one or more of the following factors:

- (i) Technical and engineering feasibility;*
- (ii) The proposed facility is locationally-dependent. A utility facility is locationally-dependent if it must cross land in one or more areas zoned for exclusive farm use in order to achieve a reasonably direct route or to meet unique geographical needs that cannot be satisfied on other lands;*
- (iii) Lack of available urban and nonresource lands;*
- (iv) Availability of existing rights of way;*
- (v) Public health and safety; and*
- (vi) Other requirements of state and federal agencies.*

Response: The standard above is equivalent to the standard of MCZO 3.010(F)(10)(a)(1) and Oregon Revised Statutes (ORS) 215.275(2). Evidence of compliance is provided above in response to MCZO 3.010(F)(10)(a)(1).

(B) Costs associated with any of the factors listed in paragraph (A) of this subsection may be considered, but cost alone may not be the only consideration in determining that a utility facility is necessary for public service. Land costs shall not be included when considering alternative locations for substantially similar utility facilities and the siting of utility facilities that are not substantially similar.

Response: The standard above is equivalent to the standard of MCZO 3.010(F)(10)(a)(2) and ORS 215.275(3). Evidence of compliance is provided above in response to MCZO 3.010(F)(10)(a)(2).

(C) The owner of a utility facility approved under this section shall be responsible for restoring, as nearly as possible, to its former condition any agricultural land and associated improvements that are damaged or otherwise disturbed by the siting, maintenance, repair or reconstruction of the facility. Nothing in this paragraph shall prevent the owner of the utility facility from requiring a bond or other security from a contractor or otherwise imposing on a contractor the responsibility for restoration.

Response: The standard above is equivalent to the standard of MCZO 3.010(F)(10)(a)(3) and ORS 215.275(4). Evidence of compliance is provided above in response to MCZO 3.010(F)(10)(a)(3).

(D) The governing body of the county or its designee shall impose clear and objective conditions on an application for utility facility siting to mitigate and minimize the impacts of the proposed facility, if any, on surrounding lands devoted to farm use in order to prevent a significant change in accepted farm practices or a significant increase in the cost of farm practices on surrounding farmlands.

Response: The standard above is equivalent to the standard of MCZO 3.010(F)(10)(a)(4) and ORS 215.275(5). Applicant acknowledges that conditions of approval may be imposed.

(E) Utility facilities necessary for public service may include on-site and off-site facilities for temporary workforce housing for workers constructing a utility facility. Such facilities must be removed or converted to an allowed use under OAR 660-033-0130(19) or other statute or rule when project construction is complete. Off-site facilities allowed under this paragraph are subject to 660-033-0130(5). Temporary workforce housing facilities not included in the initial approval may be considered through a minor amendment request. A minor amendment request shall have no effect on the original approval.

Response: The standard above is equivalent to the standard of MCZO 3.010(F)(10)(a)(5). MCZO 3.010(F)(10)(a)(5) is not applicable.

(F) In addition to the provisions of paragraphs (A) to (D) of this subsection, the establishment or extension of a sewer system as defined by OAR 660-011-0060(1)(f) in an exclusive farm use zone shall be subject to the provisions of OAR 660-011-0060.

Response: The standard above is equivalent to the standard of MCZO 3.010(F)(10)(a)(6). MCZO 3.010(F)(10)(a)(6) is not applicable.

(G) The provisions of paragraphs (A) to (D) of this subsection do not apply to interstate natural gas pipelines and associated facilities authorized by and subject to regulation by the Federal Energy Regulatory Commission.

Response: The standard above is equivalent to the standard of MCZO 3.010(F)(10)(a)(7) and ORS 215.275(6). MCZO 3.010(F)(10)(a)(7) is not applicable.

(b) An associated transmission line is necessary for public service and shall be approved by the governing body of a county or its designee if an applicant for approval under ORS 215.213(1)(c) or 215.283(1)(c) demonstrates to the governing body of a county or its designee that the associated transmission line meets either the requirements of paragraph (A) of this subsection or the requirements of paragraph (B) of this subsection.

Response: The standard above is equivalent to the standard of MCZO 3.010(F)(10)(b) and ORS 215.275(6). MCZO 3.010(F)(10)(b) does not apply.

3.3 Applicable Oregon Revised Statutes (ORS)

3.3.1 ORS 215.275 Utility facilities necessary for public service; criteria; rules; mitigating impact of facility.

(1) A utility facility established under ORS 215.213 (1)(c)(A) or 215.283 (1)(c)(A) is necessary for public service if the facility must be sited in an exclusive farm use zone in order to provide the service.

Response: The standards above are equivalent to the standards of MCZO 3.010(F)(10)(a) and OAR 660-033-0130(16)(a). Evidence of compliance is provided above in Section 3.1.1.1 in response to MCZO 3.010(F)(10)(a).

(2) To demonstrate that a utility facility is necessary, an applicant for approval under ORS 215.213 (1)(c)(A) or 215.283 (1)(c)(A) must show that reasonable alternatives have been considered and that the facility must be sited in an exclusive farm use zone due to one or more of the following factors:

(a) Technical and engineering feasibility;

(b) The proposed facility is locationally dependent. A utility facility is locationally dependent if it must cross land in one or more areas zoned for exclusive farm use in order to achieve a reasonably direct route or to meet unique geographical needs that cannot be satisfied on other lands;

(c) Lack of available urban and nonresource lands;

(d) Availability of existing rights of way;

(e) Public health and safety; and

(f) Other requirements of state or federal agencies.

Response: The standards above are equivalent to the standards of MCZO 3.010(F)(10)(a)(1) and OAR 660-033-0130(16)(a)(A). Evidence of compliance is provided above in Section 3.1.1.1 in response to MCZO 3.010(F)(10)(a)(1).

(3) Costs associated with any of the factors listed in subsection (2) of this section may be considered, but cost alone may not be the only consideration in determining that a utility facility is necessary for public service. Land costs shall not be included when considering alternative locations for substantially similar utility facilities. The Land Conservation and Development Commission shall determine by rule how land costs may be considered when evaluating the siting of utility facilities that are not substantially similar.

Response: The standard above is equivalent to the standards of MCZO 3.010(F)(10)(a)(2) and OAR 660-033-0130(16)(a)(B). Evidence of compliance is provided above in Section 3.1.1.1 in response to MCZO 3.010(F)(10)(a)(2).

(4) The owner of a utility facility approved under ORS 215.213 (1)(c)(A) or 215.283 (1)(c)(A) shall be responsible for restoring, as nearly as possible, to its former condition any agricultural land and associated improvements that are damaged or otherwise disturbed by the siting, maintenance, repair or reconstruction of the facility. Nothing in this section shall prevent the owner of the utility facility from requiring a bond or other security from a contractor or otherwise imposing on a contractor the responsibility for restoration.

Response: The standard above is equivalent to the standards of MCZO 3.010(F)(10)(a)(3) and OAR 660-033-0130(16)(a)(C). Evidence of compliance is provided above in Section 3.1.1.1 in response to MCZO 3.010(F)(10)(a)(3).

(5) The governing body of the county or its designee shall impose clear and objective conditions on an application for utility facility siting under ORS 215.213 (1)(c)(A) or 215.283 (1)(c)(A) to mitigate and minimize the impacts of the proposed facility, if any, on surrounding lands devoted to farm use in order to prevent a significant change in accepted farm practices or a significant increase in the cost of farm practices on the surrounding farmlands.

Response: The standard above is equivalent to the standards of MCZO 3.010(F)(10)(a)(4) and ORS 660-033-0130(16)(a)(D). Applicant acknowledges that conditions of approval may be imposed.

(6) The provisions of subsections (2) to (5) of this section do not apply to interstate natural gas pipelines and associated facilities authorized by and subject to regulation by the Federal Energy Regulatory Commission. [1999 c.816 §3; 2009 c.850 §9; 2013 c.242 §5]

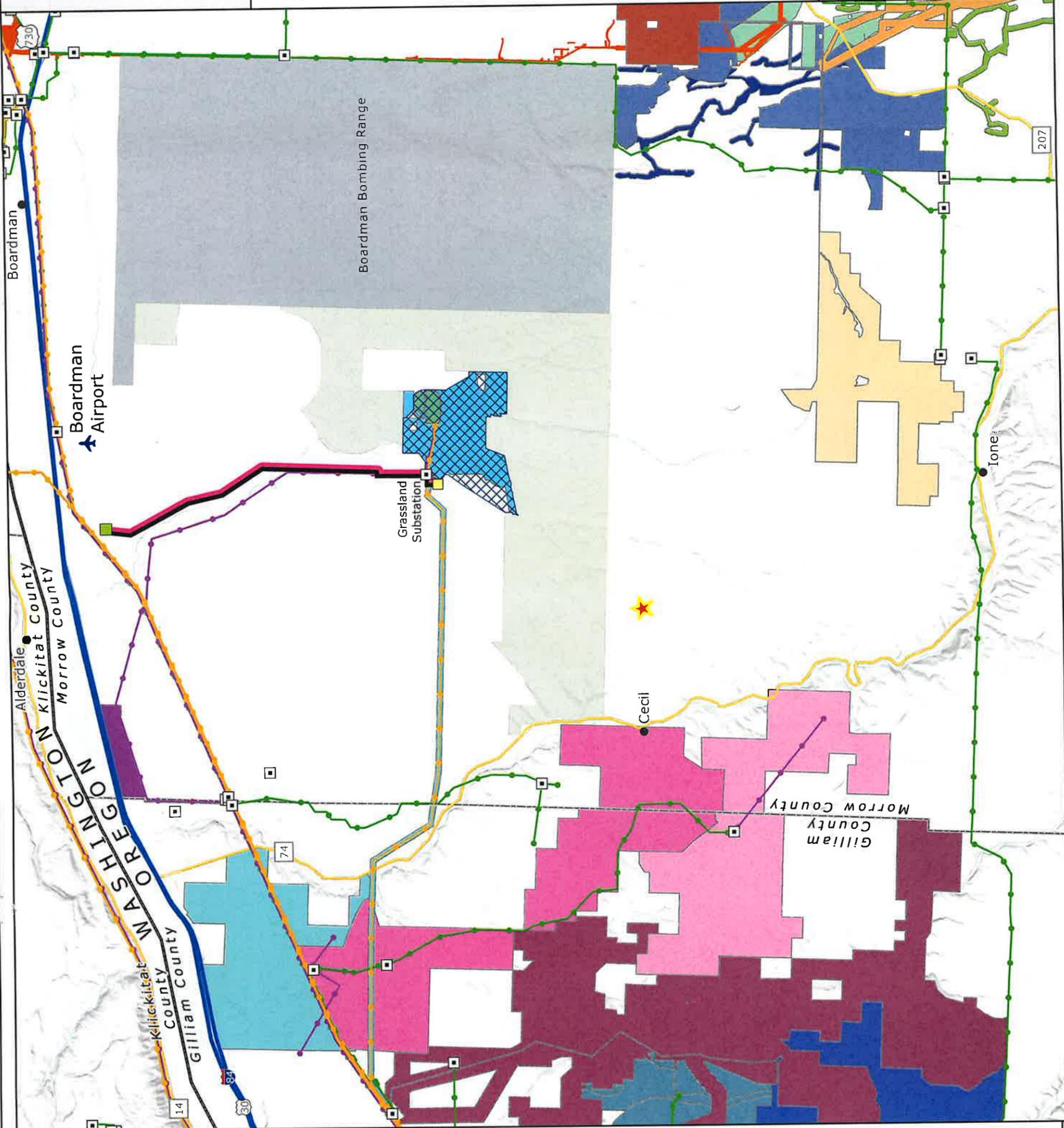
Response: The standard above is equivalent to the standards of MCZO 3.010(F)(10)(a)(7) and ORS 660-033-0130(16)(a)(G). MCZO 3.010(F)(10)(a)(7) is not applicable.

4.0 References

- NRCS (Natural Resources Conservation Service). 2025. Web Soil Survey. Accessed September 2025. Available here: <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>.
- USGS (U.S. Geological Survey). 2025. TopoBuilder Application. Accessed September 2025. Available here: <https://topobuilder.nationalmap.gov/>.

Figures

- Energy Facilities, Status**
- Boardman Coal Plant, Decommissioned
 - Boardman to Hemingway Transmission Line, Approved
 - Boardman Solar Energy Facility, Approved
 - Carty Generating Station pRFA4, Proposed
 - Carty Generating Station, Approved
 - Columbia Ethanol Project, Operating
 - Coyote Springs Cogeneration, Operating
 - Leaning Juniper IIA Wind Power Facility, Operating; Repowering Under Construction
 - Leaning Juniper IIB Wind Power Facility, Operating
 - Montague Solar (Pachwaywit Fields), Operating
 - Montague Wind, Operating
 - Oregon Trail Solar, Approved/Under Construction
 - Shepherds Flat Central, Operating/Under Construction
 - Shepherds Flat North, Operating/Under Construction
 - Shepherds Flat South, Operating/Under Construction
 - Sunrise Solar and Storage Projects, Proposed
 - Sunset Solar Project, Approved
 - Sunstone Solar Project, Approved
 - Wagon Trail Solar Project, Approved
 - Wheatridge Renewable Energy Facility East, Approved
 - Wheatridge Renewable Energy Facility I, Operating
 - Wheatridge Renewable Energy Facility II, Operating
 - Wheatridge Renewable Energy Facility III, Operating
 - Apex Substation, Approved
 - Litespeed Substation, Approved
 - Apex - Litespeed #1 and #2, Approved



NOT FOR CONSTRUCTION

0 1 2 4 6 8 Miles

WGS 1984 UTM Zone 11N

1:160,000

Miller Substation

Figure 1 Context

MORROW COUNTY, OR

- Proposed Substation
- State Boundary
- City/Town
- Airport
- Interstate Highway
- US Highway
- State Highway
- County Boundary
- Boardman/Willow Creek Managed Area
- Existing Infrastructure
- Substation
- 115 kV Transmission Line
- 230 kV Transmission Line
- 500 kV Transmission Line



Reference Map

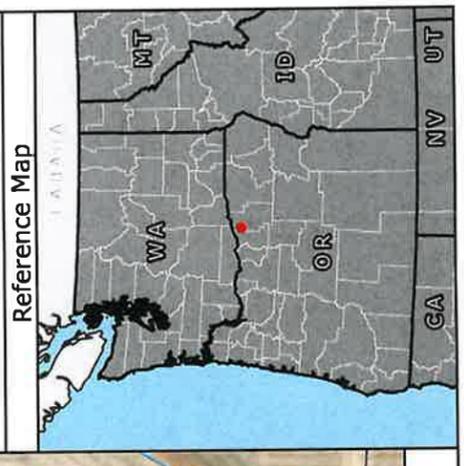


Miller Substation

Figure 2 Project Location

MORROW COUNTY, OR

-  Substation Project Boundary
-  Taxlot Boundary
-  Intermittent Stream (NHD)
-  Local Roads
-  Taxlot Boundary Of Interest



Detailed Substation Project Boundary View



Taxlot: 02N23E000003000; 632.84 acres

4328 feet

4283 feet

Minimum 30 feet

Minimum 30 feet

Immigrant Ln

NOT FOR CONSTRUCTION



WGS 1984 UTM Zone 11N

1:7,000

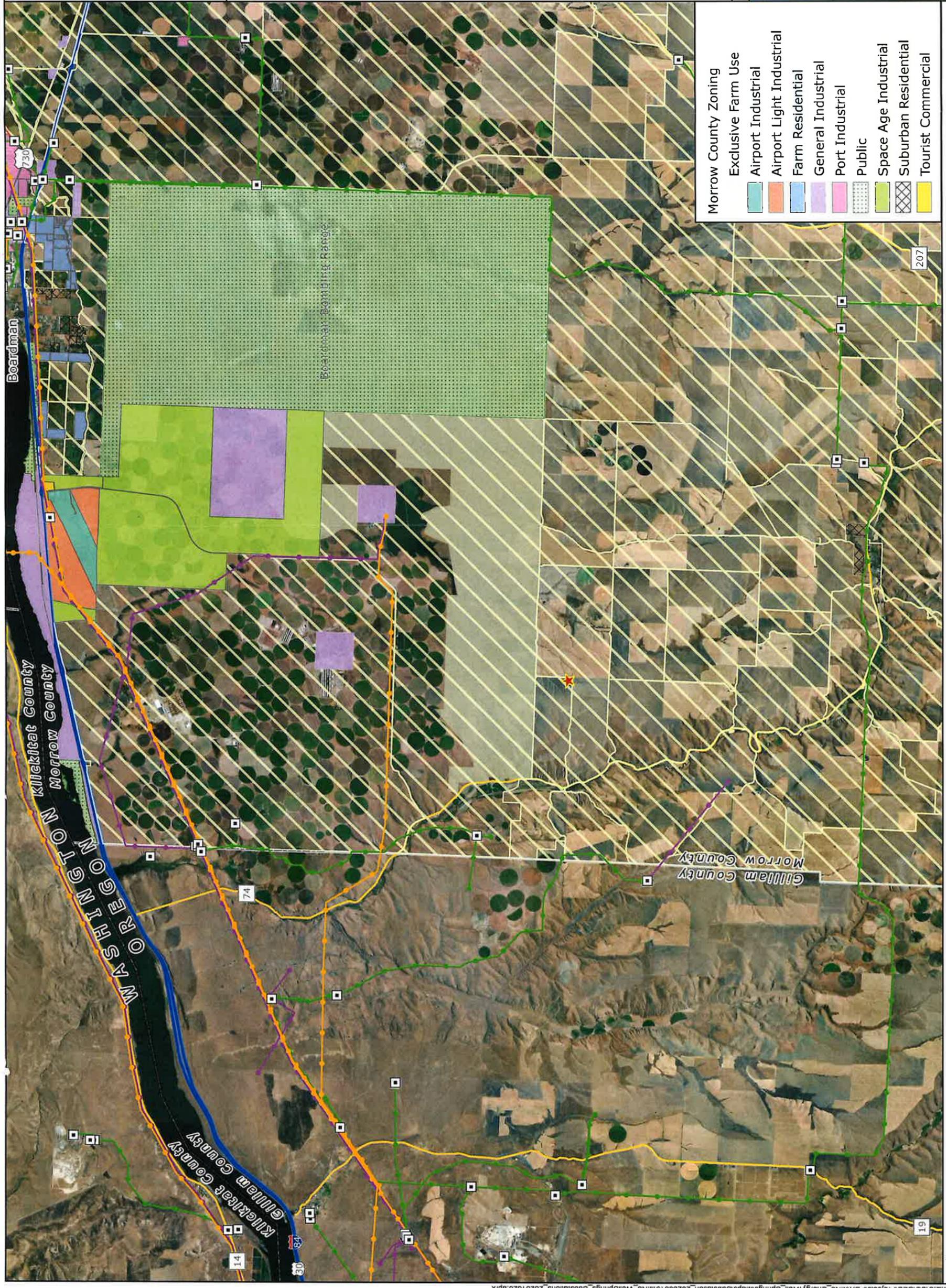
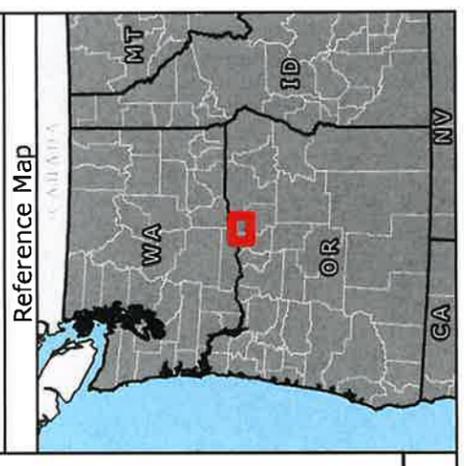


Miller Substation

Figure 3 Zoning

MORROW COUNTY, OR

- Proposed Substation
- County Boundary
- State Boundary
- City/Town
- Interstate Highway
- US Highway
- State Highway
- Boardman/Willow Creek Managed Area
- Existing Infrastructure
- Substation
- 115 kV Transmission Line
- 230 kV Transmission Line
- 500 kV Transmission Line



- Morrow County Zoning
- Exclusive Farm Use
 - Airport Industrial
 - Airport Light Industrial
 - Farm Residential
 - General Industrial
 - Port Industrial
 - Public
 - Space Age Industrial
 - Suburban Residential
 - Tourist Commercial

NOT FOR CONSTRUCTION



WGS 1984 UTM Zone 11N

1:160,000



ASSESSOR'S MAP/TAX	OWNER 1	OWNER 2	MAIL ADDRESS	CITY	STATE	ZIPCODE
02N24E0000001400	IMMIGRANT LANE, LLC		64982 BAKER LN	IONE	OR	97843
02N23E000000101	MILLER, JUSTIN C & MILLER, NICOLE MARIE		65096 BAKER LN	IONE	OR	97843
02N24E0000001200	MORTER, RALPH L		66221 DIRT RD	IONE	OR	97843
02N23E0000002300	KREBS, CAMERON L		68171 KUNZE LN	BOARDMAN	OR	97818
02N23E0000003700	KREBS, CAMERON L		68171 KUNZE LN	BOARDMAN	OR	97818
02N23E000000102	THREEMILE CANYON FARMS, LLC		75906 MARTY MYERS RD	BOARDMAN	OR	97818
02N24E000000107	THREEMILE CANYON FARMS, LLC		75906 MARTY MYERS RD	BOARDMAN	OR	97818
02N23E0000001100	MILLER, APRIL, 1/2 & MILLER, LORI, 1/2		7777 TAYLOR ST 1A	FORT WORTH	TX	76102
02N24E0000001500	MILLER, APRIL, 1/2 & MILLER, LORI, 1/2		7777 TAYLOR ST 1A	FORT WORTH	TX	76102
02N24E0000002301	MILLER, APRIL, 1/2 & MILLER, LORI, 1/2		7777 TAYLOR ST 1A	FORT WORTH	TX	76102
02N23E0000002900	MILLER, APRIL, 1/2 & MILLER, LORI, 1/2		7777 TAYLOR ST 1A	FORT WORTH	TX	76102
02N23E0000003000	MILLER, APRIL, 1/2 & MILLER, LORI, 1/2		7777 TAYLOR ST 1A	FORT WORTH	TX	76102
02N23E0000003900	MILLER, APRIL, 1/2 & MILLER, LORI, 1/2		7777 TAYLOR ST 1A	FORT WORTH	TX	76102
02N23E0000004000	MILLER, APRIL, 1/2 & MILLER, LORI, 1/2		7777 TAYLOR ST 1A	FORT WORTH	TX	76102
02N23E0000004100	MILLER, APRIL, 1/2 & MILLER, LORI, 1/2		7777 TAYLOR ST 1A	FORT WORTH	TX	76102
02N23E0000004200	MILLER, APRIL, 1/2 & MILLER, LORI, 1/2		7777 TAYLOR ST 1A	FORT WORTH	TX	76102
02N23E0000004300	MILLER, APRIL, 1/2 & MILLER, LORI, 1/2		7777 TAYLOR ST 1A	FORT WORTH	TX	76102

LUD-N-088-25 | Wells Spring Solar LLC | EFU 1-Mile Notice Area.
 02N23E TL3000
 S:\Planning\LUD\Worth2025

January 20, 2026

VIA Email: tmabbott@morrowcountyor.gov

Tamra Mabbott
Planning Director
Morrow County Planning Department
215 NE Main Ave.,
Irrigon, OR 97844

Re: Well Springs Solar LLC – Miller Substation

Dear Tamra,

Well Springs Solar LLC (Applicant) submitted an application to Morrow County for a stand-alone substation (referred to as the “Miller Substation”) as a “utility facility necessary for public service” on 13 acres of land zoned Exclusive Farm Use (EFU) in Morrow County. Substations are an allowed use subject to standards in the EFU zone under Morrow County Zoning Ordinance (MCZO) Section 3.010(D)(9). Applicant sought approval under an administrative review to allow construction of the Miller Substation and provided responses to all applicable MCZO criteria.

On December 22, 2025, Morrow County received an objection letter to the Miller Substation application arguing that Applicant had not met the standard of MCZO Section 3.010(F)(10)(a) because Applicant had not shown any need for a utility site and had not demonstrated that it had made any application to the Oregon Department of Energy or the Energy Facility Siting Council for an energy production facility justifying the Miller Substation. The letter also argued that not identifying a transmission line for which Applicant has legal rights made the application incomplete.

Applicant hereby submits this letter to address the objection letter and respectfully requests that Morrow County continue processing this application as an administrative review.

On December 22, 2025, Applicant submitted a Notice of Intent (NOI) to the Oregon Department of Energy for the Well Springs Solar Project, an up to 750 MW project that will be supported by the Miller Substation. See <https://www.oregon.gov/energy/facilities-safety/facilities/Pages/WSS.aspx%E2%80%9D>. The Miller Substation is necessary to support the Well Springs Solar Project, a utility-scale renewable energy project that will benefit the public and that is necessary to meet Oregon’s renewable energy targets. As a result, the analysis

January 20, 2026

Page 2

provided by Applicant as to whether the Miller Substation is “necessary for public service” is not “purely hypothetical,” as noted in the objection letter. Instead, the NOI clearly establishes the need for the Miller Substation and addresses the objection raised in the December 22, 2025 letter.

The objection letter also argues that the Applicant has not identified an associated transmission line with its initial material and as such did not comply with MCZO 3.010(F)(10)(b). However, the application does not involve an associated transmission line and as such MCZO 3.010(F)(10)(b) does not apply.

Because Applicant addressed the objections raised in the December 22, 2025 letter and otherwise complied with all MCZO criteria in its application for the Miller Substation, Applicant respectfully requests that Morrow County move forward with an administrative review of the proposed Miller Substation.

Best regards,

Davis Wright Tremaine LLP



Olivier Jamin



Minnick·Hayner

attorneys at law

249 West Alder · P.O. Box 1757 · Walla Walla, WA 99362-0348
(509) 527-3500 · Fax (509) 527-3506 · E-mail info@minnickhayner.com

December 22, 2025

Morrow County Planning Department
P.O. Box 40
Irrigon, OR 97844

Re: Objection to Application LUD-N-088-25 - Miller Substation

To whom it may concern:

An application has been filed for approval of what is referenced to as the Miller Utility Substation. This letter is an objection to the approval of the Miller Substation application.

I am making this application on behalf of our law firm and multiple landowners and residents of Morrow County who we represent. I am a member of the Bar Associations in the states of Oregon, Washington and Idaho.

I have been working on behalf of landowners, with respect to energy production facilities and specifically wind farms and now solar and battery farms, for the last 35 years. I have represented hundreds of landowners in Oregon upon whose land facilities have been either developed or planned. I understand the industry, the present transmission capabilities, and the corridors for transmission and substations. My comments are made specifically on behalf of resident landowners.

In order for a substation to be approved in an EFU zone there are a number of criteria. This particular application does not meet two of the primary criteria.

Section 3.010, Exclusive Farm Use, EFU Zone provides in subparagraph F as follows:

10. A. A utility facility that is necessary for public service.

- a. A utility facility is necessary for public service if the facility must be sited in the exclusive farm use zone in order to provide the service.**

James K. Hayner · Steven C. Frol · Mona J. Geidl · Robert R. King · Peter D. Lucas-Roberts

H.H. Hayner (1916-2010) · W.L. Minnick (1913-1993)

Minnick · Hayner is a Washington Professional Service Corporation

Argument: The applicant has not met the primary criteria that is necessary for an approval of utility service at this site and for the benefit of the public. Specifically, the applicant has not shown any need for a utility site, since it has not demonstrated that it has any current signed land leases for energy production, either wind or solar that will need transmission lines and a substation at this site. A primary requirement for the use of a substation is that it will transmit renewable energy and will be integrated into the energy production service. The applicant has not demonstrated that it has made any application with Oregon ODEO/EFSEC for a permit for any energy production facilities in and around the Miller site. The applicant has not shown any connectivity necessary for transmission or development of energy along any corridor that might use the Miller substation. In essence, the analysis as to whether a substation is necessary is purely hypothetical. If a renewable energy project were permitted and if the Miller substation would best serve the project, then an analysis would be relevant. However, that has not been proved and no evidence has been provided.

In a similar situation for the Morgan substation, the county acknowledged this conundrum and recommended a condition of approval requiring the applicant to identify the renewable energy project in the site plan for the zoning permit. We argue that proving the existence of a renewable energy project is a prerequisite to approval. This application is made solely to obtain potential competitive advantage. This applicant anticipates that there could be energy production facilities and with that anticipation wants to competitively tie up sites for which it would then have leverage over landowners or other development companies. The county would therefore be preferring this applicant and developer over others who might actually be developing an energy project through the state permitting process. In the Morgan substation approval, the report indicated that “the county may find the applicant can comply with this criteria” that hooks up to an energy project. However, similarly the applicant may not be able to hook up to an energy project. We submit that approving the application prior to understanding what renewable project is being permitted, where lines might be necessary, and where substations might be necessary is totally inappropriate.

Under Use Standards section 10(b) provides the applicant must show an associated transmission line is necessary for public service upon a list of criteria.

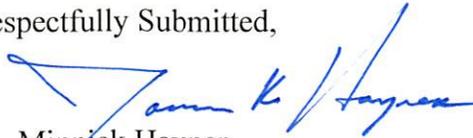
Argument: This applicant has not identified an associated transmission line with its initial material. We understand that the applicant has or may provide additional material which identifies “potential” transmission line corridors. However, this standard section refers to specifics about the transmission line corridors. We believe that the failure to identify associated transmission line for which the applicant has legal rights should be considered a failure of the application. Without an associated specific transmission line, a substation does not provide any public service. The two are linked together. The county does not

Page 3
December 19, 2025

need a substation if there is no associated transmission line. A transmission corridor for power lines is necessary in order to make an energy production project viable. Both a substation and transmission line are inextricably tied together and it is inappropriate to approve a substation on the basis that it is necessary for public service without the applicant also showing that there is a permitted or to be permitted energy project with an associated transmission line that meets the criteria of the county.

Conclusion: This application for a utility substation is premature. As a precondition to any approval, the applicant should show that there is a viable energy project that is in the process of being permitted or has been permitted, and that there is an associated transmission line necessary for public service. Those two elements are preconditions to a utility facility being necessary for the public benefit.

Respectfully Submitted,



Minnick Hayner
James K. Hayner, Attorney



PLANNING DEPARTMENT

P.O. Box 40 • 215 NE Main Ave. Irrigon, Oregon 97844
(541) 922-4624 • www.morrow.or.us/planning

PUBLIC NOTICE

February 4, 2026

Dear Adjoining Landowners, Public Agencies, and Interested Parties:

Under provisions of the Morrow County Zoning Ordinance, you are an "adjoining landowner," public agency, or interested party who may have an interest in the land use hearings listed on the attached Public Notice.

The Morrow County Planning Commission will hold a public hearing on Tuesday, February 24, 2026, at 6:00 p.m. at the Bartholomew Building located at 110 N Court St, Heppner, OR 97836. For information on remote meeting participation via Zoom please visit the Planning Department website <https://www.co.morrow.or.us/planning>

A copy of the Preliminary Findings of Fact for each application will be available on February 17th. The Planning Commission meeting materials will be available on our website at <https://www.co.morrow.or.us>.

If you would like a paper or email copy of the application materials, or if you have information or concerns that you would like to share, please contact our office. You are invited to participate in the Planning Commission hearing or submit written comments prior to or during the hearing.

If you wish to be advised of the results of the hearings, please call the office at (541) 922-4624 or email Michaela Ramirez at mramirez@morrowcountyor.gov.

Cordially,

A handwritten signature in blue ink that reads "Michaela Ramirez".

Michaela Ramirez,
Administrative Assistant

Enclosures: Public Notice
 Vicinity Map

PUBLIC NOTICE
MORROW COUNTY LAND USE HEARING

THE MORROW COUNTY PLANNING COMMISSION will hold the following hearings of public interest on Tuesday, February 24, 2026, at 6:00 p.m. at the Bartholomew Building located at 110 N Court St, Heppner, OR 97836. For information on meeting participation via Zoom, please visit the Morrow County website <https://www.morrowcountyor.gov/meetings>, click on the meeting date, and the Zoom link will be located within the agenda.

Conditional Use Permit CUP-S-395-26: Amy Haak, Applicant; Jeanne Lewis, Property Owner.

The applicant is requesting approval of a Home Occupation Conditional Use Permit to allow operation of an in-home salon business. The subject property is identified as Tax Lot 3101 of Assessor's Map 2S27E. The parcel is zoned Exclusive Farm Use (EFU) and is located outside the City of Heppner's Urban Growth Boundary (UGB). Approval criteria include Morrow County Zoning Ordinance (MCZO) Article 3, Section 3.010 (Exclusive Farm Use), and Article 6, Section 6.050.G (Standards Governing Conditional Uses—Home Occupations).

Land Use Decision LUD-N-089-25: Leif Van Acker, Kimley-Horn, Applicant, Property Owner

Amazon Data Services, Inc. The request is to site a data center campus on property zoned Airport Light Industrial (ALI). The property is described as tax lot 136 of Assessor's Map 4N 24E, located approximately 3.7 miles west of Boardman's Urban Growth Boundary, southeast of the Boardman Airport, and southwest of the Tower Road/I-84 interchange. Criteria for approval include Morrow County Zoning Ordinance (MCZO) Article 3 Section 3.076 Airport Light Industrial, ALI, Section 3.092 Airport Safety and Compatibility Overlay Zone, ASC, and Article 4 Supplementary Provisions.

Land Use Decision LUD-N-088-25: Tim Seck, Well Springs LLC, a subsidiary of MN8 Energy

Development Company, Property Owner: April Miller LePage and Nolan Miller. The request is to permit a standalone 230kV substation as a "utility facility necessary for public service" within a 13-acre building envelope on an approximately 633-acre parcel. The Miller substation is proposed on property described as tax lot 3000 of Assessor's Map 2N 23 located approximately 3 miles east of State Highway 74 on the north side of Immigrant Lane, south of Interstate 84, approximately 14 miles. Criteria for approval include MCZO Article 3 Section 3.010(D) and 3.010(F)(10).

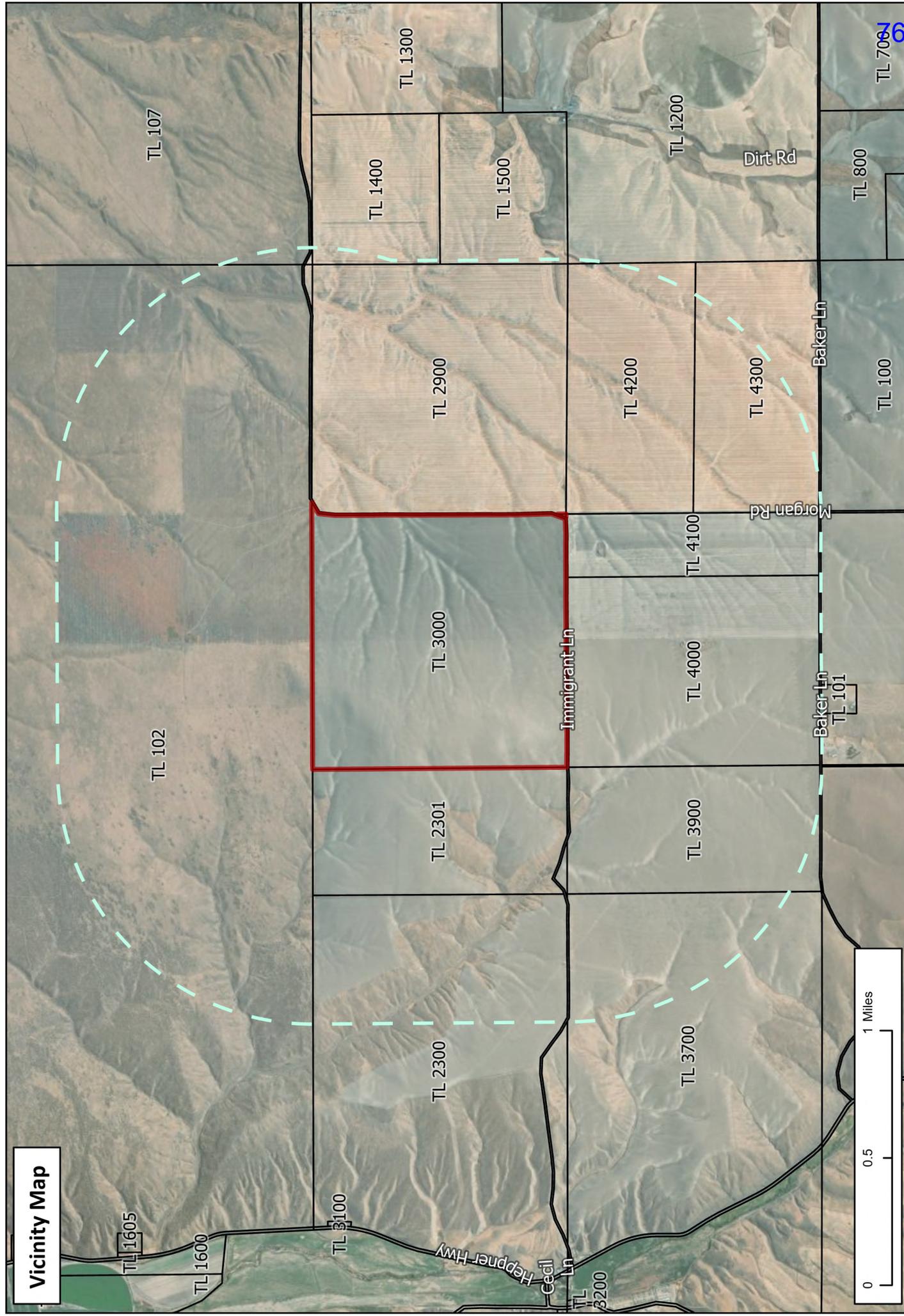
Copies of the staff reports, and all relevant documents will be available on or before February 13, 2026. For more information, please contact Kaitlin Kennedy at kkennedy@morrowcountyor.gov, Clint Shoemake or Tamra Mabbott at tmabbott@morrowcountyor.gov, or by phone at (541) 922-4624.

DATED this 29th day of January 2026

MORROW COUNTY PLANNING DEPARTMENT

Publish Date: EO – February 4th, 2026; Gazette Times – February 4th, 2026

Vicinity Map



Application Number:
LUD-N-088-25

Assessor's Map and Tax Lot:
02N23E TL3000

Property Owner:
Wells Spring Solar, LLC

Subject Property Size:
632.84ac Total

Subject Property Zone:
EFU

Applicable MCZO Section:
Section 3.010

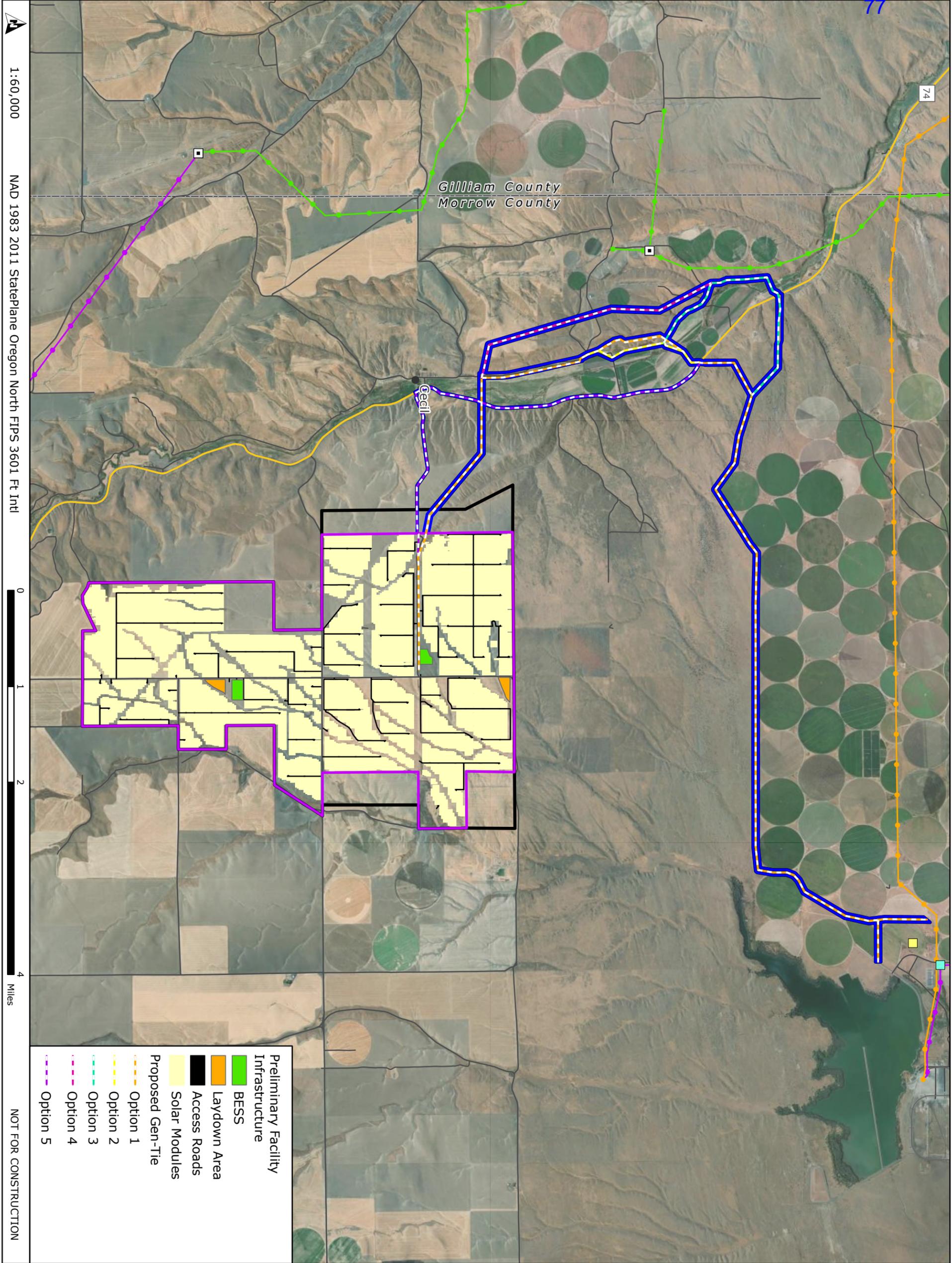
Legend:

- Morrow County Tax Lots
- Subject Parcel
- 1-Mile Notice Area
- City Limits
- Urban Growth Boundary

Scale: 0 0.5 1 Miles

Coordinate System:
 NAD 1983 HARN StatePlane Oregon North FIPS 3601
 Projection: Lambert Conformal Conic
 Datum: North American 1983 HARN
 Cartography By: Stephen Wreosics
 Friday, December 5, 2025
 Morrow County Planning Department

Map Information:
 S: Planning/LUD/North/2025

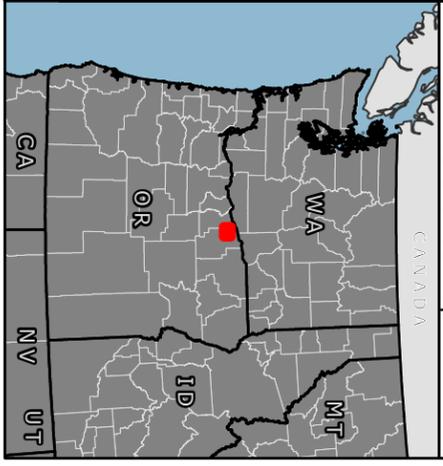


Preliminary Facility Infrastructure

- BESS
- Laydown Area
- Access Roads
- Solar Modules

Proposed Gen-Tie

- Option 1
- Option 2
- Option 3
- Option 4
- Option 5



- Facility Site Boundary
- Micrositing Corridor
- Gen-Tie Corridor
- POI: PacifiCorp Apex
- POI: PGE Grassland
- County Boundary
- City/Town
- State Highway
- Local Roads
- Substation
- 115 kV Transmission Line
- 230 kV Transmission Line
- 500 kV Transmission Line
- Railroad

Well Springs Solar Project

Figure 2

Facility Site Overview

MORROW COUNTY, OR

1:60,000
NAD 1983 2011 StatePlane Oregon North FIPS 3601 Ft Intl

0 1 2 4 Miles

NOT FOR CONSTRUCTION

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**PRELIMINARY FINDINGS OF FACT
LAND USE DECISION
LUD-N-089-25**

REQUEST: To approve a new data center campus on land zoned Airport Light Industrial (ALI).

APPLICANT: Lief Van Acker
Kimley-Horn
1 SW Columbia St., Suite 650
Portland, OR 97204

PROPERTY OWNER: Amazon Data Services, Inc.
410 Terry Ave. North
Seattle, WA 98109

PROPERTY DESCRIPTION: Tax lot 136 of Assessor's Map 4N 24E

PROJECT LOCATION: Approximately 3.7 miles west of Boardman's Urban Growth Boundary, southeast of the Boardman Airport and southwest of the Tower Road/I-84 interchange. Property is also known as Parcel 3 of Partition Plat 2022-15.

I. BACKGROUND INFORMATION:

The subject parcel is zoned Airport Light Industrial (ALI) and is located outside of the City of Boardman's existing Urban Growth Boundary (UGB). The site is approximately 98.01 acres in size and located on the south side of Bristow Lane (originally referred to as 'Airport Road B' on application materials).

The application includes the following improvements:

1. Four (4) single-story data center buildings; two at approximately 190,000 square feet in size and two at approximately 218,000 square feet in size
2. One (1) single-story 7,260 square-foot industrial water building with two associated water tanks and two associated generators
3. One (1) single-story 179 square-foot guard shack
4. Accessory site elements including security fencing, one (1) approximately 8-acre stormwater evaporation pond, two (2) approximately 2-acre wastewater evaporation pond bays, and one (1) approximately 1.4-acre septic drain field
5. Parking, loading docks, and site circulation features

A conceptual footprint for a future electrical substation is reflected in design documents. The substation is not a proposed component of this application, and a future application is anticipated from the utility provider.

II. APPROVAL CRITERIA:

Morrow County Zoning Ordinance Article 3 Section 3.076 Airport Light Industrial Zone, ALI, Section 3.092, Airport Safety and Compatibility Overlay Zone, ASC, Article 4 Supplementary Provisions, and Article 5 Section 5.020, Site Plan Review will apply. Criteria are listed below in **bold type**, followed by a response in standard type.

LUD-N-089-25

Preliminary Findings of Fact

SECTION 3.076 AIRPORT LIGHT INDUSTRIAL ZONE, ALI

- A. Airport Safety and Compatibility. Uses permitted within the ALI zone that are also located within the Airport Safety and Compatibility Overlay Zone shall comply with applicable standards in the Airport Safety and Compatibility Overlay Zone.**

The site is south of the Boardman Airport runway, outside the approach corridor, and no proposed structure penetrates an airport imaginary surface. However, because County's Airport Safety and Compatibility (ASC) Overlay applies to land beneath any FAA imaginary surfaces (regardless of whether buildings or structures penetrate an imaginary surface) and the site is beneath the Boardman Airport's mapped horizontal surface and conical surfaces, these findings address standards of MCZO Section 3.092.

- B. Notice: Timely notice of applications for permits in the ALI zone shall be provided to the Oregon Department of Transportation, the Oregon Department of Aviation, and the United States Department of Navy.**

The Oregon Department of Transportation (ODOT), Oregon Department of Aviation (ODAV), and the United States Department of the Navy were included on the notification list and provided an opportunity to comment on the application.

ODOT provided comments, as discussed in the response to Section 4.010(F) below. The applicant provided supplemental email correspondence from the Navy approving the site plan and cut sheet for the proposed light fixtures. No comments have been received to date from ODAV.

- D. Uses Subject to Administrative Review. In the ALI zone, the following uses and activities and their accessory buildings and uses are permitted upon demonstration of compliance with the standards in this section through the Site Plan Review process provided in MCZO 5.020, if determined by the Planning Director to satisfy the applicable criteria and provisions of law. Notice and an opportunity to file an appeal must be provided in the manner described in ORS 215.416. These uses may be referred to the Planning Commission for review if deemed appropriate by the Planning Director.**

1. Data Center

This application requests approval for a new data center campus, which is an allowed use per subsection D.1.

- E. Dimensional Requirements. In the ALI zone, the following dimensional standards shall apply:**

1. Minimum lot size: No limitation.

This application does not include the creation or reconfiguration of existing lot lines. This criterion is not applicable.

2. Minimum lot coverage. No limitation.

There is not an established maximum lot coverage requirement for the ALI zone, this criterion does not apply.

3. Minimum lot frontage. Minimum lot frontage shall be 300 feet on an arterial or collector street and 200 feet on a local street.

The proposal does not include the creation or reconfiguration of existing lot lines, however the subject site will have 2,244 feet of street frontage along Tower Road

and 1,851 feet of street frontage along Bristow Lane. Planning Commission may find this criterion is met.

4. Minimum setbacks.

- a. Front yard setbacks. The minimum front yard setback between a structure and a street right-of-way shall be 50 feet for an arterial street, 30 feet for a collector street, and 20 feet for a local street. Structures on corner lots shall observe the minimum front yard setback for both streets.**

The site plan identifies a 323-foot setback separating Bristow Lane from the nearest building and a 127-foot setback between Tower Road and the nearest site structure. Fences are exempt from setback requirements, provided that they don't interfere with the vision clearance requirements, per MCZO Article 7.100(B).

- b. Side and rear yard setbacks. There is no side or rear yard setback except as may be required by the Building Code or other siting requirements. Where so required, the requirements may be waived on common lot lines when adjoining lot owners enter into a joint agreement for coordinating vehicular access and parking. Party wall or adjoining building walls must meet fire separation requirements of the State of Oregon Structural Specialty Code and Fire and Life Safety Code. The joint development agreement must be approved by the Port of Morrow as to form and content and recorded in the Morrow County Clerk's office, and a copy must be provided to the Planning Department. Site features are setback a sufficient distance from the side and rear property lines. No additional standards are required, this criterion is not applicable.**
- c. Railroad spur. There is no structure setback from a railroad spur where the spur will be utilized by the permitted use. Otherwise the setback shall be 20 feet.**

There is no railroad spur near the property. This criterion does not apply.

5. Maximum building height: No maximum height. However, no structure shall be allowed to penetrate an airport imaginary surface.

The four proposed data center buildings will have a roof height of 33'-0", height of 36'-7" to top of exterior parapet walls, and all proposed water tanks are anticipated to be approximately 60'-6" in height. The proposed structures will not exceed any of the airport's imaginary surfaces—in particular, the horizontal surface and the conical surfaces which lie over the site, as shown on the site plan.

The Oregon Department of Aviation (ODAV) and Federal Aviation Administration (FAA) have been provided notice of this application, and no comments have been received to date. All structures will require confirmation that they are compliant with the ODAV standards before County issues a Zoning Permit. This is included as a Condition of Approval.

- F. Transportation Impacts. Upon request by ODOT or Morrow County, a Traffic Impact Analysis (TIA) shall be required when projects on lands zoned ALI, cumulatively, have generated more than 400 passenger car equivalent trips per day on the local street network. Heavy vehicles – trucks, recreational vehicles and buses – will be defined as 2.2 passenger car equivalents. The TIA shall include: daily vehicle trips generated by existing projects and projects that are reasonably likely to occur within the ALI zone during the planning period, peak**

hour trip distribution at affected intersections, analysis of compliance with applicable roadway performance standards, recommended mitigation measures necessary to achieve or retain compliance with applicable roadway performance standards, and identification of triggers addressing the timing of future mitigation.

A traffic impact analysis (TIA) has been provided with this application for review by Morrow County and ODOT. According to the applicant, employees accessing the site will be coming from either eastbound I-84 or westbound I-84 and exiting onto Tower Road south to Airport Road B (Bristow Lane). Traffic counts were collected at key locations along this route and a traffic study was completed to forecast the added trips to the site through the estimated construction schedule. The results of the traffic study indicate that offsite intersection or roadway improvements are not warranted at this time, based on level of service thresholds, to accommodate the added trips from the development.

The county traffic engineer of record, Todd Mobley, reviewed the TIA and found that the project meets trip generation thresholds generally, however, he also made several recommendations summarized here:

1. Trip Generation: An estimate of construction traffic volumes, car/truck mix, and duration should be provided so that the County and surrounding stakeholders can better understand construction impacts.
2. Trip Distribution: Based on the 2024 traffic counts, for inbound traffic, approximately 45% travels from the west along I-84 and 55% travels from the east along I-84. For outbound traffic, approximately 35% travels to the west and 75% travels to the east. Provide justification for the assumed east/west split on I-84 – 90% traveling to and from the east, and 10% traveling to and from the west.
3. Trip Distribution: Existing volumes, particularly at Tower Road at Kunze Lane intersection, show some trips traveling to and from the south on Tower Road, but the assumed site trip distribution is 100% traveling to and from the north. Provide justification for the assumed north/south split on Tower Road.
4. Operational Analysis: Only PM peak hour analysis was provided but AM peak trip rates are higher. Provide justification for omitting the AM peak hour.
5. Safety Analysis: No left-turn lane warrant analysis was included. We recognize that volumes (particularly in January) are low, but other considerations are heavy vehicles, farm equipment, and peak harvest conditions. Provide a left-turn warrant analysis based on the PM peak hour build volumes.

AWS submitted a memo and revised TIA, attached to these findings, addressing the issues identified by Todd Mobley. Public Works, Planning and Todd Mobley discussed the revised TIA and continue to see the value in a right-turn lane to mitigate traffic impacts during the construction phase. Planning Commission could request a right-turn lane analysis to ensure queuing does not impede construction traffic flow to the south. This is listed as a Condition of Approval for Planning Commission to consider.

The Morrow County Public Works Director has requested a Road Use Agreement (RUA) to address impacts to the transportation system, specifically Tower Road, anticipated during project construction. AWS has agreed to entering into a RUA. This is recommended and included as a Condition of Approval.

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Preliminary Findings of Fact

An email from the Oregon Department of Transportation dated December 30, 2025, is attached to these findings, indicating no mitigation is recommended for ODOT facilities, although they also suggest a Road Use Agreement with the county to mitigate impacts during the construction phase.

This area of Tower Road is part of an Interchange Area Management Plan (IAMP) that is currently underway.

SECTION 3.092 AIRPORT SAFETY AND COMPATIBILITY OVERLAY ZONE, ASC

D. Notice of Land Use and Permit Applications within Overlay Zone Area. Except as otherwise provided, written notice of applications for land use or limited land use decisions in the area within this overlay zone, including comprehensive plan or zoning amendments, shall be provided to the airport sponsor and the Department of Aviation in the same manner as notice is provided to property owners entitled by law to written notice of land use or limited land use applications.

1. Notice shall be provided to the airport sponsor and the Department of Aviation when the property or a portion thereof that is subject to the land use or limited land use application is within 5,000 feet of the sides or ends of the runway.

Notice and an opportunity to comment were provided to the Oregon Department of Aviation and the Port of Morrow, which is the airport sponsor. The applicant also intends to submit Form 7460-1 Notice of Construction to the FAA within 45 days of construction. This is recommended and included as a Condition of Approval.

2. Notices required by this section need not be provided to the airport sponsor or the Department of Aviation where the land use or limited land use application:

- a. would only allow structures less than 35 feet in height, measured from grade;**
- b. involves property located entirely outside the approach surface;**
- c. does not involve uses that emit smoke dust, or steam; sanitary landfills or water impoundments; or radiotelephone, television or similar transmission facilities or electrical transmission lines; and**
- d. does not involve wetland mitigation, creation, enhancement or restoration.**

The applicant will be required to provide evidence of conformance with the policies and procedures of ODAV and the FAA as applicable prior to the Certificate of Occupancy. This is recommended and included as a Condition of Approval.

E. Height Limitations on Allowed Used in Underlying Zone. All uses permitted by the underlying zone shall comply with the height limitations in the Section unless standards of the underlying zone are more restrictive.

- 1. Except as provided in paragraph 2, no structure or tree or other object of natural growth shall be allowed to penetrate an airport imaginary surface.**
- 2. For areas within airport imaginary surfaces but outside of the approach and transition surfaces, where terrain is at higher elevations than the airport runway surfaces where existing structures and permitted**

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Preliminary Findings of Fact

development penetrate the airport imaginary surfaces, a local government may authorize structures up to 35 feet in height.

No proposed structure, buildings or vegetation penetrates an airport imaginary surface. The proposed buildings and tanks are outside the airport's approach zone, the runway protection zone, and the transitional surfaces. No proposed structures exceed the horizontal surface of 150 feet above the runway elevation, as shown in the site plan, nor any conical surface. Planning Commission may find these criteria are met.

F. Procedures. An application for a land use or limited land use approval on property within this overlay zone shall provide the following information in addition to any other required information:

- 1. A map or drawing showing the location of the property in relation to the airport imaginary surfaces.**
- 2. Elevation profiles and a site plan, drawn to scale, including the location and height of all existing and proposed structures, measured from existing grade.**

A site plan drawing has been provided showing the subject property location in relation to the airport imaginary surfaces, including elevation profiles. In addition, the applicant provided a map that shows the location of the site in relation to the airport imaginary surfaces using the County's GIS mapping tool, which maps the FAR Part 77 Airspace surfaces for this airport. Notice and an opportunity to comment was provided to ODAV and FAA.

G. Land Use Compatibility Requirements. Any land use allowed in the underlying zone may be permitted in the overlay zone, subject to the following standards:

- 1. The user shall comply with the height standards in Section (E) of this Chapter.**

The height standards of this chapter are addressed above. Planning Commission may find this criterion is met.

- 2. The use shall not include a place of public assembly.**

The application does not include a place of public assembly as defined in OAR 660-013-020. Planning Commission may find this criterion is met.

- 3. The uses shall not create a bird attractant. If the airport sponsor determines that there is a potential for attracting birds, the applicant shall include a study demonstrating that any hazard to use of the airport is mitigated.**

The applicant provided a bird hazard analysis report prepared by Craig Turner, PWS at Pacific Habitat Services, Inc., that is attached to these findings. The applicant states this report demonstrates that any potential hazard to use of the airport is mitigated through design measures incorporated into the project. The applicant also provided correspondence attached to these findings from the Port of Morrow, the airport sponsor, agreeing with the conclusions of this report, and ODAV, indicating the proposal appears to meet the state-level requirements. Notice and an opportunity to comment has been provided to the FAA accordingly.

It is recommended and listed as a Condition of Approval that the applicant shall obtain written approval from (1) the Port of Morrow, as airport sponsor; (2) ODAV, and (3) the FAA regarding the proposed water impoundments. For

purposes of this condition, written lack of objection or concurrence with the Pacific Habitat Services, Inc. memorandum dated January 28, 2026, shall constitute written approval

4. The use shall not cause light or glare that projects lighting directly onto a runway or taxiway, or imitates airport lighting.

The applicant states this use will not cause light or glare to be cast directly onto a runway or imitate airport lighting, because all site lighting proposed on the site will be downcast and shielded from emitting light upwards. Light pole locations are shown on the site plan. The applicant also provided an email from Kimberly Peacher, Liaison Officer, NAS Whidbey Island, confirming the lighting design should not interfere with Naval aircraft operations. Notice and an opportunity to comment has been provided to the ODAV and FAA accordingly.

It is recommended and included as an ongoing Condition of Approval that the applicant shall comply with this standard throughout construction and operation. Additionally, it is recommended and included as a Condition of Approval that the applicant shall submit a photometric lighting plan and glare analysis prior to Zoning Permit approval.

5. The use shall not be a source of smoke, dust, or steam.

The planned facility is not anticipated to create smoke, dust, or steam, as described further in the applicant's February 6, 2026, supplemental memo. Notice and an opportunity to comment has been provided to the ODAV and FAA accordingly.

6. The use shall not cause electrical interference with the airport operations, or in the case of proposed or expanded communications or transmission facilities, the Department of Aviation and the FAA shall approve the facility.

The applicant states the planned datacenter facility does not emit electrical signals that could interfere with the airport operations. Notice and an opportunity to comment has been provided to the ODAV and FAA accordingly. The proposed on-site substation and any transmission lines serving this datacenter campus will be owned and operated by Umatilla Electric Cooperative and will be under a separate application coordinated with the FAA.

7. The use shall not create a new or expanded water impoundment within 5,000 feet of the edge or end of a runway larger than one-quarter acre in size unless necessary for airport operations or approved in writing by the airport sponsor, the Department of Aviation, and the FAA.

The applicant states the proposed stormwater evaporation pond is approximately 3,620 to 4,550 feet from the airport runway and the proposed non-contact cooling water ponds are approximately 4,700 to 5,280 feet from the airport runway.

It is recommended and listed as a Condition of Approval that the applicant shall obtain written approval from (1) the Port of Morrow, as airport sponsor; (2) ODAV, and (3) the FAA regarding the proposed water impoundments. For purposes of this condition, written lack of objection or concurrence with the Pacific Habitat Services, Inc. memorandum dated January 28, 2026, shall constitute written approval.

H. Prohibited Uses. Notwithstanding the underlying zoning, the following uses are prohibited in the Airport Safety and Compatibility Overlay Zone:

1. New residential development.

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Preliminary Findings of Fact

The application does not include new residential development. Planning Commission may find this criterion is met.

2. New Public Assembly Facilities.

The application does not include a new public assembly facility as defined in OAR 660-013-020. Planning Commission may find this criterion is met.

I. Nonconforming Uses.

1. The regulations prescribed by this Zone shall not be construed to require the removal, lowering, or other changes or alterations of any structure or tree not conforming to the regulations as of the effective date of this Section, or otherwise interfere with the continuance of a nonconforming use. Nothing contained herein shall require any change in the construction, alteration, or intended use of any structure that was approved under the requirements of the previous Airport Approach or Airport Hazard zones, including those approvals that expired or that became void. Such approvals are hereby validated as consistent with this Airport Safety and Compatibility Overlay and no further approval is required under the terms of the zoning ordinance.

2. Marking and Lighting - Notwithstanding the preceding provision of this Section, the owner of any existing non-conforming structure or tree is hereby required to permit the installation, operation, and maintenance thereon of such markers and lights as shall be deemed necessary by the Morrow County Court, to indicate to the operators of aircraft in the vicinity of the airport the presence of such airport hazards. Such markers and lights shall be installed, operated and maintained at the expense of the owner of the public use airport.

The subject site does not contain any existing nonconforming uses, structures, or vegetation that were lawfully established. Any unlawful structures or vegetation identified by the applicant or outside agencies shall be brought into conformance with these standards. This requirement is included as an ongoing Condition of Approval.

ARTICLE 4 SUPPLEMENTARY PROVISIONS

SECTION 4.010. ACCESS

A. Minimum Lot Frontage Requirement. Every lot shall abut a street, other than an alley, for at least 50 feet, except on cul-de-sacs where the frontage may be reduced to 30 feet.

The subject site will have 2,244 feet of street frontage along Tower Road and 1,851 feet of street frontage along Bristow Lane. Planning Commission may find this criterion is met.

B. Access Permit Requirement. Where access to or construction on a county road is needed, an access permit or right-of-way permit from Morrow County Public Works department is required subject to the requirements in this Ordinance. Where access to a state highway is needed, an access permit from ODOT is required as part of the land use application. Where access is needed to a road managed by the Forest Service or other entity, an access permit or other authorization from the appropriate entity shall be required as part of the land use application.

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Preliminary Findings of Fact

Access to the site will be provided from Bristow Lane, which is owned by the Port of Morrow. Morrow County Public Works Director has requested both the construction and production entrance(s) be at least 300 feet west of Tower Road (a county owned road) to align with Morrow County access management standards. Preliminary site plans indicate the entrance closest to Tower Road is approximately 850 feet west.

- C. Emergency Vehicle Access. It is the responsibility of the landowner to provide appropriate access for emergency vehicles at the time of development. A dead-end private street exceeding one hundred-fifty (150) feet in length shall have an adequate turn around facility approved by the appropriate Fire Marshal or, if the Fire Marshal fails to review the private street, approval by the Building Official or his designee.**

Bristow Lane connects Tower Road and Boeing Road and is not a dead-end private street. Notice and an opportunity to comment has been provided to the Fire Marshal as well as the Boardman Rural Fire Protection District.

- D. Easements and Legal Access. All lots must have access onto a public right of way. This may be provided via direct frontage onto an existing public road, a private roadway, or an easement. Minimum easement requirements to provide legal access shall be as follows:**

- 1. 1000' or less, a minimum easement width of 20'**
- 2. More than 1000', a minimum easement width of 40'**
- 3. Parcels where 3 or more lots share an access (current or potential), a minimum easement of 60'.**

This lot has direct frontage and approved access onto Bristow Lane, which complies with the minimum TSP standards for the anticipated traffic volume.

SECTION 4.040. OFF-STREET VEHICLE PARKING REQUIREMENTS.

Because vehicle parking facilities can occupy large amounts of land, they must be planned and designed carefully to use the land efficiently while maintaining the visual character of the community. At the time of construction, reconstruction, or enlargement of a structure, or at the time a use is changed in any zone, off-street parking space shall be provided as follows unless greater requirements are otherwise established. When the requirements are based on the number of employees, the number counted shall be those working on the premises during the largest shift at peak season. Fractional space requirements shall be counted as a whole space. Off-street parking spaces may include spaces in garages, carports, parking lots, and/or driveways if vehicles are not parked in a vehicle travel lane (including emergency or fire access lanes), public right-of-way, pathway or landscape area. The County may allow credit for "on-street parking", as provided in Section 4.050. For uses not specified in Table 4.040-1, parking requirements shall be determined by the use in Table 4.040-1 found to be most similar in terms of parking needs.

TABLE 4.040-1 MINIMUM PARKING REQUIREMENTS

Use- Industrial- Storage warehouse, manufacturing establishment, rail or trucking freight terminal (F.1): One space per employee on the largest shift.

Each data center building is anticipated to require a maximum of 50 employees during the largest shift, totaling 200 required spaces, with 12 ADA-compliant. The application proposes 251 spaces adjacent to the applicable buildings. The site plan includes 3 standard ADA spaces per datacenter building, 1 ADA-compliant electric vehicle (EV)

space per datacenter building, 1 ADA space at the industrial wastewater building, and 1 ADA space at the guard shack. In total, 18 ADA-compliant spaces are proposed, adequate to meet this requirement.

SECTION 4.045. BICYCLE PARKING REQUIREMENT.

This chapter also provides standards for bicycle parking, because children as well as adults need safe and adequate spaces to park their bicycles throughout the community. All uses subject to Design Review that are located within an Urban Growth Boundary shall provide bicycle parking in conformance with the following guidelines. Uses outside an Urban Growth Boundary are encouraged to provide bicycle parking based on these guidelines.

- A. Number of Parking Spaces. A minimum of two bicycle parking spaces is recommended for each use with greater than 10 vehicle parking spaces. The following additional standards apply to uses within an Urban Growth Boundary, and are recommended for other areas of the County:**

The applicant did not identify bicycle parking spaces on the proposed site plan. However, because the subject site is not within an Urban Growth Boundary, bicycle parking is not required, therefore these provisions do not apply.

SECTION 4.050. OFF-STREET PARKING AND LOADING. Buildings or structures to be built or substantially altered which receive and distribute materials and merchandise by trucks shall provide and maintain off-street loading berths in sufficient number and size to handle adequately the needs of the particular use. Off-street parking areas used to fulfill the requirements of this Ordinance shall not be used for loading and unloading operations except during periods of the day when not required to care for parking needs. General provisions are as follows:

- A. The provisions and maintenance of off-street parking and loading space is a continuing obligation of the property owner. Should the owner or occupant of any lot or building change the use to which the lot or building is put, thereby increasing off-street parking and loading requirements, it shall be a violation of this Ordinance to begin or maintain such altered use until such time as the increased off-street parking or loading requirements are complied with.**

The site plan identifies parking and loading spaces sufficient to accommodate the number of employees expected during the largest shift adjacent to each of the proposed buildings. Final Zoning Permit approval for each of the future buildings will require compliance with the standards of this chapter.

- B. Requirements for types of buildings and uses not specifically listed in this Ordinance shall be determined by the Planning Commission based upon the requirements for comparable use listed.**

Planning commission may concur with the applicant's analysis that the proposed use is most similar to "industrial: storage warehouse, manufacturing establishment, rail or trucking freight terminal." Unless otherwise determined by the Planning Commission, the applicant shall provide a minimum of one parking space per employee during the largest shift.

- C. In the event multiple uses occupy a single structure or parcel of land, the total requirements for off-street parking shall be the sum of the requirements of each use computed separately.**

This application does not include multiple uses. This criterion does not apply.

- D. Owners of two or more uses, or parcels of land may agree to utilize jointly the same parking and loading spaces when the hours of operation do not overlap, provided that satisfactory legal evidence is presented to the County in the form of deeds, leases, or contracts to establish the joint use.**

This application does not propose joint use. This criterion does not apply.

- E. Off-street parking spaces for dwellings shall be located on the same parcel with the dwelling. Other required parking spaces for residential uses shall be located not farther than 500 feet from the building or use they are required to serve, measured in a straight line from the building.**

This application does not propose residential use. This criterion does not apply.

- F. Required parking spaces shall be available for the parking of passenger automobiles of residents, customers, patrons, and employees only, and shall not be used for storage of vehicles or materials or for the parking of trucks used in conducting the business or use.**

Vehicle or material storage is not a permitted use of the proposed parking spaces. Planning Commission may find this criterion is met.

- G. Parking designated exclusively for people with disabilities shall be provided in conformance with the Americans with Disabilities Act.**

Each data center building is anticipated to require a maximum of 50 employees during the largest shift, totaling 200 required spaces, with 12 ADA-compliant. The application proposes 251 spaces adjacent to the applicable buildings. The site plan includes 3 standard ADA spaces per datacenter building, 1 ADA-compliant electric vehicle (EV) space per datacenter building, 1 ADA space at the industrial wastewater building, and 1 ADA space at the guard shack. In total, 18 ADA-compliant spaces are proposed, adequate to meet this requirement.

SECTION 4.060. DESIGN AND IMPROVEMENT STANDARDS – Parking Lots

- A. Except for single-family and duplex dwellings, areas used for parking for more than two vehicles shall have durable and dustless surfaces adequately maintained.**

The proposed parking areas will be paved. Planning Commission may find this criterion is met.

- B. Except for parking in connection with single-family and duplex dwellings, parking and loading areas adjacent to or within a residential zone or adjacent to a dwelling shall be designed to minimize disturbance to residents by the erection between the uses of a sight obscuring fence or planted screen of not less than six (6) feet in height except where vision clearance is required.**

The subject site is not within a residential zone or adjacent to a dwelling. This criterion is not applicable.

- C. Parking spaces along the outer boundaries of a parking lot shall maintain a minimum setback from the property line of five feet, unless a greater setback is specified for a structure in the zoning district and shall be contained by a bumper rail or by a curb which is at least four inches high.**

The proposed parking areas are not located within five feet of the property line, or within the designated setbacks within the ALI zone. Planning Commission may find this criterion is met.

- D. Artificial lighting which may be provided shall not shine or create glare in any residential zone or on any adjacent dwelling.**

The subject site is not located adjacent to a residential zone or lawfully established dwelling. This criterion is not applicable. A copy of this notice was provided to Naval Air Station Whidbey Island due to the proximity to the Naval Weapons Systems Training Facility (U.S. Navy Bombing Range). Although the Bombing Range is NOT a residential zone, lighting can conflict with air traffic. Navy jets fly over this area, and the range is in active use.

- E. Access aisles shall be a minimum of 24 feet wide for two-way traffic. The minimum aisle width for emergency vehicle access (with one-way traffic) is 20 feet.**

The applicant states the proposed two-way drive aisles are a minimum of 30 feet in width and one-way drive aisles are a minimum of 21 feet in width. Planning Commission may find this criterion is met.

- F. Except for single-family and duplex dwellings, groups of more than two parking spaces shall be so located and served by a driveway that their use will require no backing movements or other maneuvering within a street right-of-way other than an alley.**

The proposed parking areas do not require vehicle maneuvering within a street right-of-way. Planning Commission may find this criterion is met.

- G. Service drives to off-street parking areas shall be a minimum of 24 feet wide for two-way traffic flow, and 20 feet wide for one-way traffic flow. The number of service drives shall be limited to the minimum that will accommodate anticipated traffic.**

The site layout accommodates vehicular circulation throughout the development. These service drives are approximately 30-feet in width. The proposed locations of service drives appear to be reasonable. Planning Commission may find the application complies with this criteria.

- H. Driveways shall maintain minimum sight distance per the standards of Section 4.020 of this Ordinance.**

The applicant's TIA finds that the proposed access intersection sight distances will meet AASHTO intersection requirements and are not a concern. Planning Commission may find this criterion is met.

- I. The standards set forth in the table below shall be the minimum for parking lots approved under this Ordinance (all figures are in feet except as noted).**

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Preliminary Findings of Fact

The letters in the first row of the table correspond to the letters in the following diagram.

TABLE 4.060-1 OFF-STREET PARKING DESIGN STANDARDS

The proposed development incorporates 30-degree parking, which is not dimensionally specified in the MCZO. However, these parking spaces provide 9 feet by 19 feet minimum of vehicular space without encroaching into the drive aisles. Planning Commission may find this criterion is met.

ARTICLE 5 DEVELOPMENT PERMITS

SECTION 5.020 SITE PLAN REVIEW

E. Review Criteria. Applications processed under this section shall comply with the following criteria, as applicable:

- 1. The standards listed in MCZO 5.010(D) are, or can be, met.**

These standards are addressed in the criteria above and will be reviewed as part of the Zoning Permit process.

- 2. Water is or will be available to the site at a quantity and quality adequate for the proposed use. New developments must either (1) provide an estimated annual water usage, and identify the necessary OWRD authorizations required to serve the estimated water need or (2) submit a letter, notice, or memorandum of understanding from the service provider evidencing a commitment to serve the site, which shall indicate the source of the water (e.g., surface water, existing water right, etc.) and a targeted delivery for water to the site.**

The applicant states adequate water service will be provided by the Port of Morrow through a water main along Airport Road B (Bristow Lane). The applicant provided the attached letter of intent from the Port of Morrow, dated December 21, 2023, to provide up to 26 million gallons of water annually. The applicant indicated this is adequate for the site. Planning Commission may find this criterion is met.

- 3. Adequate sewage disposal and wastewater management can be provided for the proposed use as determined by the service provider or by demonstrating compliance with applicable review authority standards, as set forth below. For new developments that will rely on third-party service providers for sewer and/or wastewater disposal, the applicant may satisfy this criterion by submitting a letter, notice, or memorandum of understanding from the service provider evidencing a commitment to serve the site. For new developments that will rely on on-site septic and/or industrial wastewater and/ or non-contact cooling water disposal and/or treatment, the applicant may satisfy this criterion by identifying the necessary ODEQ permits, as required by the state regulations, to be obtained prior to commencement of the proposed use or certificate of occupancy being granted.**

Sanitary Sewer:

There is currently no sanitary sewer service to the site. The applicant proposes an on-site septic field to handle the domestic sewer flows. Since the project

generates more than 2,500 gallons per day of domestic sanitary sewer, the septic system will be permitted through the Oregon Department of Environmental Quality (ODEQ). The applicant provided the attached letter from the ODEQ, dated June 11, 2025, with the determination that a septic field is feasible in the location specified.

Industrial Wastewater:

The application states the Port of Morrow is currently designing a wastewater treatment facility in the vicinity of the site which is planned to handle industrial wastewater (cooling water) discharge from this campus by 2027. Evidence of this agreement was not provided, regardless, the applicant states on-site wastewater pond storage will be permitted through ODEQ and is adequate to manage the site's contact cooling water needs until such time that the Port of Morrow is able to deliver an off-site discharge system. Applicant has not provided evidence that this permit has been filed.

Applicant shall provide evidence that all applicable state agency permits have been granted for the planned onsite water, wastewater, and septic facilities prior to the Certificate of Occupancy. This is included as a Condition of Approval.

4. Applicant's proposed plans for electrical services and solid waste disposal are adequate for the proposed use, as demonstrated by complying with applicable submittal requirements in Section F.

The applicant states electrical services will be provided by a substation in the northwest corner of the property as conceptually reflected in site plans. The applicant provided the attached email from Umatilla Electric Cooperative (UEC), dated May 7, 2025, indicating UEC's intent to construct electrical facilities to serve the project.

The applicant indicates they will utilize onsite compactor(s) and dumpsters. Commercial solid waste disposal services are available in this area. Planning Commission may find this criterion is met.

5. Development in hazard areas identified in the Morrow County Comprehensive Plan, Natural Hazard Mitigation Plan, or Community Wildfire Protection Plan shall comply with all applicable requirements.

The applicant states there is an existing wetland located on the southeast corner of the site, adjacent to Tower Road that is approximately 1.3 acres in size. The wetland delineation was submitted to the U.S. Army Corps of Engineers (USACE) and it was determined that it is not considered a waters of the United States and an AJD was issued on April 2, 2025 (Corps No. NWP-2025-105).

Additionally, the wetland delineation was submitted to the Oregon Department of State Lands (DSL) and received approval on September 17, 2025, for WD# 2025-0112. DSL concurred with the wetland boundaries as mapped and identified that the wetland is subject to permit requirements of the state Removal-Fill Law. The project proposes no impacts to the existing wetland and maintains a 50' buffer from any improvements, therefore no additional wetland permitting is expected. Planning Commission may find this criterion is met.

6. Development shall comply with Section 3.200 Significant Resources Overlay Zone or 3.300 Historic Buildings and Sites protecting inventoried significant natural and historic resources, if applicable.

No Goal 5 resources are inventoried on this property. No other information or evidence about the presence of these resources is known. However, the applicant provided the attached letter from the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), dated September 27, 2024, indicating mitigation efforts have been agreed upon regarding any property of religious and cultural significance to the CTUIR. Notice of this application and an opportunity to comment were provided to the CTUIR.

7. Development in flood plains shall comply with MCZO Section 3.100 Flood Hazard Overlay Zone.

Per FEMA firm map #41049C0125D effective 12/18/2007 the site is located in Flood Zone X, designated as an area outside the 0.2% annual chance floodplain. The nearest floodways are the Columbia River approximately 1.7 miles to the north, and Sixmile Canyon approximately 3.1 miles to the southwest. Therefore, this site is not anticipated to be affected by floodwaters. Planning Commission may find this criterion is met.

8. Development in the Airport Safety and Compatibility Overlay Zone (ASC) is compliant with the standards and notice requirements identified in Section 3.092.

Development on the site will comply with all standards of MCZO Section 3.092, Airport Safety and Compatibility Overlay Zone (ASC) as previously discussed.

9. The transportation system provides for the safe, orderly, and efficient circulation of traffic into and out of the proposed development, and negative impacts to the transportation system are mitigated adequately to achieve consistency with adopted County standards. County transportation facilities shall be located, designed, and constructed in accordance with the design and access standards in the Morrow County Transportation System Plan. This review criterion is satisfied if the applicant has entered into a development and/or mitigation agreement(s) pursuant to ORS 94.504, executed by the Board of Commissioners, under which applicant has agreed to (i) provide mitigation proportional and reasonably related to the traffic impacts caused by the proposed development or (ii) pay a fee-in-lieu of mitigation, equal to the estimated cost of designing and constructing the identified mitigation.

See discussion on transportation system impacts in the response to MCZO Section 3.076(F) above.

III. AGENCIES & OTHERS NOTIFIED: Mike Gorman, Tax Assessor; Glenn McIntire, Building Official; Toni Connell, City of Boardman; Steve Freeland, Emergency Manager; Eric Imes, Public Works Director; Corey Sweeney, Weed Supervisor; Morrow County Sheriff's Office; Oregon Department of Environmental Quality, Eastern Oregon Region Office & Bend Office; Leigh McIlvaine and Dawn Hert, Oregon Department of Land Conservation & Development; Marty Broadbent, Fire Marshal; Oregon Health Authority – Drinking Water; Brandon Pike, Oregon Department of Aviation; Teresa Penninger, Oregon Department of Transportation; Chris Kowitz; Oregon Water Resources

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Preliminary Findings of Fact

Department; Greg Silbernagel, Watermaster; Jessica Wuttke-Campoamor, Federal Aviation Administration; Kimberly Peacher, Liaison Officer, NAS Whidbey Island; Brandon Hammond, City of Boardman; Teara Farrow Ferman, CTUIR; Jacob Cain, Port of Morrow; Mary Killion, Friends of Morrow County; Kelly Doherty

- IV. PROPERTY OWNERS & AGENCIES NOTIFIED OF APPLICATION:** December 10, 2025
- V. 14-DAY COMMENT PERIOD ENDED:** December 24, 2025
- VI. COMMENTS RECEIVED:**
Email comments were received from Kelly Doherty on December 24, 2025, prior to the deadline (see attached). These comments concern MCZO Section 3.076 Airport Light Industrial Zone and 3.092 Airport Safety and Compatibility Overlay Zone criteria as well as groundwater contamination and include FAA Advisory Circular 150/5200-33C as reference. The comments were based on the information mailed during the initial Administrative Review process.
- VII. PROPERTY OWNERS & AGENCIES NOTIFIED OF HEARING:** February 4, 2026
- VIII. LEGAL NOTICE PUBLISHED:** February 4, 2026
East Oregonian
February 4, 2026
Heppner Gazette-Times
- IX. HEARING DATE:** February 24, 2026
Bartholomew Building
Heppner, OR
- X. NOTICE OF DECISION:** *(To be determined)*
- XI. DECISION OF THE PLANNING COMMISSION:**
- Option #1: The Planning Commission may deny Land Use Decision LUD-N-089-25.
- Option #2: The Planning Commission may approve Land Use Decision LUD-N-089-25 subject to the following **CONDITIONS OF APPROVAL:**
1. **Precedent Conditions.** Prior to building permit approval, a Rural Address and final Zoning Permit is required for each building. The ministerial Zoning Permit may be granted if the following conditions of approval are met:
 - a. Final site layout and features are consistent with the site plan approved herein.
 - b. A Road Use Agreement, approved by the Morrow County Public Works Director must be completed to address and coordinate impacts to the transportation system anticipated during project construction.

LUD-N-089-25

Preliminary Findings of Fact

- c. Construct a temporary right-turn lane to mitigate construction traffic or provide a right-turn lane analysis to show a right-turn lane is not warranted during construction.
 - d. Applicant shall submit a photometric lighting plan and glare analysis.
2. **Subsequent Conditions.** Prior to the final Certificate of Occupancy for the first building, the following conditions of approval must be met:
- a. Facilities for potable, industrial, and emergency suppression water have been permitted by applicable agencies and are constructed and operational.
 - b. Electric service is operational and is serving the approved use.
 - c. If FAA notice is required pursuant to the FAA Notice Criteria Tool for any building, applicant shall provide confirmation of the resulting aeronautical determination letters from the FAA and ODAV prior to final Certificate of Occupancy for such building.
 - d. Applicant shall obtain written approval from (1) the Port of Morrow, as airport sponsor; (2) ODAV, and (3) the FAA regarding the proposed water impoundments. For purposes of this condition, written lack of objection or concurrence with the Pacific Habitat Services, Inc. memorandum dated January 28, 2026, shall constitute written approval.
3. **Ongoing Conditions.** The following conditions of approval are ongoing, and must be adhered to for the duration of facility operations:
- a. The facility shall at no point during construction or operation cause light or glare that project lighting directly onto the Boardman Airport runway or taxiway or imitates airport lighting.
 - b. Any unlawful structures or vegetation identified by the applicant or outside agencies shall be brought into conformance with the current standards of MCZO Section 3.092(l).

Stacie Ekstrom, Chair

Date

ATTACHMENTS:

Vicinity Map

Property Owner List

Application

Site Plan

Airport Elevation Profile

Airport Overlay Map

Application Narrative (Administrative Review Memo), dated November 20, 2025

Completeness Review Response from Kimley-Horn, dated December 5, 2025

TIA Review Letter from AKS Engineering & Forestry, LLC, dated January 22, 2026

TIA Review Response Letter from Kimley-Horn, dated February 5, 2026

Revised Transportation Impact Analysis (TIA), dated February 2026

LUD-N-089-25

Preliminary Findings of Fact

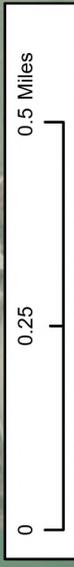
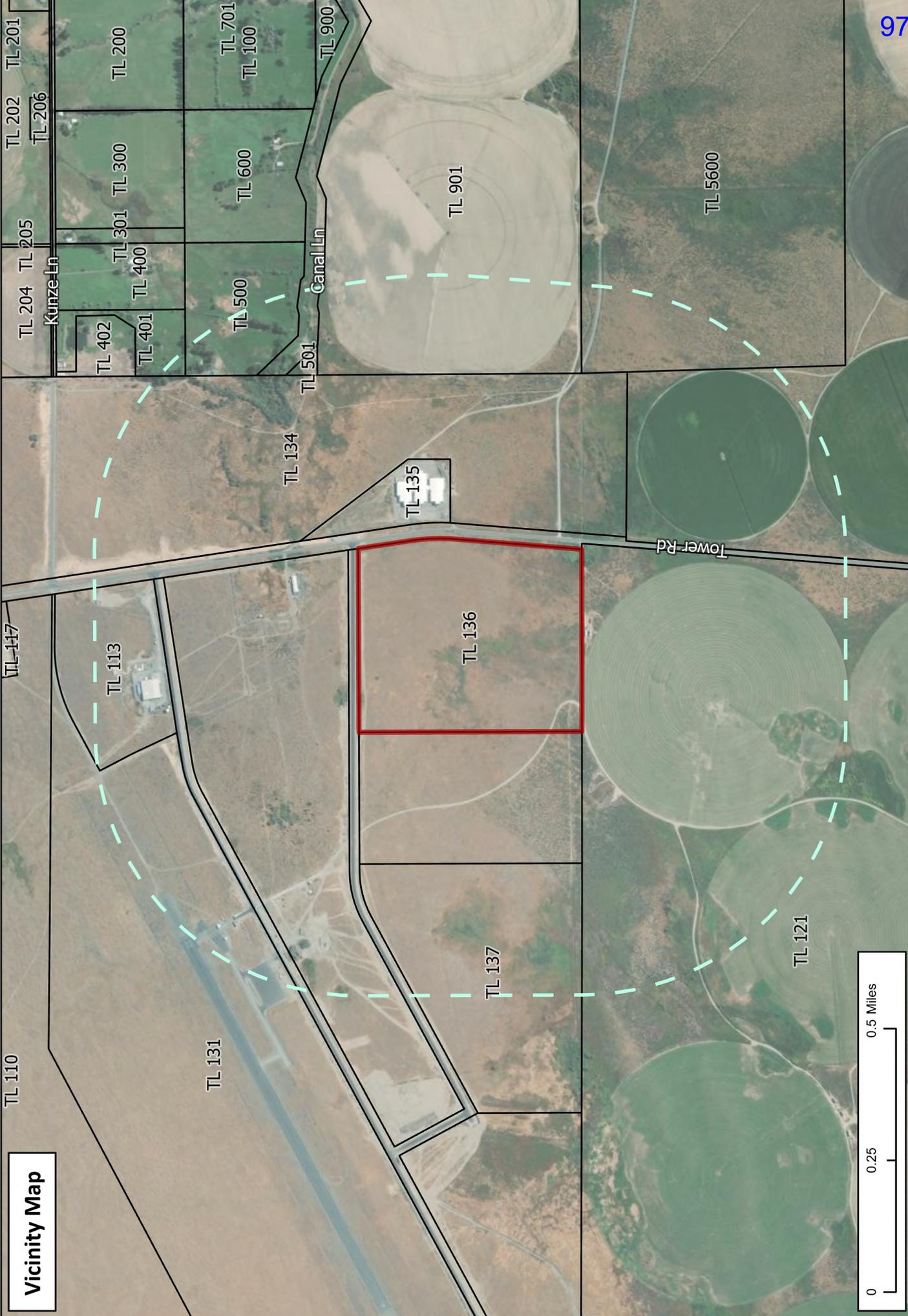
Email from the Oregon Department of Transportation, dated December 30, 2025
Letter of Intent to Serve Water from the Port of Morrow, dated December 21, 2023
On-site Septic Evaluation from the Oregon DEQ, dated June 11, 2025
Email of Intent to Serve Power from Umatilla Electric Cooperative, dated May 7, 2025
Pacific Habitat Services Bird Mitigation Study, dated January 28, 2026
Letter from the Port of Morrow re: Bird Mitigation Study, dated February 10, 2026
Letter from Brandon Pike, ODAV, re: Bird Mitigation Study, dated February 12, 2026
Email from Kimberly Peacher, US Navy, re: Lighting, dated November 21, 2025
Email comments from Kelly Doherty, dated December 24, 2025

DRAFT

LUD-N-089-25

Preliminary Findings of Fact

Vicinity Map



Application Number:	LUD-N-089-25
Subject Property Size:	98.01ac Total
Assessor's Map and Tax Lot:	4N24E TL136
Property Owner:	Amazon Data Services
Subject Property Zone:	ALI
Applicable MCZO Section:	Section 3.076

- Subject Parcel
- Morrow County Tax Lots
- City Limits
- Urban Growth Boundary
- 0.5-Mile Notice Area

S:Planning/LUD/North/2025

Coordinate System:
 NAD 1983 HARN StatePlane Oregon North FIPS 3601
 Projection: Lambert Conformal Conic
 Datum: North American 1983 HARN

Cartography By: Stephen Wreosics
 Friday, December 5, 2025
 Morrow County Planning Department

ASSESSOR'S MAP/TAX	OWNER 1	OWNER 2	MAIL ADDRESS	CITY	STATE	ZIPCODE
04N24E000005600	USA (BOMBING RANGE)					0
02527E000003101	LEWIS, JEANNE M		13060 SE BUSH PL	PORTLAND	OR	97236
04N24E000000135	CSS POTATO FARMS, LLC		5911 2ND AVE W	KEARNEY	NE	68847
04N24E230000500	DOHERTY, BRYCE ET AL		67990 KUNZE LN	BOARDMAN	OR	97818
04N24E230000501	DOHERTY, BRYCE ET AL		67990 KUNZE LN	BOARDMAN	OR	97818
04N24E230000401	DOHERTY, JAMES E & DOHERTY, KELLY L		68812 W WILSON LN	BOARDMAN	OR	97818
04N24E000000121	THREEMILE CANYON FARMS, LLC		75906 MARTY MYERS RD	BOARDMAN	OR	97818
04N24E000000134	CITY OF BOARDMAN		PO BOX 229	BOARDMAN	OR	97818
04N24E230000901	FRANK TIEGS, LLC		PO BOX 3110	PASCO	WA	99302
04N24E000000131	ANDERSON, NANCY		PO BOX 34	CHEHALIS	WA	98532
04N24E000000113	TRUE ORGANIC PRODUCTS, LLC		PO BOX 7192	SPRECKELS	CA	93962
04N24E000000136	AMAZON DATA SERVICES, INC		PO BOX 80416	SEATTLE	WA	98108
04N24E000000137	AMAZON DATA SERVICES, INC		PO BOX 80416	SEATTLE	WA	98108

LUD-N-089-25 | Amazon Data Services | ALI 0.5-mile Notice Area.
04N24E TL136
S:\Planning\LUD\North2025



LAND USE APPLICATION ADMINISTRATIVE REVIEW

RECEIVED
NOV 20 2025

BY: MR

Internal Use
 File Number LUD-N-089-25
 Date Received 11-20-25 Deemed Complete 12-8-25 Fee 600.00 per **PAID**

Type of Application: (check one)

- Non-Farm Use Temporary Use Dwelling Authorization
- Agri-tourism Event(s) Other: _____

Applicant:

Name(s) Leif Van Acker
 Mailing Address 1 SW Columbia Street, Suite 650, Portland, OR 97204
 Phone 503-388-6392 E-mail leif.vanacker@kimley-horn.com

Legal Property Owner: (if different from applicant)

Name(s) Amazon Data Services, Inc.
 Mailing Address 410 Terry Ave. North, Seattle, WA 98109
 Phone 206-529-5716 E-mail jastacc@amazon.com

Property Description:

Township 4N Range 24E Section 22 Tax Lot(s) 136
 Physical Address N/A A data center campus with four data center buildings, one substation,
 General Location South of the Boardman Airport, Southwest intersection of Tower Rd and Airport Rd B

Proposal (identify what you are proposing): A data center campus with four data center buildings and associated generators and fuel tanks, one substation, one auxiliary water building, one septic field, one stormwater evaporation pond, two non contact cooling water discharge evaporation ponds, and associated utilities, landscape and hardscape.

Approval Criteria:

Zoning Designation ALI Acres: 98.01
 Is any portion of the property within an Overlay Zone? Yes
 Applicable Article, Section(s), and Subsection(s): The site is within the Airport Safety and Compatibility Overlay Zone (ASC)

A Planner can assist you in identifying the review criteria that apply to your request. The review criteria are used to determine whether your application will be approved or denied. It is your responsibility to provide adequate written justification and any other evidence you feel is relevant to explain how your request complies with the review criteria. Failure to provide adequate justification may result in your application being denied, or deemed incomplete until additional information is provided. If additional space is needed, please attach a separate sheet of paper.

Physical Features: (describe the site)

Vegetation on the property Small bush/forest in the southeastern property corner. The rest of the site is grass
 Topography of the property (i.e. rocky, hilly, forested) Generally slopes south to north at 2-5%
 Any significant features of the property (i.e. steep slopes, water bodies, etc.) Wetland in the southeast property corner



Soil type(s): Loamy fine sand, silt loam, bedrock

Is the land or any portion of it subject to flooding? No

Most current use of the property Vacant farmland

Has the location been utilized as an integral part of the farming operation on the property? Previous farming operations onsite

Does the location have water rights for irrigation? There is an existing irrigation pivot on-site that is no longer in use

What are the predominant farming types in the area? No current agricultural activities

Is the property currently under special assessment by the County Assessor's Office?? No

Existing Improvements:

What structures or development does the property contain? Will any structure be removed or demolished?

The property currently has existing fence, risers of unknown source and irrigation lines that will be demolished

Describe the Access to the Property:

State Highway County Road Public Road USFS Private Easement

Road name Airport Road B

Improvement type and condition of road New paved road

Will any new access be required? The site will require two driveway entrances onto Port of Morrow owned roadway

Existing Services:

Fire protection district or method Boardman Rural Fire Protection District

Solid waste disposal method Onsite compactor and dumpsters

Utilities and other public services provided Port of Morrow (water), Umatilla Electric (power)

Please include a map or plot plan with the following information and locations:

- Existing and proposed water supply
- Existing and proposed sewage disposal method
- Existing and proposed structures
- Existing and proposed roads and accesses

Attach applicable submittal requirements in accordance with Morrow County Zoning Ordinance Article 5

How the proposal will be compatible with surrounding uses The Boardman Airport industrial area is intended to contain a variety of industrial uses within the Port-owned land. The proposal maintains significant setbacks to adjacent existing farming uses

How the proposal will protect and preserve existing natural resources such as trees, vegetation, water resources and wildlife habitat Onsite wetland in the SE corner of the property will be preserved with a 50-foot buffer to prevent impact. There is not significant other trees, vegetation or water sources within the property.

Whether you believe diking, screening or other landscaping will be required to protect nearby properties and habitats The project will be screened from nearby properties as much as feasible with the provided security fencing, and significant setbacks are maintained to adjacent properties.

The applicant is responsible for providing all of the information to show compliance with the standards for approval. If you are unsure of the standards required by the code, the Planning Department can provide them. The plot plan and narrative should include enough detail to address specific issues about your particular application.

Through applying for this application I authorize the Morrow County Planning Director or designee to enter upon the property subject of the application to conduct a site visit necessary for processing the requested application. Morrow County shall contact the Land Owner prior to the site visit to arrange an appropriate time for the site visit.



Signatures: I(we), the undersigned, acknowledge that I am familiar with the standards and limitations set forth by the Morrow County Zoning Ordinance and that additional information and materials may be required, as provided by the Zoning Ordinance and Comprehensive Plan. I propose to meet all standards set forth by the County's Zoning Ordinance and any applicable State and Federal regulations. I(we) certify that the statements and information provided with this application are true and correct to the best of my(our).knowledge.

Signed: Leif Van Acker
Applicant

Printed: Leif Van Acker
Applicant

Date: 11/10/2025

Signed by John Eichelberg
Legal Property Owner

John Eichelberg on behalf of
Amazon Data Services, Inc.
Legal Property Owner

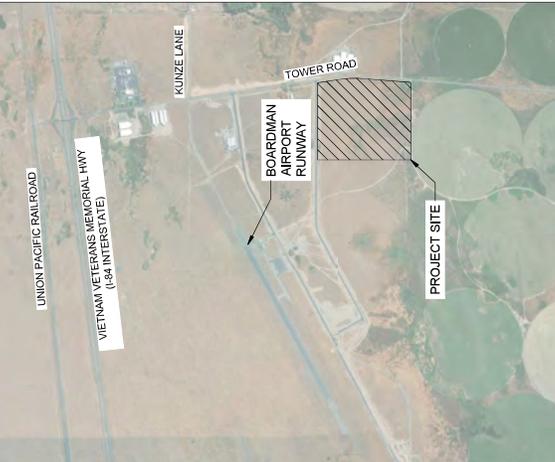
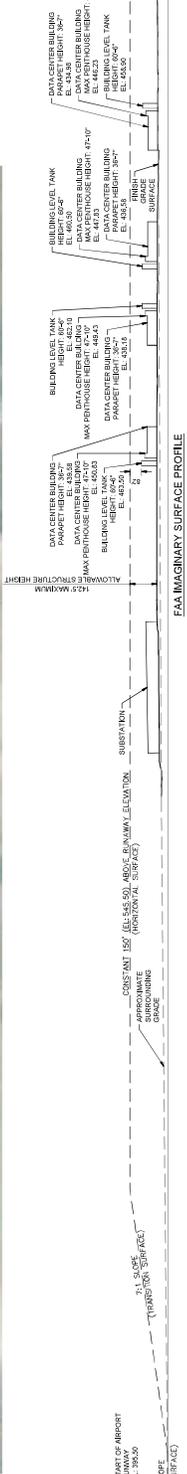
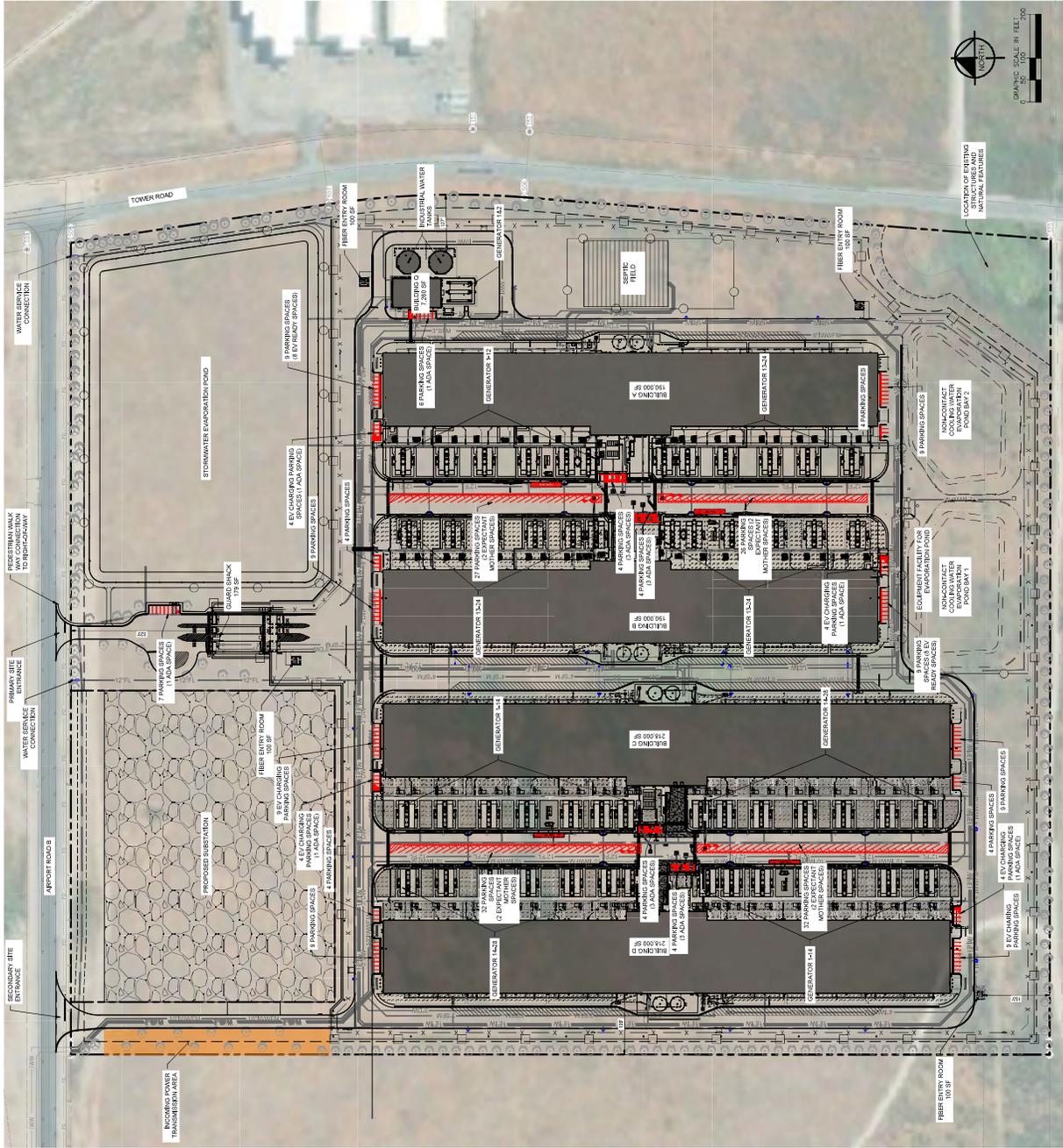
November 14, 2025

If this application is not signed by the property owner, a letter authorizing signature by the applicant must be attached.

**Morrow County Planning Department
215 NE Main Ave, PO Box 40, Irrigon, OR 97844
(541) 922-4624 FAX: (541) 922-3472**



TOWER ROAD EAST DATA CENTER



OWNER
AMAZON DATA SERVICES INC.
1515 COLUMBIA ST. SUITE 600
TOWER ROAD
BOARDMAN, OR 97818
CONTACT: LEIF VAN HOCKER, P.E.
EMAIL: LEIF.VANHOCKER@AMZN.COM

ENGINEER
AMAZON DATA SERVICES INC.
1515 COLUMBIA ST. SUITE 600
TOWER ROAD
BOARDMAN, OR 97818
CONTACT: LEIF VAN HOCKER, P.E.
EMAIL: LEIF.VANHOCKER@AMZN.COM

PROJECT NUMBER
CONFIDENTIAL

PROJECT NAME
TOWER ROAD EAST DATA CENTER

PERMITTING
SCHEDULE

LEGEND

- PROPERTY LINE
- LANDSCAPE BUFFER SETBACK
- PROPOSED 3' OUTER SECURITY FENCE WITH 1 BARBED WIRE
- PROPOSED 6' OUTER SECURITY FENCE WITH 1 BARBED WIRE
- PROPOSED 6' CHAIN LINK FENCE
- PROPOSED FIRE HYDRANT
- PROPOSED FIRE HOSE
- PROPOSED LIGHT POLE
- PROPOSED LANDSCAPING

ZONING REQUIREMENTS
SITE ZONING: A1 (AIRPORT LIGHT INDUSTRIAL)
ASSESSOR MAP NUMBER: 1515000000
PROPERTY AREA: 88,017 ACRES
PERTURBED AREA: 8,200 ACRES

USE:

REQUIRED	PROPOSED
DATA CENTER	DATA CENTER
27	27
0	139
0	127
0	236

REQUIRED
ONE SPACE PER EMPLOYEE ON
1:10 SPACES PER BUILDING 200 SPACES
PER BUILDING OF PARKING SPACES
REQUIRED 3 ADA SPACES (1 VAN + 11 4 VAN)
AS WELL AS NUMBER AND SIZE
FLOWING SPACES (1 PER BUILDING)

REQUIRED
42 SPACES

REQUIRED
DECKMAN IMPROVEMENT AREA (AG)
0.24

REQUIRED
DECKMAN TOTAL AREA TO PRACTICE (AG)
0.24

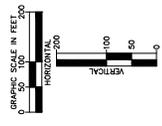
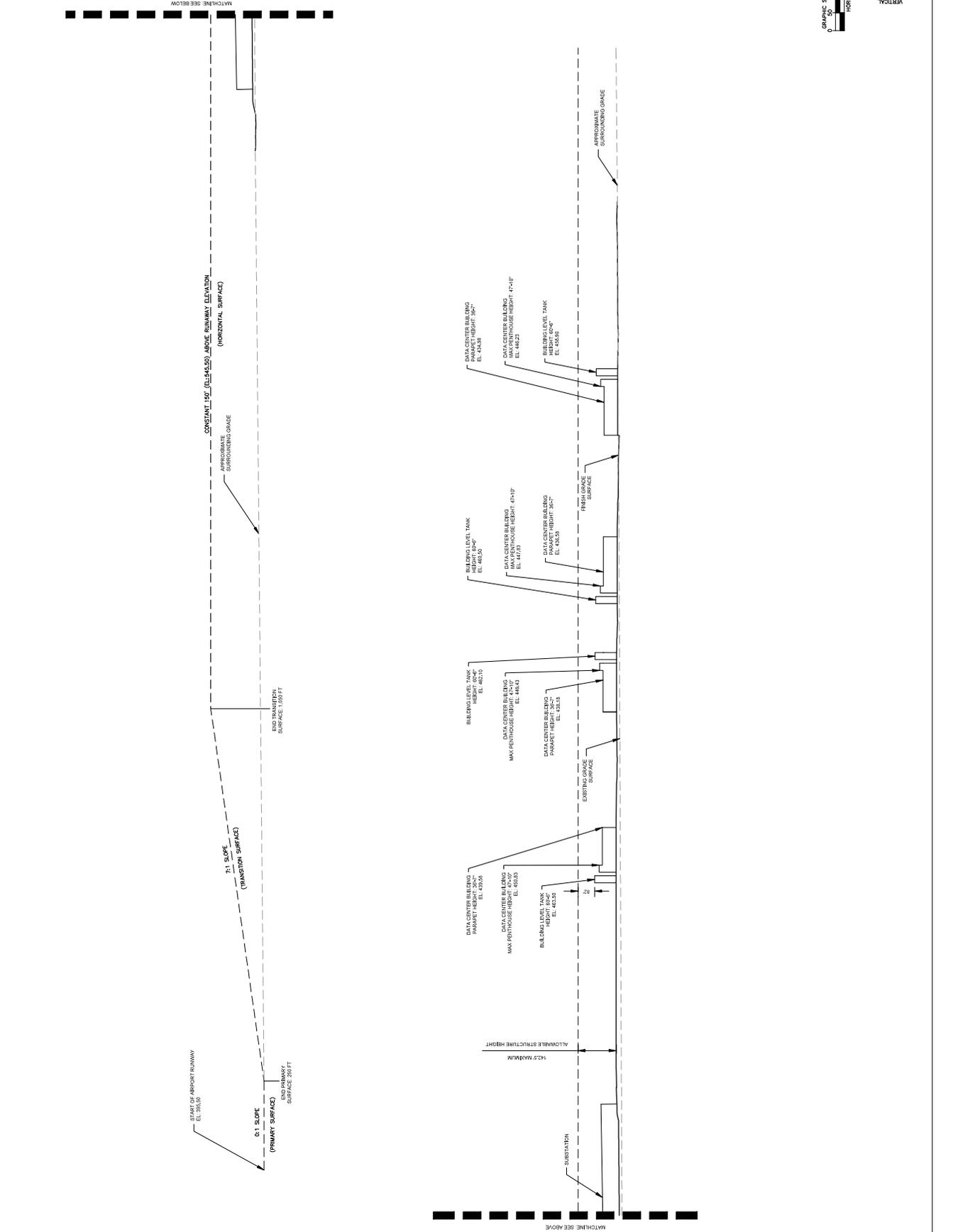
STORMWATER MANAGEMENT AREAS
TOTAL IMPERVIOUS AREA
PAVED

RAINFALL CALCULATIONS
TOTAL RAINFALL: 55,324 CY
NET RAINFALL: 15,402 CY
TOTAL STORAGE: 15,402 CY
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TOWER ROAD EAST DATA CENTER



CONFIDENTIAL	
PROJECT NUMBER	TOWER ROAD BOARDMAN, OR 97818
PROJECT NAME	PERMITTING
SCALE	AS SHOWN

DATE	10/11/2011	PROJECT NO.	1000044
TIME	10:00 AM	PROJECT NAME	TOWER ROAD EAST DATA CENTER
LOCATION	BOARDMAN, OR	PROJECT TYPE	PERMITTING
SCALE	AS SHOWN	PROJECT STATUS	IN PROGRESS
DESIGNER	WSP PARSONS	CLIENT	PORTLAND AIRPORT AUTHORITY
CHECKER	WSP PARSONS	DATE	10/11/2011
APPROVER	WSP PARSONS	SCALE	AS SHOWN
DATE	10/11/2011	PROJECT NO.	1000044
TIME	10:00 AM	PROJECT NAME	TOWER ROAD EAST DATA CENTER
LOCATION	BOARDMAN, OR	PROJECT TYPE	PERMITTING
SCALE	AS SHOWN	PROJECT STATUS	IN PROGRESS
DESIGNER	WSP PARSONS	CLIENT	PORTLAND AIRPORT AUTHORITY
CHECKER	WSP PARSONS	DATE	10/11/2011
APPROVER	WSP PARSONS	SCALE	AS SHOWN



MEMORANDUM

To: Tamra Mabbott
Senior Planner
Morrow County

From: Leif Van Acker, P.E.
Kimley-Horn and Associates, Inc.

Date: November 20, 2025

Subject: Tower Road Data East Center – Administrative Review Memo

This letter is to provide additional information regarding the Tower Road East Data Center campus in conjunction with the Administrative Review application through the Morrow County Planning Department:

The applicant is proposing approximately 816,000 square feet of data center use within four buildings. The development is also proposing an auxiliary water building and tanks, electric substation, stormwater evaporation pond, cooling water evaporation pond, septic facility, security fencing, utility improvements, associated generators and parking.

Zoning Code Section 3.076 – Airport Light Industrial Zone, ALI

The subject property is currently vacant and has no existing uses. The land was previously used for agricultural purposes and has an existing irrigation pivot. The site is currently zoned Airport Light Industrial (ALI) which allows data centers with an Administrative Review, per Zoning Code Section 3.076D. The surrounding properties are all vacant/agricultural. The current zoning of the properties to the north and west are also Airport Light Industrial (ALI) and the properties to the south and east are zoned Space Age Industrial (SAI).

Section 3.076E – Dimensional Requirements

1. Minimum Lot size: No limitation – **Standard Met**
2. Minimum lot coverage: No limitation – **Standard Met**
3. Minimum lot frontage: Minimum lot frontage shall be 300 feet on an arterial or collector street and 200 feet on a local street. – **The subject property has 2,244 feet of frontage on Tower Road and 1,851 feet of frontage on Airport Road B. Standard Met**
4. Minimum setbacks:
 - a. Front yard setbacks: The minimum front yard setback between a structure and a street right-of-way shall be 50 feet for an arterial street, 30 feet for a collector street, and 20 feet for a local street. Structures on corner lots shall observe the minimum front yard setback for

both streets. – **The subject property maintains 323' setback to the northern property boundary and 127' from the eastern property boundary. Standard met.**

b. Side and rear yard setbacks. There is no side or rear yard setback except as may be required by the Building Code or other siting requirements. Where so required, the requirements may be waived on common lot lines when adjoining lot owners enter into a joint agreement for coordinating vehicular access and parking. Party wall or adjoining building walls must meet fire separation requirements of the State of Oregon Structural Specialty Code and Fire and Life Safety Code. The joint development agreement must be approved by the Port of Morrow as to form and content and recorded in the Morrow County Clerk's office, and a copy must be provided to the Planning Department. – **The subject property maintains a 153' setback to the southern property boundary and 139' setback to the western property boundary. Standard met.**

5. Maximum building height: No maximum height. However, no structure shall be allowed to penetrate an airport imaginary surface. - **The four proposed buildings will have a roof height of 33'-0", height of 36'-7" to top of exterior parapet walls, and all proposed water tanks are anticipated to be approximately 60'-6" in height. The proposed structures will not exceed the airport's horizontal surface, as shown on the site plan exhibit.**

Section 3.076F – Transportation Impacts

Transportation Impacts. Upon request by ODOT or Morrow County, a Traffic Impact Analysis (TIA) shall be required when projects on lands zoned ALI, cumulatively, have generated more than 400 passenger car equivalent trips per day on the local street network. Heavy vehicles – trucks, recreational vehicles and buses – will be defined as 2.2 passenger car equivalents. The TIA shall include: daily vehicle trips generated by existing projects and projects that are reasonably likely to occur within the ALI zone during the planning period, peak hour trip distribution at affected intersections, analysis of compliance with applicable roadway performance standards, recommended mitigation measures necessary to achieve or retain compliance with applicable roadway performance standards, and identification of triggers addressing the timing of future mitigation. – **A traffic impact analysis (TIA) has been provided with this application for review by Morrow County and ODOT. Employees accessing the site will be coming from either eastbound I-84 or westbound I-84 and exit onto Tower Road south to Airport Road B. Traffic counts were collected at key locations along this route and a traffic study was completed to forecast the added trips to the site through the estimated construction schedule. The results of the traffic study indicate no required offsite intersection or roadway improvements to accommodate the added trips from the development. Standard met.**

Zoning Code Section 3.092 – Airport Safety and Compatibility Overlay Zone, ASC

The subject property is also located within the Airport Safety and Compatibility Overlay Zone (ASC), due to its proximity to the Boardman Public Use Airport.

Section 3.092D – Notice of Land Use and Permit Applications within Overlay Zone Area

1. Notice shall be provided to the airport sponsor and the Department of Aviation Morrow County Zoning Ordinance Article 3 Section 3.092 (01.08.25) Page 4 of 5 when the property or a portion thereof that is subject to the land use or limited land use application is within 5,000 feet of the sides or ends of the runway. – **The subject property is within 5,000 feet from the south side of the runway, therefore notice will be provided. The project also intends to submit Form 7460-1 Notice of Construction within 45 days of construction. Standard met.**

Section 3.092E - Height Limitations on Allowed Used in Underlying Zone.

All uses permitted by the underlying zone shall comply with the height limitations in the Section unless standards of the underlying zone are more restrictive.

1. No structure or tree or other object of natural growth shall be allowed to penetrate an airport imaginary surface. – **No structure or any proposed buildings penetrate an airport imaginary surface. The proposed buildings and tanks are outside the airport’s approach zone, the runway protection zone, and the transitional surfaces. No proposed structures exceed the horizontal surface of 150 feet above the runway elevation, as shown in the site plan, nor any conical surface. An exhibit has been provided on the site plan to show that the proposed buildings do not exceed the horizontal surface. Standard met.**

Section 3.092F – Procedures

An application for a land use or limited land use approval on property within this overlay zone shall provide the following information in addition to any other required information:

1. A map or drawing showing the location of the property in relation to the airport imaginary surfaces. – **A site plan drawing has been provided showing the subject property location in relation to the airport imaginary surfaces. Standard met**
2. Elevation profiles and a site plan, drawn to scale, including the location and height of all existing and proposed structures, measured from existing grade. – **Per the ITE manual, the estimated trip generation for a data center campus with 816,000 square feet of building area is 596 trips per day. The peak construction trips for the site are anticipated to max out around 600 trips per day. Standard met.**

Section 3.092G – Land Use Compatibility Requirements

Any land use allowed in the underlying zone may be permitted in the overlay zone, subject to the following standards:

1. The user shall comply with the height standards in Section (E) of this Chapter. – **As explained above, no proposed structure penetrates an airport imaginary surface. Standard met.**

2. The use shall not include a place of public assembly. – **The use is not a place of public assembly. It is a data center that allows only badged employees and visitors on-site. Standard met.**
3. The uses shall not create a bird attractant. If the airport sponsor determines that there is a potential for attracting birds, the application shall include a study demonstrating that any hazard to use of the airport is mitigated. – **Per Morrow County’s adopting ordinance (ORD-2016-4), the provisions in this overlay zone are “designed to protect an airport from encroachments or other uses that could limit the airport’s ability to operate.” The airport sponsor is the Port of Morrow. Port of Morrow has not indicated that the use, including the proposed water impoundments, creates a potential for attracting birds that could limit the Boardman airport’s ability to operate. The ponds are not within the airport approach corridor. Further, Applicant has already submitted a Notice of Construction relating to the water impoundments for Federal Aviation Administration (“FAA”) review. Applicant will work with the FAA and Oregon Department of Aviation (“ODAV”) to implement any necessary mitigation. Standard met.**
4. The use shall not cause light or glare that projects lighting directly onto a runway or taxiway, or imitates airport lighting. – **The use will not cause light or glare to be cast directly onto a runway or imitate airport lighting, because all site lighting proposed on the site will be downcast and shielded from emitting light upwards. Light pole locations are shown on the site plan. Standard met.**
5. The use shall not be a source of smoke, dust or steam. – **During construction, a dust mitigation plan will minimize dust. And during operations, the proposed data centers will not cause interference with airport operation due to the fact that data centers do not generally generate a significant amount of smoke, dust or steam, and the structures will be located more than 4,000 feet from the south side of the runway. Standard met.**
6. The use shall not cause electrical interference with the airport operations, or in the case of proposed or expanded communications or transmission facilities, the Department of Aviation and the FAA shall approve the facility. – **The proposed use is not anticipated to cause electrical interference with the airport operations. Standard met.**
7. The use shall not create a new or expanded water impoundment within 5,000 feet of the edge or end of a runway larger than one-quarter acre in size unless necessary for airport operations or approved in writing by the airport sponsor, the Department of Aviation, and the FAA. – **Per Morrow County’s adopting ordinance (ORD-2016-4), the provisions in this overlay zone are “designed to protect an airport from encroachments or other uses that could limit the airport’s ability to operate.” The airport sponsor is the Port of Morrow. Port of Morrow has not indicated that the use, including the proposed water impoundments, creates a potential for attracting birds that could limit the Boardman airport’s ability to operate. The ponds are not within the airport approach corridor. Further, Applicant has already submitted a Notice of Construction relating to the water impoundments for Federal Aviation Administration (“FAA”) review. Applicant will work with the FAA and Oregon Department of Aviation (“ODAV”) to implement any necessary mitigation. Standard met.**

Zoning Code Section 4.040 – Off-street Vehicle Parking Requirements

The required parking for a data center is assumed to use the Storage Warehouse parking rate in the Morrow County Zoning Ordinance, of 1 space per employee on the largest shift. Each data center building on the campus has a maximum shift of 50 employees, therefore 200 spaces are required for the campus. The development proposes 251 parking spaces which exceeds the parking requirement. Additionally, this development meets the requirements of the ADA parking code by providing 18 ADA parking spaces and meets the Oregon Electric Vehicle Charging standards by providing electrical conduit and electrical services to at least 20% of the parking. The proposed four building campus intends to provide electrical conduits and panel space for 50 parking spaces, which meets the code requirement, additional per client standards, 18 number of EV chargers (34 spaces) will be installed.

Construction on the site will be sequenced one building at a time and once a contractor is brought on board, they will develop a construction parking and phasing plan. It is anticipated that the subsequent building areas will be used for construction parking and staging, and if additional construction parking is needed, the applicant may be able to negotiate to use some adjacent Port of Morrow owned land for this purpose.

Zoning Code Section 5.010 – Zoning Permit

Section 5.010D Review Standards

1. The proposed land use is allowed in the underlying land use district. – **Data center is an allowed use in the ALI zoning district, with an administrative review. Standard met.**
2. If a land use approval (i.e. Site Plan Review, Conditional Use Permit, or Legislative action) is required for the proposed development, the land use approval has been granted and the proposed development is consistent with that land use decision. If the land use approval included conditions of approval, all precedent conditions of approval have been met, and applicant has provided a compliance schedule for meeting the subsequent conditions prior to construction or operation, as may be applicable. A precedent condition is a condition that must be met prior to start of construction of the use or a phase of the use; a subsequent condition is a condition that must be met prior to start of operation of the use or a phase of the use. – **Any conditions of approval issued with the Administrative Review process will be adhered to. Standard met.**
3. The building/yard setback, lot area, lot dimension, density, lot coverage, building height and other applicable development standards of the underlying zone and any sub-district(s) are met. - **All dimensional standards of the ALI zoning district have been met. Standard met.**
4. Off-street parking and loading-unloading facilities shall be provided as required in Section 4.040 and 4.050 of the Morrow County Zoning Ordinance. Pedestrian access to off-street parking areas shall be provided. Morrow County Zoning Ordinance Article 5 (01.08.25) Page 2 of 6 - **Parking and loading facilities have been provided in accordance with the zoning code requirements, and pedestrian access has been provided from each building to the right of way line. Standard met.**

5. Unless applicant's use of water is exempt from permitting requirements under Oregon water law, the applicant shall have received all necessary permits or licenses from the Oregon Water Resources Department prior to construction or operation, as applicable. If OWRD water permits or licenses are required for operations, applicant shall provide a compliance schedule for obtaining the required authorization. If an offsite water source is used, applicant shall provide a letter, notice, or memorandum of understanding from the service provider evidencing a commitment to serve the site, which shall indicate the source of the water (e.g. surface water, existing water right, etc.) and a targeted delivery for water to the site. - **Water service will be provided by the Port of Morrow through a recently installed water main along Airport Road B. There were two water stub points installed by the Port of Morrow to serve this site. The Port of Morrow has indicated that adequate pressure and flow will be provided through their water main to serve the project needs. Standard met.**
6. All applicable permits for water, sanitary sewer, wastewater, solid waste, or power services for the site have been granted or Applicant has provided evidence that such services will be provided prior to operation of the use or phase of the use. - **There is currently no sanitary sewer or industrial wastewater service to the site. The project proposes an on-site septic field to handle the on-site domestic sewer flows. Since the project generates more than 2,500 gpd of domestic sanitary sewer, this septic field will be permitted through Oregon Department of Environmental Quality (ODEQ). At this time, the site investigation has already been completed by DEQ and determined that a septic field is feasible in the location specified on the plan.**

The Port of Morrow is currently designing and constructing a wastewater treatment facility to the west of the project site which is planned to handle industrial wastewater (cooling water) discharge from this campus. The Port of Morrow plans to extend a force main to the site which this campus will be able to connect to by the planned construction timeline in 2027. Based on the potential construction schedule of the data center buildings on this campus, an on-site cooling water evaporation pond is proposed in order to capture cooling water until the offsite connection is available, as well as providing peak flow mitigation on an ongoing basis. The cooling water evaporation pond will be permitted through DEQ.

Standard met.

7. The site shall not be the subject of outstanding Code Enforcement violations unless the purpose of the application is to rectify an outstanding violation. – **Not applicable. Standard met.**
8. The applicant shall obtain any required access permit(s) from the Morrow County Public Works Department and/or Oregon Department of Transportation. – **Access to the site will be from the Port of Morrow owned and operated roadway to the north of the project site. This road is currently unnamed, but has been tentatively named by the Port of Morrow as Airport Road B. The Port is in the process of getting this road named with Morrow County. The site will have two driveway access points to this roadway, one for a primary security entrance (eastern driveway) and one secondary entrance for**

deliveries, emergency access and substation access (western driveway). These access points have been coordinated with the Port of Morrow for concurrency and the driveway and intersection spacing has been designed to conform with all AASHTO design requirements.

Section 5.010E Submittal Requirements

A Zoning Permit application shall be submitted including all of the following information except for specific items determined at the pre-application review not to be applicable. All zoning permit plans shall have dimensions clearly indicated. An applicant may provide the information on separate sheets, if necessary or desirable for clarity.

1. North arrow and scale. – **North arrow and scale bar have been shown on the site plan. Standard met.**
2. Location of property boundaries, including adjacent public or private streets and rights of way. – **Property boundaries and ROW lines have been shown on the site plan. Standard met.**
3. Location of existing structures and natural features. – **There are no existing structures on the property, but existing natural features have been shown. Standard met.**
4. Areas affected by the proposed development with slopes in excess of 10 percent. – **There are no existing areas with slopes in excess of 10 percent on the subject property. Standard met.**
5. Location of existing utilities and facilities, or proposed locations (sewer, water, fire hydrants, electricity, septic system, storm water facilities, etc.). – **Existing and proposed utilities on the project site have been shown on the site plan. Standard met.**
6. Proposed landscaping. – **Proposed landscaping has been shown on the site plan. Standard met.**
7. Exterior lighting. – **Light pole locations have been shown on the site plan. Standard met.**
8. Proposed circulation plan for vehicles, pedestrians, and bicyclists, including existing and proposed points of access and sidewalks. – **Proposed vehicle access points onto Airport Road B have been labeled on the site plan, and the pedestrian access to the right of way has been labeled. Standard met.**
9. Parking lot layout, with circulation plan and striping details. – **Parking plan has been provided on the site plan, with stalls highlighted in red and labeled with the quantity and type of parking stall (EV, ADA, expectant mother and standard). Standard met.**
10. Sign location and details. – **Locations of proposed signs has been shown on the site plan. There are no monument or pylon signs proposed with this development. Standard met.**

Zoning Code Section 5.020 – Site Plan Review

Section 5.020E – Review Criteria

Applications processed under this section shall comply with the following criteria, as applicable:

1. The standards listed in MCZO 5.010(D) are, or can be, met. – **Standards listed above.**

2. Water is or will be available to the site at a quantity and quality adequate for the proposed use. New developments must either (1) provide an estimated annual water usage, and identify the necessary OWRD authorizations required to serve the estimated water need or (2) submit a letter, notice, or memorandum of understanding from the service provider evidencing a commitment to serve the site, which shall indicate the source of the water (e.g., surface water, existing water right, etc.) and a targeted delivery for water to the site. – **The Port of Morrow is the water provider to this project. The Port of Morrow has indicated that adequate pressure and flow will be provided through their water main to serve the project needs. Standard met.**
3. Adequate sewage disposal and wastewater management can be provided for the proposed use as determined by the service provider or by demonstrating compliance with applicable review authority standards, as set forth below. For new developments that will rely on third-party service providers for sewer and/or wastewater disposal, the applicant may satisfy this criterion by submitting a letter, notice, or memorandum of understanding from the service provider evidencing a commitment to serve the site. For new developments that will rely on on-site septic and/or industrial wastewater and/ or non-contact cooling water disposal and/or treatment, the applicant may satisfy this criterion by identifying the necessary ODEQ permits, as required by the state regulations, to be obtained prior to commencement of the proposed use or certificate of occupancy being granted. – **An on-site septic facility is proposed to accommodate the on-site domestic sanitary sewer flows. Standard met.**
4. Applicant's proposed plans for electrical services and solid waste disposal are adequate for the proposed use, as demonstrated by complying with applicable submittal requirements in Section F. - **The project is anticipated to receive power service from Umatilla Electric Cooperative (UEC). Initial discussions have been had with UEC regarding power service and coordination of substation design and feeder layout. The project proposes an on-site substation in the northwest corner of the property which is to be owned and operated by UEC, and a separate parcel is planned to be dedicated back to UEC for the substation area.**

The project will be providing one trash compactor per building for solid waste disposal, which has been determined to be adequate for the proposed use.

Standard met.

5. Development in hazard areas identified in the Morrow County Comprehensive Plan, Natural Hazard Mitigation Plan, or Community Wildfire Protection Plan shall comply with all applicable requirements. - **There is an existing wetland located on the southeast corner of the site, adjacent to Tower Road that is approximately 1.3 acres in size. The wetland delineation was submitted to the U.S. Army Corps of Engineers (USACE) and it was determined that it is not considered a waters of the United States and an AJD was issued on April 2, 2025 (Corps No. NWP-2025-105).**

Additionally, the wetland delineation was submitted to the Oregon Department of State Lands (DSL) and received approval on September 17, 2025 for WD#2025-0112. DSL

concluded with the wetland boundaries as mapped and identified that the wetland is subject to permit requirements of the state Removal-Fill Law. The project proposes no impacts to the existing wetland and maintains a 50' buffer from any improvements, therefore no additional wetland permitting is expected.

Standard met.

6. Development shall comply with Section 3.200 Significant Resources Overlay Zone or 3.300 Historic Buildings and Sites protecting inventoried significant natural and historic resources, if applicable. – **No significant natural or historic resources were identified on this site, other than the wetland mentioned in #5 above. Standard met.**
7. Development in flood plains shall comply with MCZO Section 3.100 Flood Hazard Overlay Zone. - **Per FEMA firm map #41049C0125D effective 12/18/2007 the site is located in Flood Zone X, designated as an area outside the 0.2% annual chance floodplain. The nearest floodways are the Columbia River approximately 1.7 miles to the north, and Sixmile Canyon approximately 3.1 miles to the southwest. Therefore, this site is not anticipated to be affected by floodwaters. Standard met.**
8. Development in the Airport Safety and Compatibility Overlay Zone (ASC) is compliant with the standards and notice requirements identified in Section 3.092. – **Development on the site will comply with all standards of the ASC overlay zone, as previously discussed. Standard met.**
9. The transportation system provides for the safe, orderly, and efficient circulation of traffic into and out of the proposed development, and negative impacts to the transportation system are mitigated adequately to achieve consistency with adopted County standards. County transportation facilities shall be located, designed, and constructed in accordance with the design and access standards in Morrow County Zoning Ordinance Article 5 (01.08.25) Page 5 of 6 the Morrow County Transportation System Plan. This review criterion is satisfied if the applicant has entered into a development and/or mitigation agreement(s) pursuant to ORS 94.504, executed by the Board of Commissioners, under which applicant has agreed to (i) provide mitigation proportional and reasonably related to the traffic impacts caused by the proposed development or (ii) pay a fee-in-lieu of mitigation, equal to the estimated cost of designing and constructing the identified mitigation. – **A traffic study has been provided with this application which shows no adverse impacts to the transportation network based on the additional trips generated by the development. Standard met.**

Section 5.020F Submittal Requirements

In addition to the applicable submittal requirements identified in Section 5.010, applications requiring Site Plan Review must include the following, as applicable:

1. Project information including: name of project, company, and/or property owner. – **Project information has been added to the site plan. Standard met.**
2. A Trip Generation Estimate identifying the number of anticipated passenger car equivalent trips per day expected to access the site during construction and during regular operations. - **A traffic impact assessment has been provided with this application. Per the ITE**

- manual, the estimated trip generation for a data center campus with 816,000 square feet of building area is 596 trips per day. The peak construction trips for the site are anticipated to max out around 600 trips per day. Standard met.
3. Proposed road improvement plans and/or road use agreement, as applicable. – **This site accesses Port of Morrow owned roadways. The access points have been coordinated with the Port, and a road use agreement from the Port can be provided if needed. Standard met.**
 4. Electric, water, septic, and industrial wastewater services plans, including a description of any existing services and the applicant's proposal for provision of such utility services to the site. – **The only current utility service to the site is an existing water line. The proposed and existing utilities have been shown on the site plan. Standard met.**
 5. To demonstrate that electric, water, and sanitary sewer/wastewater services are available or can be made available at the site, either: (a) evidence that facilities with adequate capacity are permitted, or can be permitted, to serve the proposed development, or (b) a will serve letter from the providing utility demonstrating that service is available or can be made available to serve the proposed development. – **Water service is to be provided by the Port of Morrow, and power service it to be provided by UEC. Will serve letters have been provided. Sanitary sewer will be discharged to an onsite septic system that is sized to handle the required flows per ODEQ requirements. Non-contact cooling water will be discharged to an onsite evaporation pond that will be sized to handle the required flows and recover before the next cooling cycle. Standard met.**
 6. Parking plans during construction and permanent parking plan with layout. – **Parking plan has been shown on the site plan. Standard met.**
 7. A Traffic Impact Analysis consistent with the requirements of Section 4.035 if traffic impacts are anticipated to exceed the thresholds identified in MCZO Section 4.035, unless an approved development and/or mitigation agreement executed by the Board of Commissioners that addresses traffic impacts from the proposed development is provided. – **A traffic impact analysis has been provided with this application. Standard met.**

Oregon Department of Environmental Quality (ODEQ) 1200-c Permit

The project site will disturb greater than 1 acre of land and therefore will require a 1200-c permit to be submitted to ODEQ. There are no local surface waters present to discharge to, therefore the proposed stormwater from the site is intended to be fully captured and retained on-site in an above ground stormwater pond. Due to shallow bedrock on the site, infiltration is not feasible, therefore this pond is designed as an evaporation pond. A yearly water balance has been completed to design the size of this pond, taking into account average pan evaporation rates and average rainfall values by month, ensuring that at least 2' of freeboard is maintained at all times during the year. This pond will be lined and have a bottom slope of 0.5% for ease of maintenance at the low point of the pond.



We look forward to the opportunity to work with Morrow County on this project. If you have any questions or concerns, please do not hesitate to call or email.

Sincerely,

A handwritten signature in blue ink that reads "Leif Van Acker".

Leif Van Acker, P.E.
Project Manager
503-388-6392
leif.vanacker@kimley-horn.com

MEMORANDUM

To: Morrow County
Tamara Mabbott, Senior Planner
PO Box 40
Irrigon, OR 97844

From: Leif Van Acker, P.E.
Kimley-Horn and Associates, Inc.
1 SW Columbia Street, Suite 650
Portland, OR 97204

Date: December 5, 2025

**Subject: Tower Road Data East Center – Administrative Review Completeness
Review Comment Response**

Dear Ms. Mabbott,

The following are responses to your comment letter for the above referenced project dated December 4, 2025:

Completeness Check Comments**General**

Comment 1. The application form indicates the request includes the substation. Can you confirm that is the intent? Previous data center campus applications did not include the substation.

Response: The substation is shown for reference and a future application will be submitted by the utility provider.

Comment 2. The site plan shows the “incoming power transmission area.” Is this intended to be included in the request? Can you indicate the location of off-site transmission lines? This could be conceptual and would not be part of this application, which is limited to tax lot 136.

Response: Transmission entering the site is shown conceptually, as has been requested on previous applications. Actual transmission line

routing and zoning applications will be submitted by the utility provider.

Comment 3. When you submitted your application to Oregon Department of Aviation, did your plans include the substation and the stormwater evaporation pond?

Response: Yes, the substation and stormwater evaporation pond were included. We are waiting on a response from ODAV.

Comment 4. The December 21, 2023, letter from Port of Morrow indicates they will supply up to 26 million gallons of water annually. Can you confirm this is the total amount needed for the campus?

Response: The agreed upon water supply is adequate for the site.

Water Quality

Comment 1. The June 11, 2025, Site Evaluation letter from the Department of Environmental Quality (DEQ) includes a suitability evaluation for an on-site septic system. The August 28, 2025, DEQ letter was an assessment of groundwater impacts for a “three hall data center.” Is that a typographical error? Or does that analysis apply to the four-building campus shown in the site plan?

Response: This is a typographical error, and the total anticipated flow rate is correct, and matches the 4 data center campus shown. DEQ shows all four buildings on page 5 of the Septic Evaluation Letter.

Comment 2. Have you received from DEQ a similar preliminary review for the stormwater and cooling water evaporation ponds? If so, please provide those letters with your application, or explain why DEQ permits are not required?

Response: DEQ permits will be required for both the stormwater evaporation pond (1200-c) and the cooling water evaporation pond (WPCF 2501), however preliminary reviews are not needed for these, and a LUCS is required in order to submit these permit review packages.

Comment 3. The application indicates the Port of Morrow will extend a force main to the site and serve the campus will connect in 2027. Could you provide a letter of intent from the Port for the industrial wastewater? Relatedly, could you clarify the timing of construction relative to service for industrial wastewater? Does ADS intend to start construction before 2027? Any clarification on the timing of the construction and connection for wastewater would be helpful so that we can correctly frame conditions or approval.

Response: The on-site pond storage is adequate to manage the site's non-contact cooling water needs until such time that the Port is able to deliver the off-site discharge system. The site can fully function without the Port's system and therefore should not be conditioned upon delivery of this system.

Sincerely,



Leif Van Acker, P.E.

Date: 1/22/2026
To: Tamra Mabbott, Morrow County
From: Todd Mobley, PE
Myla Cross
Project Name: Tower Road East Data Center – Morrow County
AKS Job No.: 13812-01
Project Site: Map No. 04N24E Tax Lot 136
Subject: East Tower Road Campus – TIA Review



Introduction

This memorandum summarizes our review of the traffic analysis of the Traffic Impact Analysis, dated October 2025, for the proposed East Tower Road Campus development in Morrow County, Oregon. The proposed development will include the construction of an approximately 816,000-SF data center.

Traffic Impact Analysis Review

The traffic impact analysis was prepared for a proposed 816,000-SF data center with a buildout year of 2028. Six intersections were examined in the traffic study:

1. Tower Road at I-84 Westbound Ramps
2. Tower Road at I-84 Eastbound Ramps
3. Tower Road at Kunze Lane
4. Tower Road at Boardman Airport Lane
5. Tower Road at Frontage Road (West leg to be constructed by development)
6. Site Access at Frontage Road (Intersection to be constructed by development)

Trip Generation

The trip generation was prepared for an 816,000-SF building using rates from the *Trip Generation Manual*,¹ Land Use Code 160, Data Center. The trip generation estimates vary slightly from the ITETripGen website, likely due to rounding errors. Table 1 presents the trip generation estimates for the proposed data center for the time periods in the memorandum.

¹ Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 12th Edition, 2025.

Table 1: Trip Generation

ITE Code & Land Use	Size	Morning Peak Hour			Evening Peak Hour			Daily Total
		In	Out	Total	In	Out	Total	
160 – Data Center	816 KSF	40	17	57	8	33	41	595

Table 1 shows the AM peak hour is higher than the PM peak hour; however, an operational analysis was only conducted for the PM peak hour.

An estimate of construction traffic volumes, car/truck mix, and duration should be provided so that the County and surrounding stakeholders can better understand construction impacts.

Trip Distribution

The trip distribution in the TIA was reported to be based on previously approved distributions for similar developments in the site vicinity. The *Boardman Data Center Traffic Impact Analysis*, dated July 11, 2024, was included in the appendix as reference. The following distribution was assumed:

- 90% traveling to/from the east along I-84
- 10% traveling to/from the west along I-84

Based on the 2024 traffic counts at the freeway ramp terminal intersections, for inbound traffic approximately 45% travels from the west along I-84 and 55% travels from the east along I-84. For outbound traffic, approximately 25% travels to the west and 75% travels to the east. Additionally, existing volumes, particularly at the Tower Road at Kunze Lane intersection, show some trips traveling to and from the south on Tower Road. However, the assumed site trip distribution is 100% traveling to and from the north. Justification should be provided for the assumed site trip distribution.

Trip Assignment

The trip distribution and assignment is illustrated in Figure 2, Development Trip Distribution, of the TIA.

Traffic Volumes

The buildout year for the proposed project is 2028. The traffic study based the traffic volumes on existing traffic counts collected in January of 2024. These volumes were seasonally adjusted, a background growth rate of 2.0 percent per year (compounded) was applied, and the in-process volumes from the *Boardman Data Center TIA* were added to estimate the 2028 no-build volumes. Site trips were added to the no-build volumes to estimate the 2028 build volumes.

Figure 2, Development Trip Distribution, shows correct trip assignment volumes, specifically 7 site trips making a westbound left turn during the PM peak hour at the Tower Road at I-84 westbound ramp intersection. However, there is a discrepancy between Figure 4, 2028 No-Build Turning Movements, which shows a westbound left-turn volume of 170 vehicles, and Figure 5, 2028 Build Turning

Movements, which shows a westbound left-turn volume of 201 vehicles. The westbound turning volume should be 177 for the 2028 build volumes, this error is also present in the Synchro outputs.

Operational Analysis

The operational analysis was reviewed, and the following items were noted:

- Only PM peak hour analysis was provided but AM peak trip rates are higher. Provide justification for omitting the AM peak hour. AM traffic counts at the study intersections can be found in Memo #3 of the I-84 Exit 159 Tower Road IAMP².
- A peak hour factor (PHF) of 0.92 was applied to the Site Access at Frontage Road intersection. Per ODOT's *Analysis Procedures Manual*, for intersection analysis at a sketch planning-level, where traffic counts are not provided in 15- minute intervals, a PHF of 0.85 should be applied to for collector-collector or lower classification roadways.
- As stated in the *Traffic Volumes* section, the westbound left-turning volume for the Tower Road at I-84 Westbound Ramps intersection during build conditions is incorrect.

Overall, the TIA shows that all study intersections will operate acceptably per jurisdictional standards with the proposed development in place. Correcting the PHF for the Site Access at Frontage Road intersection and correcting the westbound left-turning volume for the Tower Road at I-84 westbound ramp intersection during build conditions will not affect the conclusion that the study intersections will operate acceptably.

Safety Analysis

The safety analysis included a review of the latest five-year crash history from January 1, 2019, through December 31, 2023. Crash rates for each study intersection were compared with their respective ODOT 90th percentile crash rates. Based on the results of the crash analysis, none of the study intersections had a crash that resulted in an injury classified as *Injury A* (suspected serious injury) or fatality, and none had a crash rate above their respective ODOT 90th percentile crash rate. Under the *Collision Severity* section, it is stated that the analysis is conducted for years 2018-2022. However, this appears to be a typo as the results are consistent with the data from years 2019-2023.

No left-turn lane warrant analysis was included in the TIA. We recognize that volumes (particularly in January) are low, but other considerations are heavy vehicles, farm equipment, and peak harvest conditions. Provide a left-turn warrant analysis based on the PM peak hour build volumes.

Conclusions

Based on our review of the TIA, we recommend the following:

1. **Trip Generation:** An estimate of construction traffic volumes, car/truck mix, and duration should be provided so that the County and surrounding stakeholders can better understand construction impacts.

² ODOT, I-84 Exit 159 Tower Road IAMP Project Documents, 2025. <https://kaiproject.com/websites/92/pages/476>

2. **Trip Distribution:** Based on the 2024 traffic counts, for inbound traffic approximately 45% travels from the west along I-84 and 55% travels from the east along I-84. For outbound traffic, approximately 25% travels to the west and 75% travels to the east. Provide justification for the assumed east/west split on I-84 – 90% traveling to and from the east, and 10% traveling to and from the west.
3. **Trip Distribution:** Existing volumes, particularly at Tower Road at Kunze Lane intersection, show some trips traveling to and from the south on Tower Road, but the assumed site trip distribution is 100% traveling to and from the north. Provide justification for the assumed north/south split on Tower Road.
4. **Operational Analysis:** Only PM peak hour analysis was provided but AM peak trip rates are higher. Provide justification for omitting the AM peak hour.
5. **Safety Analysis:** No left-turn lane warrant analysis was included. We recognize that volumes (particularly in January) are low, but other considerations are heavy vehicles, farm equipment, and peak harvest conditions. Provide a left-turn warrant analysis based on the PM peak hour build volumes.



MEMORANDUM

To: Tamra Mabbott, Morrow County
Senior Planner

From: Joey Miller
Brad Lincoln, PE
Kimley-Horn and Associates, Inc.

Date: February 5, 2026

Subject: Tower Road East Data Center - Comment Response

Kimley-Horn and Associates, Inc. has been retained to address comments identified in the East Tower Road Campus – TIA Review dated January 22, 2026 regarding the review of the traffic impact analysis (TIA) of the East Tower Road Campus (Development). The specific comments from Todd Mobley, PE, are listed below and a response has been provided for each comment.

1 TRIP GENERATION

Comment:

An estimate of construction traffic volumes, car/truck mix, and duration should be provided so that the County and surrounding stakeholders can better understand construction impacts.

Response:

The Planning Department received an Administrative Review Memo noting peak construction volumes for the site are anticipated to be around 600 trips per day. Additionally, AWS would address construction traffic impacts through a “Road Use Agreement.” Consistent with the template Road Use Agreement that has been previously approved by the County, AWS would designate a company representative as a point of contact; coordinate with the County to conduct pre-construction and post-construction road inventories; provide construction hauling routes for County review and approval; maintain roads used during construction as necessary; comply with all traffic control requirements under the Manual on Uniform Traffic Control Devices; and reimburse the County for the reasonable cost to repair and restore any roads damaged by construction hauling activities to a condition equal to or better than their pre-construction condition, not to exceed an agreed-upon maximum amount.

2 TRIP DISTRIBUTION

Comment:

Based on the 2024 traffic counts, for inbound traffic approximately 45% travels from the west along I-84 and 55% travels from the east along I-84. For outbound traffic, approximately 25% travels to the west and 75% travels to the east. Provide justification for the assumed east/west split on I-84 – 90% traveling to and from the east, and 10% traveling to and from the west.

Response:

The trip distribution and Development trip assignments was based on data provided in a previously approved TIA report for the Boardman Data Center (July 11, 2024) within the vicinity of the project site. A noted portion in section 2.3.2 Proposed Trip Distribution reads as follows:

“The trip distribution is based on the population surrounding the proposed project. The project is assumed to draw most of its traffic from I-84. The trip distribution pattern was submitted to the County and ODOT for review and comments.”

A comment response memo was also provided with this updated study, of which no mention or objection is presented toward the proposed trip distribution of 90% traveling to and from the east, and 10% traveling to and from the west. This same trip distribution was used in the Tower Road East Data Center TIA report to remain consistent with this previous study within the vicinity of the site. The Boardman Data Center TIA is provided as Appendix C in the Tower Road East Data Center TIA report.

It is also important to note that there is a Love’s Travel Stop along Tower Road south of the interchange is likely responsible for roughly half the trips at the interchange. The Love’s Travel Stop would have a much different distribution than the trips generated by the Development.

3 TRIP DISTRIBUTION/ASSIGNMENT

Comment:

Existing volumes, particularly at Tower Road and Kunze Lane intersection, show some trips traveling to and from the south on Tower Road, but the assumed site trip distribution is 100% traveling to and from the north. Provide justification for the assumed north/south split on Tower Road.

Response:

Tower Road to the south of the proposed Frontage Road leads exclusively to agriculture and farming land uses with no connection to other highways or roadways. The site development trips are anticipated to travel 100% to and from the north based on surrounding residential, retail, and restaurant uses.

4 OPERATIONAL ANALYSIS

Comment:

Only PM peak hour analysis was provided but AM peak trip rates are higher. Provide justification for omitting the AM peak hour.

Response:

Analysis was performed for the PM peak hour only as outlined in the Morrow County Transportation System Plan – Appendix C: Traffic Impact Analysis Guidelines. Counts were completed on a typical weekday (Thursday, January 25, 2024) from 3:00pm through 6:00pm in accordance with these guidelines. Additionally, a technical memo for the I-84 Exit 159 Tower Road IAMP displays AM peak hour volumes that are approximately 20% to 25% lower than the PM peak hour volumes collected

during the peak summer seasons. The AM peak-hour operations are not anticipated to be worse than the PM peak-hour due to the lower volumes, even though the Development generates 16 additional trips during the AM peak hour. Additionally, the volumes completed for the Development TIA have been grown by a factor of 1.59 to remain consistent with seasonal adjustment growth calculations identified the Oregon Department of Transportation (ODOT) Analysis Procedures Manual (APM).

5 SAFETY ANALYSIS

Comment:

No left-turn lane warrant analysis was included. We recognize that volumes (particularly in January) are low, but other considerations are heavy vehicles, farm equipment, and peak harvest conditions. Provide a left-turn warrant analysis based on the PM peak hour build volumes.

Response:

The channelization warrant analysis shows that the left-turn channelization would not be warranted at any of the study intersections under the 2028 build conditions. Left-turn warrant analysis has been provided in the updated TIA to address this comment.

In addition, the noted peak hour factor (PHF) updates to the Site Access at Frontage Road study intersection, noted discrepancies in westbound left-turn volumes for the Tower Road at I-84 westbound ramp study intersection, and collision analysis years (2019-2023) have been updated in the revised TIA.

 **TRAFFIC IMPACT ANALYSIS**

TOWER ROAD EAST CAMPUS

JURISDICTION: MORROW COUNTY, OR

Prepared for:
Amazon Web Services

Prepared by:
Kimley»»Horn

February 2026
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TRAFFIC IMPACT ANALYSIS**FOR****TOWER ROAD EAST CAMPUS**

Prepared for:
Amazon Web Services

Prepared by:
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EXPIRES: December 31, 2026

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

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1. DEVELOPMENT IDENTIFICATION

Kimley-Horn and Associates, Inc. (Kimley-Horn) has been retained to provide an updated traffic impact analysis (TIA) report for the Tower Road East Campus development (Development) addressing comments from Morrow County (County). This report is intended to provide the County with the necessary trip generation, trip distribution, and level of service information to facilitate their review of the Development. Brad Lincoln, responsible for this report and traffic analysis, is a licensed professional engineer (Civil) in the State of Oregon.

The Development site is located south of Interstate 84 (I-84) in Morrow County, Oregon. The site is proposed to include 816,000 square feet (SF) of data center. The site is currently undeveloped. Primary access to the site is provided via a frontage road and Tower Road. Analysis for the Development was performed for a three-year build-out period of 2028. A site vicinity map is included in **Figure 1** and a site plan is provided in **Appendix A**.

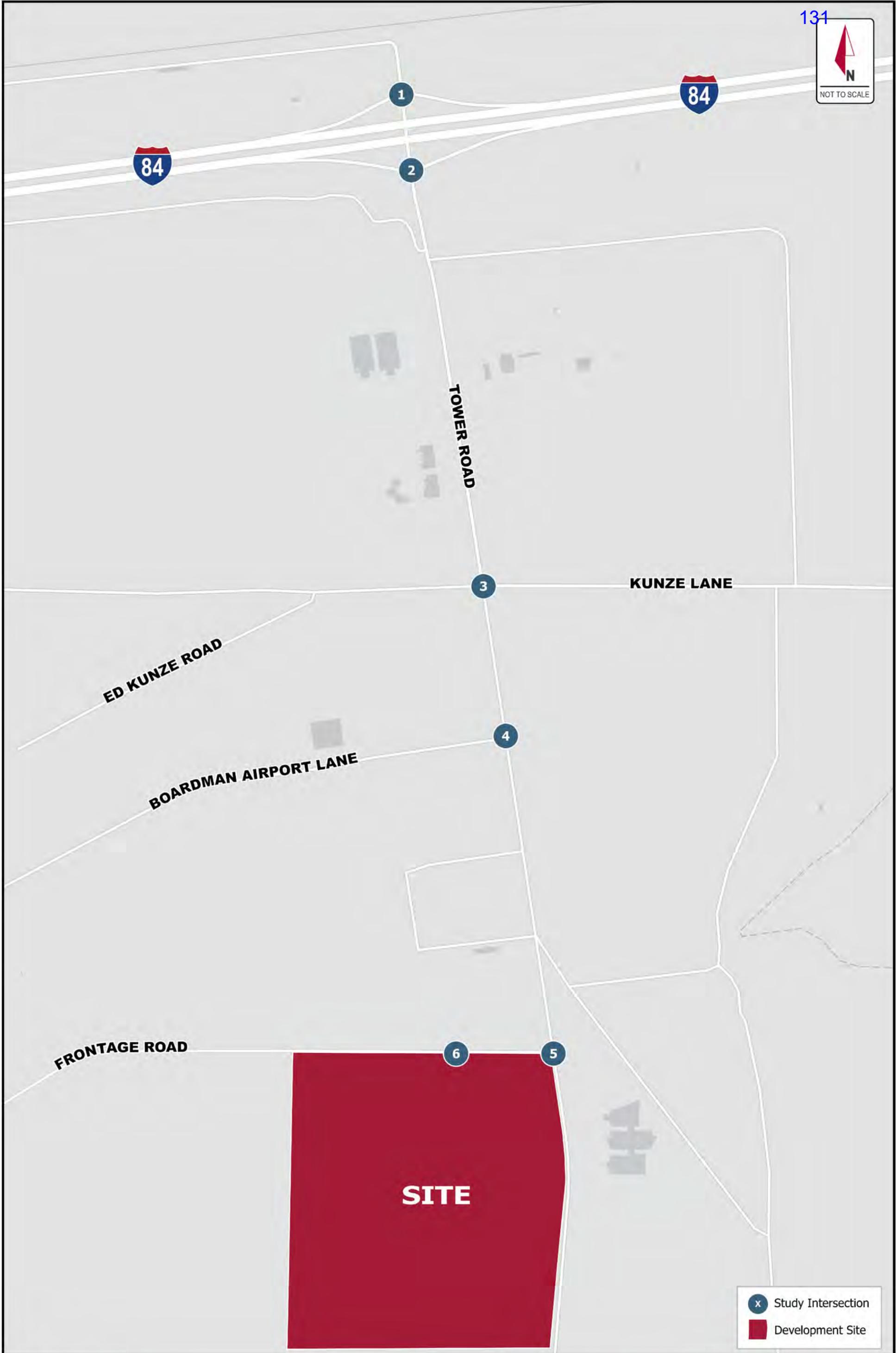
2. ROADWAY NETWORK

The major roadways in the site vicinity include I-84, Tower Road, Kunze Lane, and Boardman Airport Lane. The major intersections in the site vicinity are along Tower Road with the I-84 interchange, Kunze Lane, and Boardman Airport Lane. I-84 is an east/west four-lane roadway (two-lanes each direction) with a posted speed limit of 70 miles per hour (mph) on the main line and 35 mph on the off ramps. Tower Road is a north/south two-lane roadway with a posted speed limit of 45 mph. Kunze Lane is an east/west two-lane roadway with a posted speed limit of 45 mph. Boardman Airport Lane is an east/west two-lane roadway, but does not have a posted speed limit. All intersections in the site vicinity are two-way stop controlled.

The following intersections have been analyzed for the weekday PM peak hour for the existing, 2028 no-build, and 2028 build conditions:

1. Tower Road at I-84 Westbound Ramps	Two-Way Stop-Control
2. Tower Road at I-84 Eastbound Ramps	Two-Way Stop-Control
3. Tower Road at Kunze Lane	Two-Way Stop-Control
4. Tower Road at Boardman Airport Lane	Two-Way Stop-Control
5. Tower Road at Frontage Road	Two-Way Stop-Control
6. Site Access at Frontage Road	Two-Way Stop-Control

The analysis was conducted exclusively for the PM peak hour, in accordance with the County Transportation System Plan—Appendix C: Traffic Impact Analysis Guidelines. Additionally, traffic counts from July 2024 as part of the I-84 Exit 159 Tower Road IAMP indicate that traffic volumes during the PM peak hour are approximately 20% to 25% higher than the AM peak hour volumes collected during the peak summer season. The AM peak hour operations are not anticipated to be worse than the PM peak hour due to the lower volumes, even though the Development generates 16 additional trips during the AM peak hour.



3. METHODOLOGY

The trip generation calculations are based on the average trip generation rates published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 12th Edition (2025)*. The trip distribution is based on an approved distribution for commercial developments in the site vicinity.

The level of service analysis at the study intersections has been performed in accordance with the *Highway Capacity Manual (HCM) 7th Edition*. Congestion is generally measured in terms of level of service (LOS). Road facilities and intersections are rated between LOS A and LOS F, with LOS A being free flow and LOS F being forced flow or over-capacity conditions. A summary of the level of service criteria is included in **Table 1**. The level of service at all-way stop-controlled intersections, signalized intersections, and roundabouts are based on the average delay for all vehicles. The level of service analysis for unsignalized intersections is based on the movement with the highest delay. The analysis has been performed utilizing the *Synchro 12* software.

Table 1: Level of Service Criteria

Level of Service ¹	Expected Delay	Intersection Control Delay (Seconds per Vehicle)		Volume to Capacity (v/c)
		Unsignalized Intersections	Signalized Intersections	
A	Little/No Delay	≤10	≤10	0.0 to 0.5
B	Short Delays	>10 and ≤15	>10 and ≤20	0.5 to 0.7
C	Average Delays	>15 and ≤25	>20 and ≤35	0.7 to 0.8
D	Long Delays	>25 and ≤35	>35 and ≤55	0.8 to 0.9
E	Very Long Delays	>35 and ≤50	>55 and ≤80	0.9 to 1.0
F	Extreme Delays ²	>50	>80	> 1.0

Site-generated traffic is expected to use I-84 and Tower Road. I-84 is an Oregon Department of Transportation (ODOT) roadway. Tower Road is a Morrow County roadway. The I-84 westbound and eastbound ramp intersections are evaluated on the volume-to-capacity (V/C) ratio since they are an ODOT facility. The threshold V/C ratio is 0.70 along the highway, not necessarily for a specific movement. The [Morrow County Transportation System Plan](#) states the minimum acceptable performance of LOS D for rural roadways.

¹ **Source:** *Highway Capacity Manual, 7th Edition*.

LOS A: Free-flow traffic conditions, with minimal delay to stopped vehicles (no vehicle is delayed longer than one cycle at signalized intersection).

LOS B: Generally stable traffic flow conditions.

LOS C: Occasional back-ups may develop but delay to vehicles is short term and still tolerable.

LOS D: During short periods of the peak-hour, delays to approaching vehicles may be substantial but are tolerable during times of less demand (i.e., vehicles delayed one cycle or less at signal).

LOS E: Intersections operate at or near capacity, with long queues developing on all approaches and long delays.

LOS F: Jammed conditions on all approaches with excessively long delays and vehicles unable to move at times.

² When demand volume exceeds the capacity of the lane, extreme delays will be encountered with queuing which may cause severe congestion affecting other traffic movements in the intersection.

4. TRIP GENERATION

Trip generation calculations for the proposed 816,000 SF Development are based on data collected and contained in the *ITE Trip Generation Manual, 12th Edition (2025)*. The daily, AM, and PM peak hour trip generation rates for the Development are based on the rates for ITE Land Use Code (LUC) 160, Data Center. These rates are higher than what the Development anticipates to generate based on studies completed at other similar sites. Using the ITE data provides a conservative outlook of impacts to the roadways. The trip generation of the Development is summarized in **Table 2**.

Table 2: Trip Generation Summary

816,000 SF Data Center ITE LUC 160	Average Daily Trips (ADTs)			AM Peak-Hour Trips			PM Peak-Hour Trips		
	In	Out	Total	In	Out	Total	In	Out	Total
Generation Rate	0.73 trips per 1,000 SF			0.07 trips per 1,000 SF			0.05 trips per 1,000 SF		
Splits	50%	50%	100%	71%	29%	100%	30%	70%	100%
Trips	298	297	595	40	17	57	8	33	41

The Development is anticipated to generate approximately 595 ADTs with approximately 57 AM peak hour trips and approximately 41 PM peak hour trips.

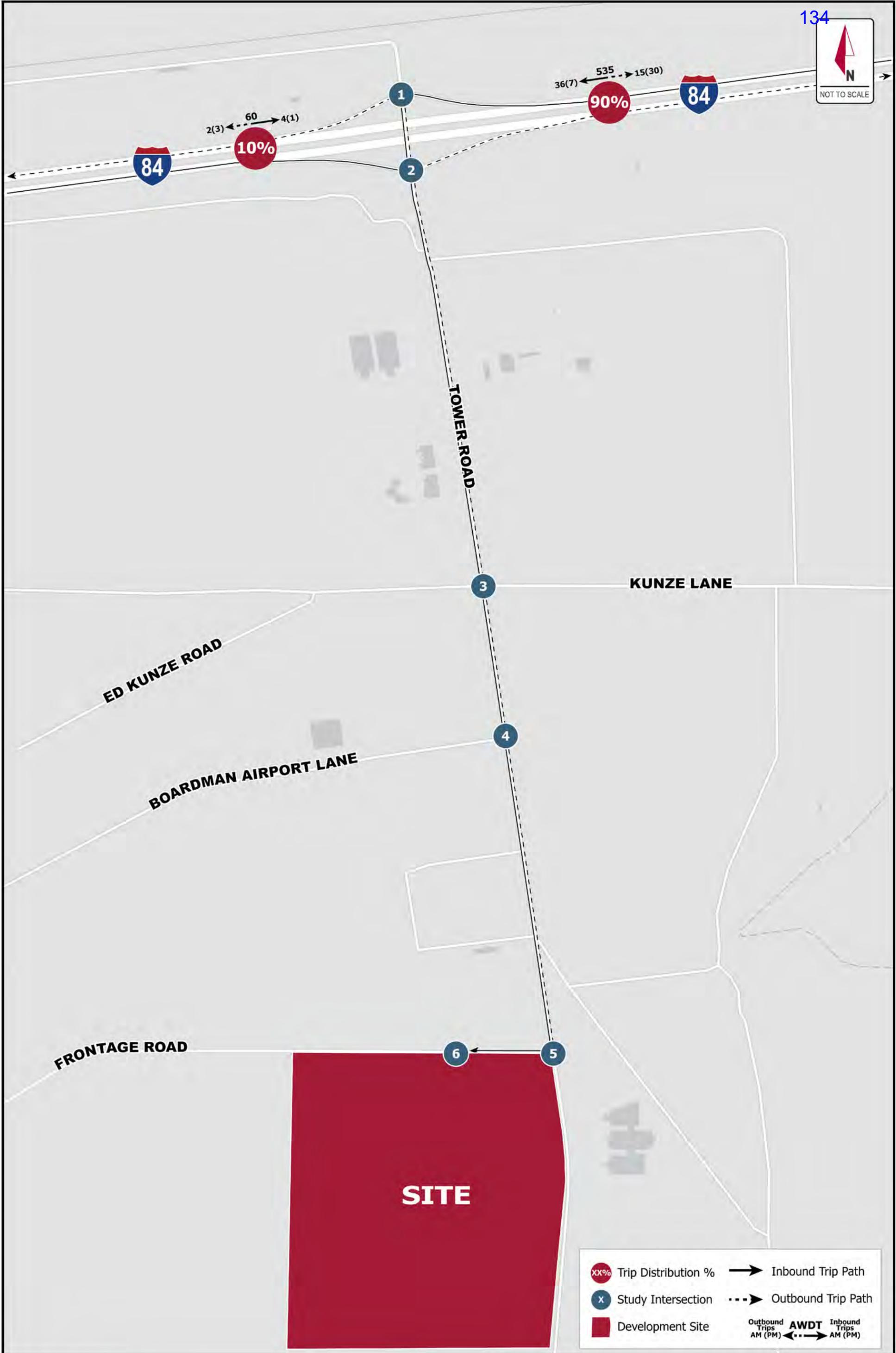
5. TRIP DISTRIBUTION

The distribution of trips generated by the Development is based on previously approved distributions for similar developments in the site vicinity to remain consistent with previous studies. The trip distribution is also based on surrounding residential communities east of the site since the vast majority of trips are anticipated to be between home and work. Trips have not been distributed south of the site since that area is primarily agricultural with limited residential land use and no connection to other highways or roadways. The anticipated trip distribution is:

- 90% to and from the east along I-84
- 10% to and from the west along I-84

The trip distribution is different than the existing turning movements at the I-84 ramp intersections would suggest. This is likely due to the I-84 ramp intersection volumes being heavily influenced by the adjacent Love's Travel Stop.

A detailed distribution of the trips generated by the proposed Development during the PM peak-hour is shown in **Figure 2**.



● XX%	Trip Distribution %		Inbound Trip Path
X	Study Intersection		Outbound Trip Path
	Development Site		Outbound Trips AM (PM)
			Inbound Trips AM (PM)

FIGURE 2: DEVELOPMENT TRIP DISTRIBUTION
TOWER ROAD EAST CAMPUS - MORROW COUNTY, OREGON (KH 090004044)

6. INTERSECTION ANALYSIS

6.1. Seasonal Adjustment Factor

The existing traffic counts were modified to current 30th highest hourly volume (30HV) conditions by applying a seasonal adjustment factor consistent with ODOT's Analysis Procedures Manual (APM). The seasonal adjustment factor was calculated using data collected at Automatic Tracking Recorder (ATR) #25-008 for I-84. ATR #25-008 is located along I-84, approximately 0.6 miles southeast of Columbia River Highway No. 2 Interchange (US-730).

Historical data at ATR #25-008 was analyzed to determine the peak-month beginning in 2018 through 2022. Within this five-year span, the ADT values were consistently higher than AWT. ADT was therefore used to determine the seasonal factors for ATR #25-008. The month of August had the highest ADT for three of five years of data and was below July during 2021 and 2023. The month of August was therefore used when calculating seasonal adjustment factors for ATR #25-008. Following the APM process, the highest and lowest monthly percentages were eliminated from the five-year of historical data when calculating the average, the remaining three years of data were used to calculate the peak-month average for the five-year time period. The monthly percent of annual average daily traffic (AADT) for the peak-month of August and count month of January are shown in **Table 3**.

Table 3. Seasonal Adjustment Factor (ATR #25-008, I-84)

Year	2019	2020	2021	2022	2023	Average
Peak-Month (August)	124	126	120	117	118	120.67
Count Month (January)	76	80	74	76	76	76.00

For ATR #25-008, the average peak-month volume was 120.67 and the average count month volume was 76.00. This results in a seasonal factor of 1.59, calculated by dividing the peak-month average by the count month average.

6.2. Turning Movement Calculations

The PM peak hour turning movement counts for the study intersections were collected by the independent counting firm IDAX in January 2024 from 3:00 PM to 6:00 PM. The existing study intersection count data is provided in **Appendix B**. The existing traffic counts were modified to current 30th highest hourly volume (30HV) conditions by applying a seasonal adjustment factor consistent with ODOT's APM. The modified existing turning movement volumes are shown in **Figure 3**. It is important to note that traffic counts were collected in July 2024, do not require the seasonal adjustment factor, as a part of the I-84 Exit 159 Tower Road IAMP which are considerably lower than the modified existing turning movement volumes shown in **Figure 3**.

The future analysis has been performed for the year 2028. The 2028 no-build turning movements have been calculated by applying a 2% annually compounding growth rate and adding trips generated by the Boardman Data Center development. The pipeline trips generated by the Boardman Data Center development are included in **Appendix C**. The 2028 no-build turning movements at the study intersections are shown in **Figure 4**.

The 2028 build turning movements at the study intersections have been calculated by adding the peak hour trips generated by the proposed Development to the 2028 no-build turning movements. The 2028 build turning movements are shown in **Figure 5**. The turning movement calculations are provided in **Appendix D**.



TOWER ROAD AT I-84 WESTBOUND RAMPS

1	
← 2	← 137
	↘ 63
	↗ 4

TOWER ROAD AT I-84 EASTBOUND RAMPS

2	
← 137	↘ 4
↘ 2	↗ 2
↘ 110	↗ 64
	↗ 212

TOWER ROAD AT KUNZE LANE

3	
← 29	↘ 13
↘ 24	↗ 21
↘ 2	↗ 158
	↗ 51

TOWER ROAD AT BOARDMAN AIRPORT LANE

4	
↘ 2	↘ 28
↘ 5	↗ 228





TOWER ROAD AT I-84 WESTBOUND RAMPS

1	
← 2	← 170
	↗ 73 ↘ ↔ 4 ↔

TOWER ROAD AT I-84 EASTBOUND RAMPS

2	
← 170	↘ 4
↘ 2	↘ 2
↘ 121	↗ 74 ↘ ↗ 279 ↘

TOWER ROAD AT KUNZE LANE

3	
← 55	↘ 14
↘ 26	↘ 23
↘ 2	↗ 226 ↘ ↗ 55 ↘

TOWER ROAD AT BOARDMAN AIRPORT LANE

4	
↘ 26	↘ 30
↘ 60	↗ 247 ↘



- x Study Intersection
- Development Site
- PM→ Turning Movement Volumes



TOWER ROAD AT I-84 WESTBOUND RAMPS

1	
← 2	← 177
	76 → 4 →

TOWER ROAD AT I-84 EASTBOUND RAMPS

2	
← 177 4 →	
2 → 2 → 122 →	77 → 309 →

TOWER ROAD AT KUNZE LANE

3	
← 63 26 →	14 → 23 →
2 →	259 → 55 →

TOWER ROAD AT BOARDMAN AIRPORT LANE

4	
26 → 38 →	
60 →	280 →

SITE ACCESS AT FRONTAGE ROAD

6	
	← 8
	33 →

TOWER ROAD AT FRONTAGE ROAD

5	
8 → 30 →	
33 →	247 →

SITE

- x Study Intersection
- Development Site
- PM→ Turning Movement Volumes

6.3. Level of Service Calculations

The impacts of the Development have been evaluated for the 2028 no-build and build conditions. The system includes the existing channelization at the study intersections as well as the existing peak hour factors, heavy-vehicle factors, and intersection control. These parameters have been used for the existing, 2028 no-build, and 2028 build conditions. The operations of the study intersections under the existing, 2028 no-build, and 2028 build conditions for the PM peak hour is summarized in **Table 4**.

Table 4: PM Peak Hour Level of Service Summary

Intersection	Existing Conditions			2028 Conditions					
				No-Build			Build		
	LOS	Delay (sec)	V/C	LOS	Delay (sec)	V/C	LOS	Delay (sec)	V/C
1. Tower Road at I-84 Westbound Ramps	B	11.5	0.21	B	12.3	0.28	B	12.5	0.29
2. Tower Road at I-84 Eastbound Ramps	B	10.5	0.17	B	11.0	0.19	B	11.1	0.20
3. Tower Road at Kunze Lane	B	10.5	0.06	B	11.5	0.07	B	11.9	0.07
4. Tower Road at Boardman Airport Lane	B	10.9	0.01	B	12.0	0.13	B	12.6	0.13
5. Tower Road at Frontage Road	-	-	-	-	-	-	B	10.8	0.06
6. Site Access at Frontage Road	-	-	-	-	-	-	A	8.4	0.04

The analysis shows the existing study intersections are operating at an acceptable V/C ratio and LOS during the PM peak hour. The study intersections are anticipated to continue operating at an acceptable V/C ratio and LOS through the 2028 build conditions. The intersection LOS analysis calculations are provided in **Appendix E**.

7. COLLISION ANALYSIS

The latest five-year collision history from January 1, 2019, through December 31, 2023, was obtained from ODOT. The analysis completed in this report is consistent with ODOT methodologies. The five-year collision rate has been calculated using PM peak hour volumes and a K-factor of 10 for conversion to ADT. There was a total of six collisions reported over the five-year period.

7.1. Collision Types

The number of collisions by intersection and type are summarized in **Table 5**.

Table 5: Five-Year Collision Data Summary

Intersection	Collision Type					Total	Per Year
	Angle	Fixed/ Other Object	Rear-End	Opposite Direction	Same Direction		
1. Tower Road at I-84 Westbound Ramps	0	0	1	0	0	1	0.2
2. Tower Road at I-84 Eastbound Ramps	0	2	1	0	1	4	0.8
3. Tower Road at Kunze Lane	0	0	0	0	0	0	0.0
4. Tower Road at Boardman Airport Lane	1	0	0	0	0	1	0.2
5. Tower Road at Frontage Road	0	0	0	0	0	0	0.0

7.2. Collision Rates

The collisions per million entering vehicles (MEV) is the standard rate for intersections. The five-year collision rates are summarized in **Table 6**.

Table 6: Five-Year Collision Rate Calculation

Intersection	PM Peak hour Intersection Vol.	K-Factor	Total Collisions	Collision Rate ¹
1. Tower Road at I-84 Westbound Ramps	206	10	1	0.27
2. Tower Road at I-84 Eastbound Ramps	531	10	4	0.41
3. Tower Road at Kunze Lane	298	10	0	0.00
4. Tower Road at Boardman Airport Lane	263	10	1	0.21
5. Tower Road at Frontage Road	256	10	0	0.00

None of the study intersections have a collision rate greater than 1.0 or more than 10 collisions per year.

7.3. Collision Severity

The number of collisions by severity are summarized in **Table 7**.

Table 7: Collision Severity by Year

Severity	2019	2020	2021	2022	2023	Total
Fatal Crash	0	0	0	0	0	0
Suspected Serious Injury	0	0	0	0	0	0
Suspected Minor Injury	0	0	0	0	0	0
Possible Injury	1	0	0	0	0	1
No Apparent Injury	0	1	0	3	1	5
Total	1	1	0	3	1	6

Collisions were broken down by severity and year. From 2019 through 2023 there was a total of one possible injury collision and five no apparent injury/property damage only collisions.

7.4. ODOT 90th Percentile Rates

Additional collision rate analysis was completed based on data provided in the ODOT APM version 2 (October 2024). Section 4.1.1 Statewide Crash Rate References Exhibit 4-1 identifies the 90th percentile crash rates from a study of 500 intersections in Oregon. The crash rates are grouped by land type, rural or urban, and traffic control type, signalized or unsignalized, and three-leg or four-leg intersections. The 90th percentile rates for the corresponding unsignalized three-leg and four-leg intersections in rural areas are 0.475 MEV for three-leg stop-controlled intersections and 1.08 MEV for four-leg stop-controlled intersections. No study intersection is shown to have an MEV rate above the 90th percentile rate. The collision data is provided in **Appendix F**.

8. CHANNELIZATION WARRANT

The study intersections along Tower Road have been analyzed for northbound and southbound left-turn lanes based on APM 12.2.1 Left Turn Lane Criteria. One rear-end collision occurred at the Tower Road at I-84 EB Ramps intersection and at the Tower Road at I-84 WB Ramps intersection. Both collisions were caused by a vehicle waiting to turn. A single incident at an intersection over the study period does not establish a crash history that a left-turn lane could address. Therefore, the left-turn lane analysis has only been performed based on Criterion 1: Vehicular Volume which defers to Exhibit 12-1 Left Turn Lane Criterion (TTI). The analysis has been performed based on volumes under the 2028 build conditions. The posted speed limit along Tower Road is 45 miles per hour (mph). The left-turn warrant exhibits for each study intersection are provided in **Appendix G**.

8.1. Tower Road at I-84 Westbound Ramps

Tower Road at I-84 Westbound Ramps is anticipated to have 76 northbound left-turns with 6 opposing and advancing vehicles in the PM peak hour under 2028 build conditions. A left-turn lane is not warranted based on APM Exhibit 12-1.

8.2. Tower Road at I-84 Eastbound Ramps

Tower Road at I-84 Eastbound Ramps is anticipated to have 4 southbound left-turns with 586 opposing and advancing vehicles during the PM peak hour under 2028 build conditions. A left-turn lane is not warranted based on APM Exhibit 12-1.

8.3. Tower Road at Kunze Lane

Tower Road at Kunze Lane is anticipated to have zero northbound left-turn vehicles and 26 southbound left vehicles with 377 opposing and advancing vehicles during the PM peak hour under 2028 build conditions. A southbound left-turn lane may be warranted per APM Exhibit 12-1, as the plotted values are positioned right along the threshold line. However, this warrant is based on the January 2024 volumes and a 1.59 seasonal adjustment factor.

The left-turn warrant for Tower Road at Kunze Lane has therefore also been performed using the July 2024 traffic volumes from the I-84 Exit 159 Tower Road IAMP, which do not require a seasonal adjustment factor. Tower Road at Kunze Lane is anticipated to only have 18 southbound left vehicles with 306 opposing and advancing vehicles during the peak hour under 2028 build conditions. A left-turn is not warranted based on APM Exhibit 12-1 and the use of the I-84 Exit 159 Tower Road IAMP developed volumes. The I-84 Exit 159 Tower Road IAMP volumes, turning movement calculations, and left-turn warrant exhibit is provided in **Appendix G**.

8.4. Tower Road at Boardman Airport Lane

Tower Road at Boardman Airport Lane is anticipated to have zero northbound left-turn vehicles with 344 opposing and advancing vehicles during the PM peak hour under 2028 build conditions. A left-turn lane is not warranted based on APM Exhibit 12-1.

8.5. Tower Road at Frontage Road

Tower Road at Frontage Road is anticipated to have zero northbound left-turn vehicles with 285 opposing and advancing vehicles during the PM peak hour under 2028 build conditions. A left-turn lane is not warranted based on APM Exhibit 12-1.

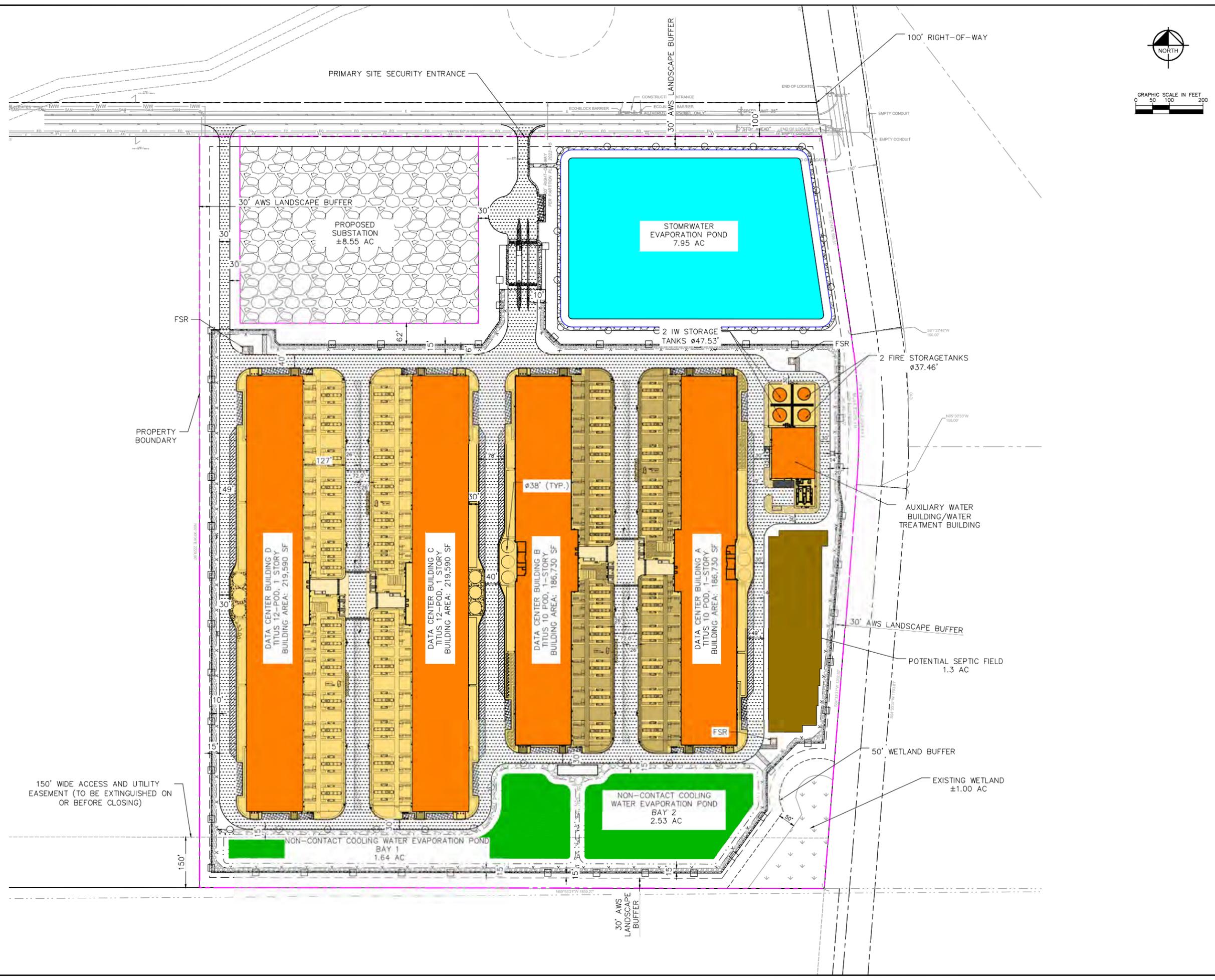
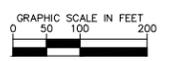
8.6. Channelization Warrant Summary

The channelization warrant analysis shows that the left-turn channelization would not be warranted at any of the study intersections under the 2028 build conditions. The Tower Road at Kunze Lane intersection left-turn channelization warrant is right on the threshold of whether a left-turn lane should be considered. The warrant was also analyzed using the July 2024 volumes from the IAMP and a left-turn lane is not warranted based on those volumes. The left-turn lane on Tower Road at Kunze Lane should therefore not be a condition of the Development.

9. CONCLUSIONS

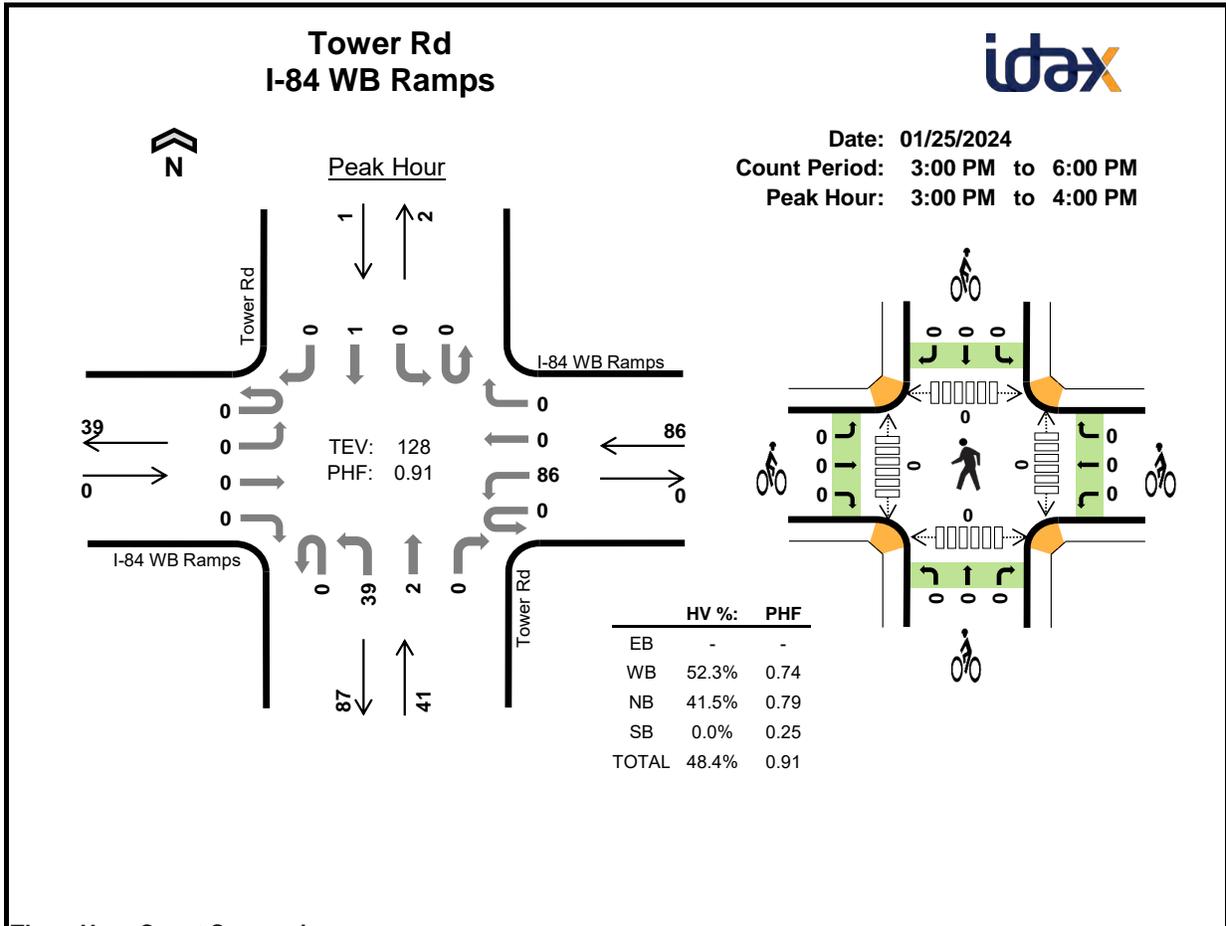
The Development site is located south of I-84 in Morrow County, Oregon. The site is proposed to include 816,000 SF of data center. The Development is anticipated to generate approximately 595 ADTs with approximately 57 AM peak hour trips and approximately 41 PM peak hour trips. Study intersections currently operate at an acceptable V/C ratio and LOS and are anticipated to continue operating at an acceptable V/C ratio and LOS through the 2028 build conditions during the PM peak hour. Left-turn lanes are not warranted at the study intersections and should not be a condition of the Development.

APPENDIX A
SITE PLAN



This document, together with the concepts and design presented herein, is intended only for the specific purpose and client for which it was prepared. Release of and improper reliance on this document without written authorization and adoption by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

APPENDIX B
COUNT DATA

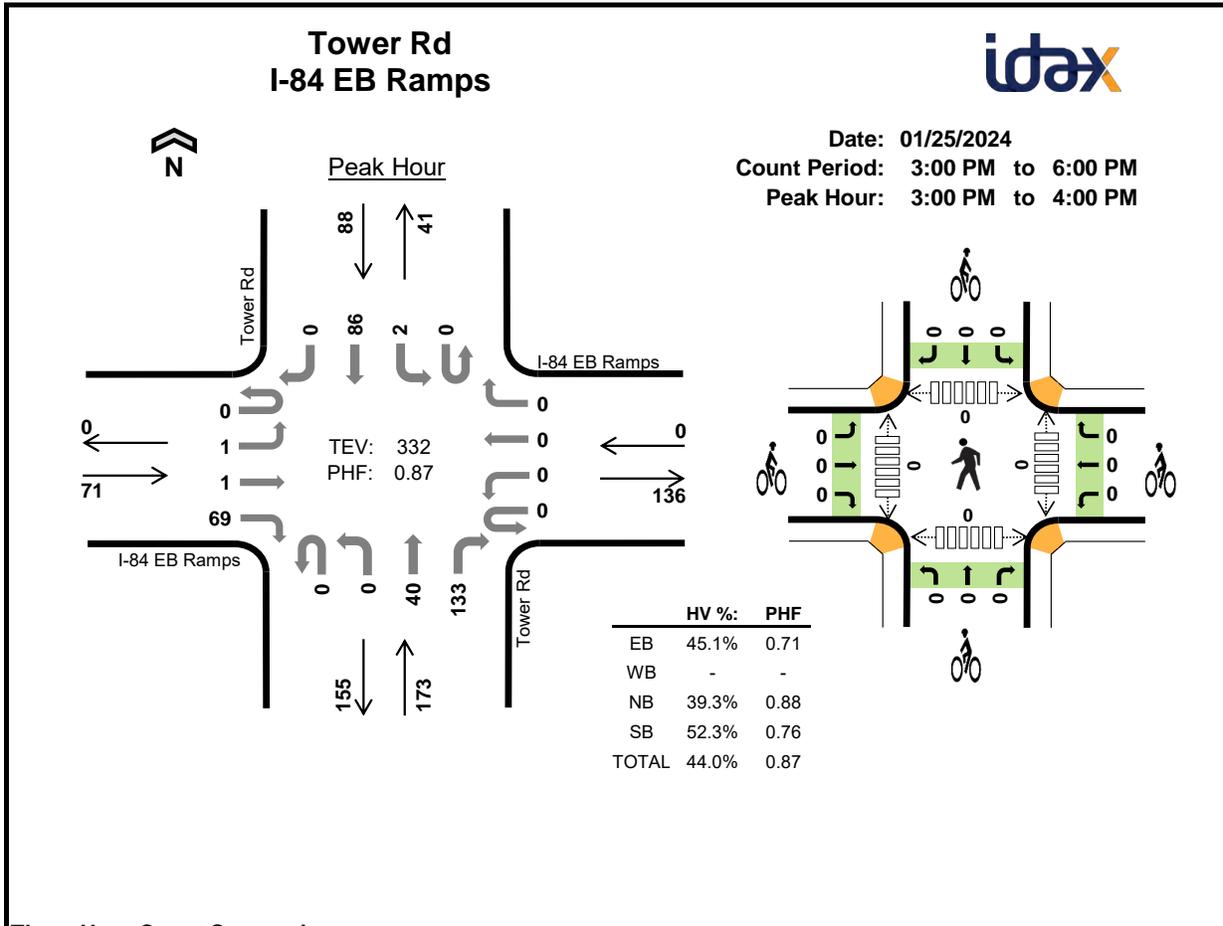


Three-Hour Count Summaries

Interval Start	I-84 WB Ramps				I-84 WB Ramps				Tower Rd				Tower Rd				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
3:00 PM	0	0	0	0	0	22	0	0	0	11	2	0	0	0	0	0	35	0	
3:15 PM	0	0	0	0	0	16	0	0	0	9	0	0	0	0	1	0	26	0	
3:30 PM	0	0	0	0	0	29	0	0	0	6	0	0	0	0	0	0	35	0	
3:45 PM	0	0	0	0	0	19	0	0	0	13	0	0	0	0	0	0	32	128	
Peak Hour	All	0	0	0	0	0	86	0	0	0	39	2	0	0	0	1	0	128	0
	HV	0	0	0	0	0	45	0	0	0	17	0	0	0	0	0	0	62	0
	HV%	-	-	-	-	-	52%	-	-	-	44%	0%	-	-	-	0%	-	48%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:00 PM	0	12	6	0	18	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	7	4	0	11	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	17	1	0	18	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	9	6	0	15	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	45	17	0	62	0	0	0	0	0	0	0	0	0	0



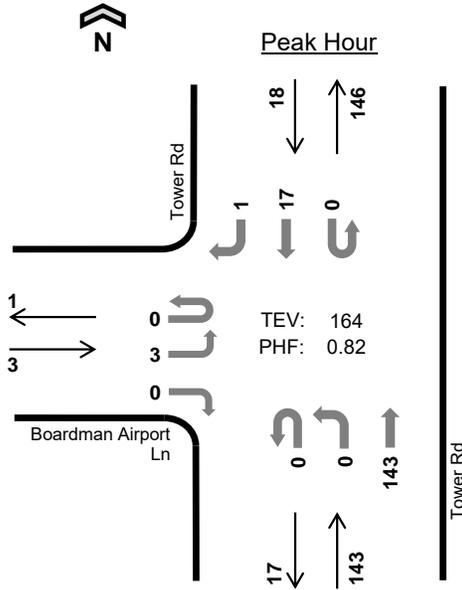
Three-Hour Count Summaries

Interval Start	I-84 EB Ramps				I-84 EB Ramps				Tower Rd				Tower Rd				15-min Total	Rolling One Hour
	Eastbound		Westbound		Northbound		Southbound		UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM	0	1	0	24	0	0	0	0	0	12	35	0	0	23	0	95	0	
3:15 PM	0	0	1	12	0	0	0	0	0	10	36	0	1	15	0	75	0	
3:30 PM	0	0	0	18	0	0	0	0	0	6	25	0	1	28	0	78	0	
3:45 PM	0	0	0	15	0	0	0	0	0	12	37	0	0	20	0	84	332	
Peak Hour	All	0	1	1	69	0	0	0	0	0	40	133	0	2	86	0	332	0
	HV	0	0	1	31	0	0	0	0	0	17	51	0	0	46	0	146	0
	HV%	-	0%	100%	45%	-	-	-	-	-	43%	38%	-	0%	53%	-	44%	0

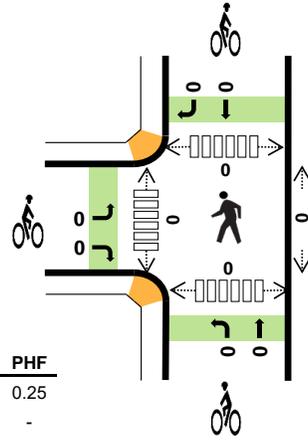
Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:00 PM	9	0	20	13	42	0	0	0	0	0	0	0	0	0	0
3:15 PM	9	0	22	7	38	0	0	0	0	0	0	0	0	0	0
3:30 PM	10	0	10	17	37	0	0	0	0	0	0	0	0	0	0
3:45 PM	4	0	16	9	29	0	0	0	0	0	0	0	0	0	0
Peak Hour	32	0	68	46	146	0	0	0	0	0	0	0	0	0	0

Tower Rd Boardman Airport Ln



Date: 01/25/2024
Count Period: 3:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM



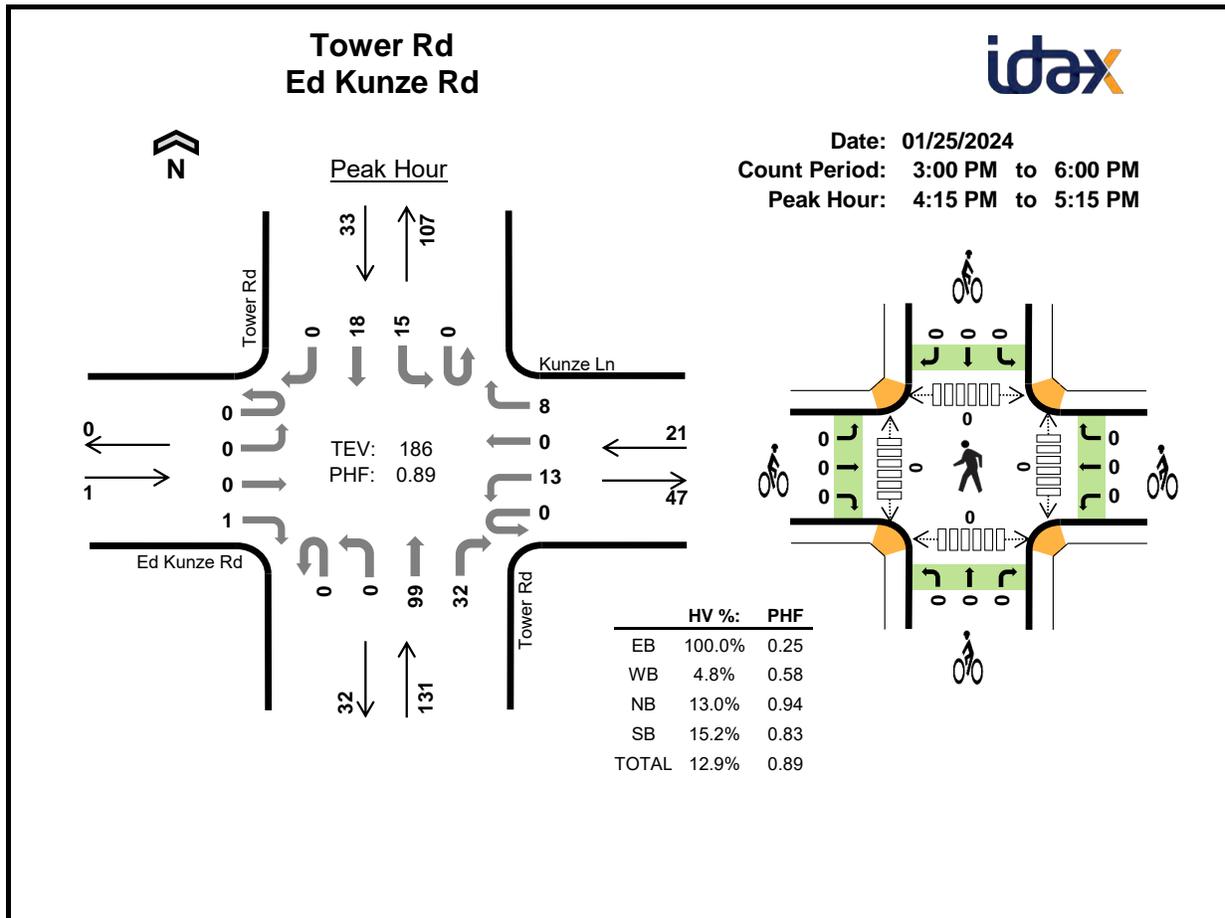
	HV %:	PHF
EB	33.3%	0.25
WB	-	-
NB	11.9%	0.74
SB	44.4%	0.56
TOTAL	15.9%	0.82

Three-Hour Count Summaries

Interval Start	Boardman Airport Ln				0				Tower Rd				Tower Rd				15-min Total	Rolling One Hour
	Eastbound		Westbound		Northbound		Southbound		Northbound		Southbound							
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:45 PM	0	0	0	0	0	0	0	0	0	0	30	0	0	0	7	1	38	0
5:00 PM	0	3	0	0	0	0	0	0	0	0	30	0	0	0	4	0	37	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	35	0	0	0	4	0	39	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	48	0	0	0	2	0	50	164
Peak Hour	All	0	3	0	0	0	0	0	0	0	143	0	0	0	17	1	164	0
	HV	0	1	0	0	0	0	0	0	0	17	0	0	0	7	1	26	0
	HV%	-	33%	-	-	-	-	-	-	-	12%	-	-	-	41%	100%	16%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:45 PM	0	0	4	3	7	0	0	0	0	0	0	0	0	0	0
5:00 PM	1	0	6	2	9	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	5	1	6	0	0	0	0	0	0	0	0	0	0
Peak Hour	1	0	17	8	26	0	0	0	0	0	0	0	0	0	0



Three-Hour Count Summaries

Interval Start	Ed Kunze Rd				Kunze Ln				Tower Rd				Tower Rd				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:15 PM	0	0	0	0	0	3	0	4	0	0	27	7	0	3	6	0	50	0	
4:30 PM	0	0	0	1	0	8	0	1	0	0	27	8	0	4	3	0	52	0	
4:45 PM	0	0	0	0	0	2	0	2	0	0	22	6	0	4	6	0	42	0	
5:00 PM	0	0	0	0	0	0	0	1	0	0	23	11	0	4	3	0	42	186	
Peak Hour	All	0	0	0	1	0	13	0	8	0	0	99	32	0	15	18	0	186	0
	HV	0	0	0	1	0	0	0	1	0	0	17	0	0	0	5	0	24	0
	HV%	-	-	-	100%	-	0%	-	13%	-	-	17%	0%	-	0%	28%	-	13%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:15 PM	0	0	3	1	4	0	0	0	0	0	0	0	0	0	0
4:30 PM	1	0	3	0	4	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	1	4	3	8	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	7	1	8	0	0	0	0	0	0	0	0	0	0
Peak Hour	1	1	17	5	24	0	0	0	0	0	0	0	0	0	0

APPENDIX C
PIPELINE TRIP GENERATION

Memorandum

DATE: July 11, 2024

TO: Morrow County, Oregon Department of Transportation

FROM: PJ McKelvey, PBS Engineering and Environmental Inc.

PROJECT: 78132.000

REGARDING: Boardman Data Center– TIA Comments Response

DESCRIPTION

The following memorandum responds to the comments received from Morrow County and ODOT regarding the Boardman Data Center Traffic Impact Analysis. The comments and responses are summarized below.

COUNTY COMMENTS

Comment 1. We reviewed and agreed with ODOT's comments. Particularly, that the applicant should revise the traffic study to include a Seasonal Adjustment Factor for the I-84 intersection volumes per ODOT's methodology for traffic analysis (referring to ODOT comment # 2 below).

Response

ODOT APM seasonal adjustment factor was calculated and used to update all study intersections volumes for the analysis. The adjustment factor was also applied to the intersection of Tower Road / Boardman Airport Lane for consistency of application.

Comment 2. The applicant should pay a proportionate share cost of installing a northbound right turn lane on Tower Road at the I-84 eastbound on-ramp. The proportionate share percentage should be recalculated after the Seasonal Adjustment Factor has been calculated and applied per Comment #1.

Response

Following the inclusion of the seasonal adjustment factor to all study intersection volumes, the mobility standard findings specific to the northbound movement at the Tower Road / I-84 eastbound ramps intersection are minimal. Synchro produced no control delay findings or v/c ratio findings for the movement. While it is true that further study is warranted for a right turn lane based on Exhibit 12-2 of the ODOT APM, it is clear it is solely due to a high percentage of approaching directional hourly volume being right turns (approximately 78% of volume through the lane).

Given the findings following the update of the analysis, proportionate share percentages will be provided for reference but will not be calculated or recommended in the revised report. I recommend the County seek further comment from ODOT on this issue after review of the revised TIA if desired.

Comment 3. Based on discussions at the April 26th, 2024, meeting between the applicant and the County, the County should condition the applicant to provide additional analysis that would determine the traffic impacts of construction vehicles during the construction of the data center. Based on the County's previous experiences with traffic congestion related to development construction, this is a safety and operations issue that should be evaluated and mitigated by the applicant.

Response

A Road Use Agreement between the County and the Applicant is actively being worked on to cover potential mitigation needs due to construction traffic for the project. No further analysis on the topic is provided in the revised report at this time.

Comment 4 (From Eric Imes). Construction traffic impacts on Bombing Range Road PDX 178 has been ½ mile backups while processing construction workers onto the site. If I have safety concerns surrounding traffic during construction, I need to be assured that the developer will respond to mitigate any problems.

Response

See response to County Comment #3 above.

Comment 5 (From Eric Imes). Cumulative impacts of multiple access points near the project. There are three access points into the Port of Morrow (Boardman Airport) within about ½ mile of each other. Has your project team discussed with the Port of Morrow the impacts of all projects into the port? I know of a Data Center project, Solar Project, Port improvement all happening at the same time potentially.

Response

Cumulative impact of alternate access points was not considered for this report. Alternatives are not fully paved to Boardman Airport Lane and were not considered as viable alternatives for common travel in their current state.

Based on a meeting between the County and the Applicant on June 20th, 2024, Eric Imes of the County agreed to contact Jacob Cain of the Port of Morrow and assume responsibility for acquiring potential in-process project information. This information can be included into the report if identified as being in-process projects with useable trip assignment information relevant to the study intersections used in the TIA.

Comment 6 (From Eric Imes). ODOT overpass repair project. I am concerned about a detour route while the overpass is being repaired. I am struggling to see a good option on the Boardman area map.

Response

ODOT has made it clear that they will perform traffic control during construction of the Tower Road bridge project. No recommendation will be made on the TIA.

ODOT COMMENTS

Comment 1. Analysis Year 2023 and 2022 counted traffic volumes were inconsistently used from a previous study. Clarify in report and analysis.

Response

The '2022 Volumes' were used as a reference and updated to the new 2023 volumes, which were used for the 2023 analysis. This report pertains to the 2023 analysis year. (Updated throughout the report)

Comment 2. Update analysis to include seasonal adjustment factor for all study intersections.

Response

ODOT APM seasonal adjustment factor was calculated and used to update all study intersections volumes for the analysis.

Comment 3. Indicate the peak hour volumes that were used for this study.

Response

The PM peak hour (4:00-5:00 PM) volumes are used as the basis volumes for all intersections in this study.
(Nothing for AM)

Comment 4. Clarify if in-process projects were used in the analysis.

Response

No in-process projects were identified near the site location, so no in-process volumes were added.
(Updated in the report)

Comment 5. Update the trip distribution and assignment

Response

The trip distribution was updated in both the report and the relevant figures in this study based on conversation with ODOT.

Comment 6. Update turning movements assignment in the traffic figures.

Response

Traffic figures were updated, and volumes were assigned to the correct turning movements throughout the report.

cc: Moe Taha (PBS)

MT:PJM:zz

Boardman Data Center Traffic Impact Analysis

Morrow County Tax Lot 110
Morrow County, Oregon

Prepared for:
Integrus Architecture
707 SW Washington Street
Suite 1200
Portland, Oregon 97205



RENEWS: DECEMBER 31, 2024

July 11, 2024
PBS Project 78132.000



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Executive Summary

Purpose and Scope

The applicant proposes to develop the Boardman Data Center Project (Project) located along Boardman Airport Lane in Morrow County, Oregon. Tax Lot 110 will be developed as a data center land use, comprising approximately 871,226 square feet of building space. The estimated completion date of the project is 2026.

This report analyzes the traffic impacts generated by the completed project as required by Morrow County (County).

The following intersections were identified for this traffic impact analysis (TIA):

1. Tower Road / Interstate 84 (I-84) westbound ramps
2. Tower Road / I-84 eastbound ramps
3. Tower Road / Boardman Airport Lane

Findings

The findings of this TIA are detailed below.

At completion, the Project is anticipated to generate 862 vehicle trips during a typical weekday and 79 during the PM peak hour.

All studied intersections in the Existing scenario currently operate at an acceptable volume-to-capacity (v/c) ratio and level of service (LOS) during the PM peak hour.

All studied intersections in the Without Project scenario project to operate at an acceptable v/c and LOS during the weekday PM peak hour.

All studied intersections in the With Project scenario project to operate at an acceptable v/c and LOS during the weekday PM peak hour.

Queueing doesn't exceed the available storage at any of the studied intersections during the PM peak hour.

The existing Boardman Airport Lane will need to be extended and paved approximately 4,100 feet to allow for construction vehicles to reach the Project site. The County is currently in the process of constructing this portion of roadway.

Heavy construction traffic can cause deterioration of roadways not designed for heavy vehicle traffic. Construction vehicle traffic for the Project may add to this possible effect.

An ODOT interchange project at I-84 and Tower Road may coincide with the construction efforts of the Project.

If extended length detours occur due to the ODOT project, Project construction traffic may cause deterioration to detour roadways outside of the existing path to the Project site. This possibility will require further communication between the client, ODOT, and affected governing agencies as the ODOT project progresses in design and starts construction.

ODOT will handle detour routing and traffic control during "Tower Road Interchange bridge over I-84" construction.

None of the analyzed turning movements meet the minimum left-turn lane criteria. Hence, a separate storage lane for left turns is not required for any of the studied intersections.

While northbound right-turn lane movement for the Tower Road/I-84 eastbound ramps intersection does meet that criteria, further study is not recommended. A combination of factors, including the high percentage of right turn movements through the lane, lack of LOS or v/c ratio issues, and the fact that right turn lane criteria is still met in the 2023 Existing Conditions and 2026 Future Without Project volumes speaks to the lack of need for an additional right-turn lane for the northbound movement for safety or operational purposes. Further study on this matter can be conducted by ODOT.

PBS Engineering and Environmental Inc. (PBS) reviewed the January 2018 to December 2022 collision history at the study intersections. The collision rate is greater than the critical collision rate at the intersection of Tower Road and I-84 westbound ramp. However, most of the collisions resulted in property damage only and none of the collisions are fatal. Hence, further study might not be necessary due to the low number of severe crashes. There are no reported crashes at the Tower Road / I-84 eastbound ramps and Tower Road / Boardman Airport Lane intersections and they are not a safety concern from a collision perspective.

There are currently no sidewalks, bike lanes, or curb ramps providing access to the site. There is not any transit service near the site location. There are no pedestrian and bicycle master plans, and only a mention of possible future transit servicing to the nearby City of Boardman in the Morrow County Coordinated Transportation Plan.

The proposed access intersection sight distances will meet American Association of State Highway and Transportation Officials (AASHTO) intersection requirements and are not a concern.

The proposed 246 parking spaces, including 9 accessible parking stalls, 5 accessible van parking stalls, and 16 electric vehicle parking stalls are based on the maximum number of employees during the largest shift at peak season and meet code requirements.

Recommendations

This traffic impact analysis supports the following recommendations.

If extended length detours occur due to the ODOT Tower Road project, Project construction traffic may cause enhanced deterioration to detour roadways outside of the existing path to the Project site.

It is recommended that the northbound right-turn movement at the Tower Road / I-84 eastbound ramps intersection be further studied to determine if respective right-turn lanes are well suited for the intersection.

It is recommended that all driveways, sidewalks, and curb ramps to access the site constructed with the Project should comply with the current Americans with Disabilities Act (ADA) guidelines.

1 INTRODUCTION

The purpose of this study is to determine the impact of the traffic generated by the Boardman Data Center project (Project) on the surrounding roadway infrastructure. The project site is shown on the vicinity map (Figure 1). This study will determine if mitigation is required to keep the roadways operating safely and at capacity levels acceptable under the current level of service (LOS) standards. This report documents the findings and conclusions of a traffic impact analysis (TIA) conducted for the proposed site plan (Figure 2) application for property located in Morrow County, Oregon.

1.1 Scope of Study

This study documents the existing and proposed conditions, traffic data, safety analysis, and intersection operations in accordance with the requirements of the Morrow County (County) TIA guidelines or other agencies, such as the Oregon Department of Transportation (ODOT), when applicable.

The following intersections were identified for analysis:

1. Tower Road / Interstate 84 (I-84) westbound ramps
2. Tower Road / I-84 eastbound ramps
3. Tower Road / Boardman Airport Lane

This TIA includes analysis of future background conditions growth based on an assumed 3% annual growth rate, a conservative estimate based on engineering judgment, and the addition of traffic from in-process projects.

This TIA is prepared for submission to the County. The traffic-related issues addressed in this report include:

- Existing traffic conditions
- Proposed site-generated traffic volumes and their distribution
- Build-out year (2026) conditions without and with the project
- Capacity analysis of the existing and future conditions for the weekday PM peak hour
- Collision evaluation of studied intersections
- Study of the background conditions including
 - Planned projects from the County's 20-year capital improvement program within the vicinity of the project
 - In-process projects within the vicinity of the project
- Recommendations for mitigation of traffic impacts and conclusions
- Trip distribution and assignment of studied intersections
- Roadway, pedestrian, bicycle, transit, and other existing conditions in the vicinity (in-process projects)
- Queuing analysis for the study intersections
- Identification of any mitigation measures

1.2 Existing Site Conditions

The existing site is located south of I-84, west of Boardman Airport, and east of the Portland General Electric (PGE) railroad. The site is bounded to the east by Boardman Airport, by the PGE railroad to the west, and undeveloped land to the north and south. The site is currently zoned space age industrial (SAI).

1.3 Existing Infrastructure

The existing infrastructure and operational traffic conditions in the study area were documented. Roadway conditions were studied to confirm that the roadway is currently operating in a safe and efficient manner.

1.3.1 Land Uses

The land uses surrounding the site are documented to help identify the site location and provide reference for any discussion of conditions that might impact the adjacent properties. The land uses surrounding the site are shown in Table 1.

Table 1. Land Uses Around the Site

North of Site		S I T E	East of Site	
Zoning	SAI		Zoning	ALI
Description	Space Age Industrial		Description	Airport Light Industrial Zone
Existing Use	Undeveloped		Existing Use	Boardman Airport
West of Site			South of Site	
Zoning	RRI		Zoning	RRI
Description	Resource Related Industrial Zone		Description	Resource Related Industrial Zone
Existing Use	Undeveloped		Existing Use	Undeveloped

1.3.2 Existing Roadways

The existing collector/local roadways providing access to the site are Tower Road and Boardman Airport Lane. Data was gathered on this and other roadways in the study area to inform operations analysis of the existing roadway system. The pertinent information regarding the study area roadways is tabulated in Table 2.

Table 2. Existing Roadway Information

Roadway Name	Classification	Speed Limit (mph)	Lane Configuration			
			Lanes	Sidewalks	Bike Lanes	TWLTL
I-84	Interstate	65–70	4	No	No	No
Tower Road	Major and Minor Collector	45	2–3	No	No	Yes

Roadway Name	Classification	Speed Limit (mph)	Lane Configuration			
			Lanes	Sidewalks	Bike Lanes	TWLT
Boardman Airport Lane	Local	45 ¹	1-2 ²	No	No	No

mph = miles per hour; TWLT = two-way-left-turn lane

¹Speed Limit assumed.

²A portion of Boardman Airport Lane is gravel and one lane wide.

1.3.3 Major Intersections and Traffic Control

Figure 3 shows existing lane assignments and intersections controls for each studied intersection.

1.4 Traffic Volumes

1.4.1 Baseline Traffic Volumes

Turning movement counts conducted at the proposed study intersections by Parametrix in October 2022 were used to estimate the traffic volumes for 2023 existing conditions at the following list of studied intersections:

1. Tower Road / I-84 westbound ramps
2. Tower Road / I-84 eastbound ramps
3. Tower Road / Boardman Airport Lane

The PM peak hour is used as the basis for analysis. The 4:00 – 5:00 PM timeframe was identified as the common PM peak hour for all three study intersections from the traffic count data.

Figure 4 shows current existing volumes based on these counts. Copies of the count data used are provided in Appendix A.

1.4.2 Seasonal Adjustment Factor

Following ODOT's *Analysis Procedures Manual* (APM), 2022 traffic counts were modified to the current 30th highest hourly volume (30HV) conditions by applying a seasonal adjustment factor to all intersections. While this is typically a ODOT right-of-way only application, the intersection of Tower Road / Boardman Airport Lane is included in this adjustment process to provide a more conservative analysis.

The seasonal adjustment factor was estimated using the on-site Automatic Traffic Recorder (ATR) method. Traffic data from ATR #11-009, located 12 miles west of the Tower Road / I-84 interchange, was used to estimate the seasonal adjustment factor from 2022-2017 (with 2020 data being excluded due communication issues to the ATR during that year).

Within the 5-year span, average daily traffic (ADT) values were consistently higher than average weekday traffic (AWT). Because of this, ADT was used to determine seasonal factor for ATR #11-009. The month of July was determined to be the peak month when calculating seasonal adjustment factor.

Table 3 summarizes the monthly percentage of ADT between the peak month (July) and the 2022 traffic count month (October), along with omission of the high and low years from the peak month and the count month per the APM process. This is done to account for construction activity that may have occurred in the vicinity of the ATR over that timespan.

Table 3. Seasonal Adjustment Factor (ATR #11-009, I-84)

Year	2017	2018	2019	2021	2022	Average
Peak Month (July)	123 ²	132	132	129	136 ²	131
Count Month (October 25 ¹)	100	101	96 ²	99	103 ²	100
Seasonal Adjustment Factor (Peak Month Average/Count Month Average)						1.31

¹ Count Month ADT percentage is a weighted average of the October and November percentages

² High and low percentages removed from average calculation

1.4.3 Background Growth

Background growth is a linear increase in traffic volumes that is not attributable to specific developments. A linear background growth of 3% per year was applied, a conservative estimate based on engineering judgment, to all 2022 existing peak hour movement volumes at the studied intersections.

1.4.4 In-Process Projects

No in-process projects were identified for inclusion in this TIA.

1.4.5 Future Volumes

The baseline volumes for 2026 intersection operations analysis, termed 2026 Without Project, represent the sum of 2023 existing traffic, seasonal factor and background growth. Figure 5 presents the 2026 Without Project volumes for the weekday PM peak hours. These volumes were input to the intersection operations analyses addressed later in this TIA.

2 PROPOSED CONDITIONS

The proposed development will add traffic to the roadway system. The project location, size, and completion date are all important elements that need to be considered to determine the development's impacts on safety and capacity. It is also important to examine how the project will operate with the existing transportation system, estimate how much new traffic it will generate, and predict where traffic generated by the site will be distributed. Furthermore, this section will address any funded infrastructure changes planned by other agencies or developers. All these elements are important in assessing the traffic impacts of this project.

2.1 Project Description

The applicant proposes the Project that will develop County Tax Lot 110 with approximately 871,226 square feet of data center infrastructure.

2.2 Access and Circulation

The proposed full development proposes one access along Boardman Airport Lane near the southern end of the site. One more access point along the access road on the east side of the site is proposed but is restricted for construction and emergency vehicle purposes only and not studied as part of this analysis. Please see Figure 2 for more information.

2.3 Trip Generation and Distribution

The following sections rely on data provided in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual* (see References section). Detailed trip generation calculations are provided in Appendix B.

2.3.1 Proposed Trip Generation

The data center will be treated as "Data Center," ITE land use code 160. The trip generation results are summarized in Table 4. The site trips are presented for the average weekday and the PM peak hour. All entering and exiting trips generated by the project are assumed to go through the study intersections.

Table 4. ITE Trip Generation for Boardman Data Center

Land Use (ITE Code)	Data Center (160)	
Independent Variable	1,000 sf GFA	
Size	871.2	
Peak Hour Trips	Weekday	PM Peak Hour
In	431	24
Out	431	55
Total Trips	862	79

sf = square feet

GFA = Gross Floor Area

At completion, the Project is anticipated to generate 862 vehicle trips during a typical weekday and 79 during the PM peak hour.

2.3.2 Proposed Trip Distribution

The trip distribution is based on the population surrounding the proposed project. The project is assumed to draw most of its traffic from I-84. The trip distribution pattern was submitted to the County and ODOT for review and comments.

Trip distribution and trip generation were used together to assign trips to access points and the studied intersections. The distribution of site-generated trips was estimated as follows:

- 10% to and from eastbound I-84, west of Tower Road
- 90% to and from westbound I-84, east of Tower Road

The site-generated trips distributed to the studied intersections are assigned to specific turning movements both approaching and departing from the site. This is referred to as trip assignment. Please see Figure 6 for the project's trip distribution and assignment for the PM peak hours.

2.3.3 Future Volumes with Project

Figure 7 presents the 2026 With Project volumes, or the sum of Without Project volumes and the site-generated trips, for the weekday PM peak hour.

2.4 Capital Improvement Projects

The ODOT Active 2021–2024 Statewide Transportation Improvement Program (STIP; see References), approved in January 2023 and shown in Appendix D, outlines the following improvement project impacting studied intersections or access intersections of the Project:

- Tower Road Interchange bridge over I-84: Design for a future construction project that includes replacing the bridge driving surface, new approach slabs, repair backwalls, paving of Tower Road (within the ODOT right-of-way), and rebuilding roadway approaches.

Through email correspondence with ODOT, also shown in Appendix D, the related project is expected to be constructed in either 2026 or 2027. This has the potential to coincide with the construction efforts of the Project and is discussed further in section 5 of this report.

3 INTERSECTION OPERATIONS AND ROADWAY CAPACITY ANALYSES

3.1 Operations Description

Traffic operations are assessed in terms of LOS, a concept developed by transportation engineers to qualify the level of operation of intersections and roadways (*Highway Capacity Manual* [HCM], see References). LOS measures are classified in grades "A" through "F," indicating a range of operation, with LOS "A" signifying the best level of operation and LOS "F" representing the worst level.

LOS at unsignalized intersections is quantified in terms of average delay per vehicle. LOS "A" reflects full freedom of operation for a driver, while LOS "F" represents operational failure.

The volume-to-capacity (v/c) ratio quantifies the portion of the theoretical capacity consumed by traffic demand volume. A v/c ratio of zero (0.00) reflects none of the capacity is consumed and all the capacity is fully available. A v/c ratio of one (1.00) reflects that all the capacity is consumed and represents operational failure. The v/c ratio can be calculated for an intersection approach lane or for a signalized intersection as a whole, with the latter calculation aggregating the v/c ratios of the critical movements.

3.2 Operation Standards

The Tower Road / I-84 westbound ramps and Tower Road / I-84 eastbound ramps intersection operation standards fall under ODOT requirements. The Morrow County Transportation System Plan (TSP) references ODOT's minimum requirements, which have LOS E for unsignalized two-way-stop-controlled (TWSC) conditions. The LOS is based on the highest v/c ratio movement.

ODOT has a mobility standard of a v/c ratio 0.70 or less for interstate highways for locations outside an urban growth boundary (UGB) and on rural lands. This is applicable to the I-84 interchange in this report.

The Tower Road / Boardman Airport Lane intersection falls under the County's operation standard requirements. The County requires signalized and unsignalized intersections to operate at a LOS "D" or better as per the County's TSP.

3.3 Analysis Methodology

The project's traffic impacts were estimated to determine the changes in traffic conditions. To make these determinations, the following were employed:

- The individual peak hour volumes were analyzed for 2023 existing and 2026 future conditions.
- The traffic counts conducted at the proposed study intersections by Parametrix in October 2022 were used to estimate the traffic volumes for 2023 existing conditions.
- For study intersections, the traffic counts for PM peak hour (4:00 to 5:00 PM) were used for the analysis and the peak hour was calculated based on the traffic counts during this period.
- The peak hour factor (PHF) for the overall intersection, as calculated from the count data, was applied for the 2023 baseline analysis scenario and the future 2026 conditions.
- A minimum heavy vehicle percentage (HV%) of 2% was assumed for each movement for all analysis scenarios. Generally, a minimum HV% of 2% is assumed because it acknowledges the possibility of some large vehicles (e.g., delivery trucks, school buses, waste hauling trucks, etc.) traveling on the roadways even if traffic counts taken for the TIA don't show heavy vehicles for the day they were collected. The HV% calculated from the count data was applied if it was greater than 2%.

- Baseline traffic volumes on the surrounding street system were determined prior to adding the traffic impacts of the proposed project. This was done to establish a baseline for measuring the project impacts at the time of its development. Baseline traffic volume estimates were prepared for 2023 and 2026 Without Project conditions.
- As noted previously, trip generation estimates for the project were prepared for the weekday PM peak hour on the surrounding street system.
- Cumulative traffic impacts of the proposed project were determined by adding the project-generated traffic to the background weekday PM peak traffic at all studied intersections. This is termed the 2026 With Project condition.
- The LOS analysis for all intersections was calculated with Trafficware’s Synchro software, Version 11, based on method in the HCM, 6th Edition.
- The intersection results report the critical approach LOS, delay, and critical lane v/c ratio.

3.4 Level of Service Analyses

LOS calculation reports for the study area intersections are provided in Appendix C. The key analysis findings are listed in tables 5, 6, and 7 in the following sections.

Lane group abbreviations for tables 5, 6, and 7 are defined and patterned as follows:

- WB = Westbound, EB = Eastbound, NB = Northbound, SB = Southbound

3.4.1 2023 Existing Conditions

Table 5 describes the LOS for each intersection within the study area for the 2023 baseline volumes during the PM peak hour.

Table 5. Estimated 2023 LOS for Existing Conditions at the PM Peak Hour

Intersection	Intersection Control	LOS	Delay (sec/veh)	v/c (approach)
1. Tower Road / I-84 westbound ramps	TWSC	B	11.6	0.154 (WB)
2. Tower Road / I-84 eastbound ramps	TWSC	B	10.2	0.093 (EB)
3. Tower Road / Boardman Airport Lane	TWSC	B	10.4	0.004 (EB)

sec/veh: seconds per vehicle
TWSC: Two-Way Stop Control

As shown in Table 5, all studied intersections currently operate at an acceptable LOS during the weekday PM peak hour.

Findings: All studied intersections in the Existing scenario currently operate at an acceptable v/c and LOS during the PM peak hour.

3.4.2 2026 Future Without Project Conditions

Table 6 describes the LOS for each intersection within the study area for the 2026 growth volumes without the inclusion of project trips.

Table 6. Estimated 2026 LOS for the Without Project Condition at the PM Peak Hour

Intersection	Intersection Control	LOS	Delay (sec/veh)	v/c (approach)
1. Tower Road / I-84 westbound ramps	TWSC	B	12.2	0.177 (WB)
2. Tower Road / I-84 eastbound ramps	TWSC	B	10.4	0.108 (EB)
3. Tower Road / Boardman Airport Lane	TWSC	B	10.8	0.004 (EB)

sec/veh: seconds per vehicle

TWSC: Two-Way Stop Control

As shown in Table 6, all studied intersections currently operate at an acceptable LOS during the weekday PM peak hour.

Findings: All studied intersections in the Without Project scenario currently operate at an acceptable v/c and LOS during the PM peak hour.

3.4.3 2026 Future With Project Conditions

Table 7 describes the LOS for each intersection within the study area for the 2024 growth volumes with the inclusion of project trips.

Table 7. Estimated 2026 LOS for the With Project Condition at the PM Peak Hour

Intersection	Intersection Control	LOS	Delay (sec/veh)	v/c (approach)
1. Tower Road / I-84 westbound ramps	TWSC	B	12.8	0.211 (WB)
2. Tower Road / I-84 eastbound ramps	TWSC	B	10.7	0.116 (EB)
3. Tower Road / Boardman Airport Lane	TWSC	B	11.7	0.110 (EB)

sec/veh: seconds per vehicle

TWSC: Two-Way Stop Control

As shown in Table 7, all studied intersections currently operate at an acceptable LOS during the weekday PM peak hour.

Findings: All studied intersections in the With Project scenario currently operate at an acceptable v/c and LOS during the PM peak hour.

3.5 Queuing Analysis

Queuing analysis was performed to evaluate queue storage adequacy at the studied intersections. The 95th percentile queues were estimated using simulation models in Trafficware's SimTraffic software (Version 11). Queue demand was rounded up to the nearest 25 feet, the average length of a queued vehicle. Available storage was measured from aerial photography and was rounded to the nearest 5 feet.

Lane group abbreviations for the following tables are defined and patterned as follows:

- WB = Westbound, EB = Eastbound, NB = Northbound, SB = Southbound
- WBT = Westbound Through
- WBR = Westbound Right
- WBL = Westbound Left
- WBTR = Westbound Through-Right
- WBLT = Westbound Left-Through
- WBLR = Westbound Left-Right

Table 8 summarizes queuing analysis results for the PM peak hour. Queues that exceed the available storage are shown in bold text. Data output sheets from all queuing calculations are included in Appendix E.

Table 8. PM Peak Hour Intersection Queuing Analysis

Intersection	Approach and Movement		Available Storage (Feet)	95th Percentile Queue (Feet)	
				2026 Without Project	2026 With Project
Tower Road / I-84 westbound ramps	WB	LTR	500+	100	100
	NB	LTR	500+	25	25
Tower Road / I-84 eastbound ramps	EB	LTR	500+	100	100
	SB	LTR	500+	25	25
Tower Road / Boardman Airport Lane	EB	LR	500+	25	50

As shown in Table 8, queuing doesn't exceed the available storage at any locations during the PM peak hour.

Findings: Queuing doesn't exceed the available storage at any of the studied intersections during the PM peak hour.

4 INTERSECTION MITIGATION

4.1 Proportionate Share

The following section details the calculation of proportionate share percentages for each non-access study intersection. These proportionate shares show the percent of trip contribution the Project brings to an intersection compared to the overall increase of traffic volume between the existing volume conditions and the With Project conditions. Please see Table 9 below for calculations.

Table 9. Proportionate Share of Study Intersections

Intersection	Project Trips Through Intersection (A)	With Project Volumes Through Intersection (B)	Existing Volumes Through Intersection (C)	Proportionate Share (D)
Tower Road / I-84 westbound ramps	27	251	206	60%
Tower Road / I-84 eastbound ramps	79	640	514	62.7%
Tower Road / Boardman Airport Lane	79	360	257	76.7%

D = A/(B-C) expressed in percentage

Proportionate share percentage findings are used to identify potential proportionate share costs of mitigations to intersections and roadways, if mitigation is required.

The Project's proportionate share for the Tower Road / I-84 westbound ramps intersection is 60%. This means that 60% of all volumes added through that intersection from the existing volumes to the projected With Project volumes are attributed to the trips generated from the Project. All other trips will be generated by linear background growth assumptions, as no in-process projects were identified for this TIA.

The Project's proportionate share for the Tower Road / I-84 eastbound ramps intersection is 62.7%.

The Project's proportionate share for the Tower Road / Boardman Airport Lane intersection is 76.7%.

No mitigation needs are identified in this TIA. No proportionate share costs associated with these percentages are recommended in this TIA.

Findings: The Project's proportionate share for the Tower Road / I-84 westbound ramps intersection is 60%, the proportionate share for the Tower Road / I-84 eastbound ramps intersection is 62.7%, and the proportionate share for the Tower Road / Boardman Airport Lane intersection is 76.7%.

Recommendations: No mitigation needs are identified in this TIA. No proportionate share costs associated with these percentages are recommended in this TIA.

5 CONSTRUCTION MITIGATION

Construction vehicle traffic will require a paved roadway to access the project site. Currently, the paved roadway ends approximately 4,100 feet west of the Tower Road / Boardman Airport Lane intersection. The County is currently in the process of constructing this portion of roadway.

Heavy construction traffic can cause enhanced deterioration of roadways not designed for heavy vehicle traffic. Construction vehicle traffic for the Project may add to this possible effect. The most heavily travelled roadways during construction will be Tower Road and Boardman Airport Lane. Remediation/repair may be needed if roadway deterioration is significant.

The interchange improvement project "Tower Road Interchange bridge over I-84," as mentioned in Section 2.4, may coincide with the construction efforts of the Project. If extended length detours occur due to the ODOT project, Project construction traffic may cause deterioration to detour roadways outside of the existing path to the Project site. This possibility will require further communication between the client, ODOT, and affected governing agencies as the ODOT project progresses in design and starts construction. ODOT will handle detour routing and traffic control during "Tower Road Interchange bridge over I-84" construction.

Findings: The existing Boardman Airport Lane will need to be extended and paved approximately 4,100 feet to allow for construction vehicles to reach the Project site. The County is currently in the process of constructing this portion of roadway.

Heavy construction traffic can cause deterioration of roadways not designed for heavy vehicle traffic. Construction vehicle traffic for the Project may add to this possible effect.

An ODOT interchange project at I-84 and Tower Road may coincide with the construction efforts of the Project.

If extended length detours occur due to the ODOT project, Project construction traffic may cause deterioration to detour roadways outside of the existing path to the Project site. This possibility will require further communication between the client, ODOT, and affected governing agencies as the ODOT project progresses in design and starts construction.

ODOT will handle detour routing and traffic control during "Tower Road Interchange bridge over I-84" construction.

6 SAFETY ANALYSIS

6.1 Left-Turn Lane Analysis

The left-turn lane criterion is based on Exhibit 12-1 from the *Analysis Procedure Manual* (APM, see References). None of the analyzed turning movements meet the minimum left-turn lane criteria. Hence, a separate storage lane for left turns is not required for any of the studied intersections. Left-turn lane charts with plot points can be found in Appendix F.

Findings: None of the analyzed turning movements meet the minimum left-turn lane criteria. Hence, a separate storage lane for left turns is not required for any of the studied intersections.

6.2 Right-Turn Lane Analysis

The right-turn lane criterion is based on Exhibit 12-2 from the APM. The northbound right-turn movement of the Tower Road/I-84 eastbound ramps intersection meets criteria for the further study of a right-turn lane according to Exhibit 12-2 from the APM. Other analyzed turning movements do not meet minimum turn-lane criteria for further study. An Exhibit 12-2 chart with plot points can be found in Appendix F. It is important to note that the criteria being met by Exhibit 12-2 is for determining if further study for a right-turn lane is recommended.

While northbound right-turn lane movement for the Tower Road/I-84 eastbound ramps intersection does meet that criteria, further study is not recommended. A combination of factors, including the high percentage of right turn movements through the lane, lack of LOS or v/c ratio issues, and the fact that right turn lane criteria is still met in the 2023 Existing Conditions and 2026 Future Without Project volumes speaks to the lack of need for an additional right-turn lane for the northbound movement for safety or operational purposes. Further study on this matter can be conducted by ODOT.

Findings: The northbound right-turn movement of the Tower Road / I-84 eastbound ramps intersection meets criteria for the further study of a right-turn lane according to Exhibit 12-2 from the APM. Other analyzed turning movements do not meet minimum turn-lane criteria.

Recommendations: While northbound right-turn lane movement for the Tower Road/I-84 eastbound ramps intersection does meet that criteria, further study is not recommended. A combination of factors, including the high percentage of right turn movements through the lane, lack of LOS or v/c ratio issues, and the fact that right turn lane criteria is still met in the 2023 Existing Conditions and 2026 Future Without Project volumes speaks to the lack of need for an additional right-turn lane for the northbound movement for safety or operational purposes. Further study on this matter can be conducted by ODOT.

6.3 Collision Analysis

Collision data from the study area were obtained from ODOT for the five-year period spanning from January 2018 through December 2022. The 90th percentile collision rate for rural four-leg minor stop-controlled intersections is 1.08 collisions per million entering vehicles (MEV) based on Exhibit 4-1 from the ODOT APM. Any collision rate lower than that would be considered acceptable and would not require further analysis. Collision rates at or above that rate warrant further investigation. The detailed collision data can be found in Appendix G. Table 10 presents the results of the collision analysis.

Table 10. Collision Analysis for Study Area Intersections (January 2018 through December 2022)

Intersection	Collision Type			Collision Severity			Total Collisions	90th Percentile Collision Rate	Collision Rate
	Rear-end	Fixed Object	All Others	PDO	Injury	Fatality			
Tower Road / I-84 westbound ramps	-	-	1	1	-	-	1	1.08	0.34
Tower Road / I-84 eastbound ramps	1	2	-	2	1	-	3	1.08	0.43
Tower Road / Boardman Airport Lane	-	-	-	-	-	-	-	-	-

PDO = Property Damage Only

To estimate the average daily trips (ADT), the PM peak hour total entering volumes from the existing traffic counts were multiplied by 10.

As shown in Table 10, the collision rate is less than the 90th percentile collision rate at the intersection of Tower Road and I-84 ramps. Additionally, most of the collisions resulted in property damage only and none of the collisions are fatal. Hence, further study will not be necessary due to the low number of severe collisions and overall collisions. There are no reported crashes at all other studied intersections.

Findings: The January 2018 to December 2022 collision history at the study intersections was reviewed. The collision rate is less than the 90th percentile collision rate at the intersection of Tower Road and I-84 ramps. Additionally, most of the collisions resulted in property damage only and none of the collisions are fatal. Hence, further study will not be necessary due to the low number of severe crashes. There are no reported crashes at the Tower Road / Boardman Airport Lane intersection and is not a safety concern from a collision perspective.

6.4 Transit, Pedestrian, and Bicycle Facilities

There are currently no sidewalks along Tower Road.

No bicycle facilities currently exist in the study area.

There is no transit service nearby.

Pedestrian and Bicycle master plans do not exist in the study area.

The Morrow County Coordinated Transportation Plan addresses the possible expansion of the Kayak Public Transit service to Boardman in the future but has no additional details or action plan (see References).

Findings: There are currently no sidewalks, bike lanes, or curb ramps providing access to the site. There is not any transit service near the site location. There are no pedestrian and bicycle master plans, and only a mention of possible future transit servicing to the nearby City of Boardman in the Morrow County Coordinated Transportation Plan.

6.5 Intersection Sight Distance

Currently, there is minimal vegetation over 3 feet in height, minimal vision obstructions (only utility poles), and minimal road grades by the proposed access intersection with Boardman Airport Lane. The proposed access

intersection will meet American Association of State Highway and Transportation Officials' *Policy on Geometric Design of Highways and Streets* (AASHTO, see References) requirements for intersection sight distance.

Findings: The proposed access intersection sight distances will meet AASHTO intersection requirements and are not a concern.

6.6 On-Site Parking

The proposed site plan (see Figure 2) shows 246 parking spaces including 9 accessible parking stalls, 5 accessible van parking stall, 16 electric vehicle parking stalls, and 218 regular parking stalls. The number of parking stalls complies with the Morrow County Zoning Code of Ordinances (Code; see References) Section 4.040, which requires off-street parking equivalent to the number of employees during the largest shift at peak season. 4.050.G of the Code states that parking designated exclusively for people with disabilities shall be provided in conformance with the Americans with Disabilities Act (ADA).

Findings: The proposed 246 parking spaces, including 9 accessible parking stalls, 5 accessible van parking stalls, and 16 electric vehicle parking stalls are based on the maximum number of employees during the largest shift at peak season and meet code requirements.

7 STUDY FINDINGS

The findings of this TIA are detailed below.

7.1 Trip Generation

At completion, the Project is anticipated to generate 862 vehicle trips during a typical weekday and 79 during the PM peak hour.

7.2 Level of Service

All studied intersections in the Existing scenario currently operate at an acceptable v/c and LOS during the PM peak hour.

All studied intersections in the Without Project scenario project to operate at an acceptable v/c and LOS during the weekday PM peak hour.

All studied intersections in the With Project scenario project to operate at an acceptable v/c and LOS during the weekday PM peak hour.

7.3 Queuing Analysis

Queueing doesn't exceed the available storage at any of the studied intersections during the PM peak hour.

7.4 Proportionate Share

The Project's proportionate share for the Tower Road / I-84 westbound ramps intersection is 24.5%, the proportionate share for the Tower Road / I-84 eastbound ramps intersection is 15.6%, and the proportionate share for the Tower Road / Boardman Airport Lane intersection is 27%.

7.5 Construction Mitigation

The existing Boardman Airport Lane will need to be extended and paved approximately 4,100 feet to allow for construction vehicles to reach the Project site. The County is currently in the process of constructing this portion of roadway.

Heavy construction traffic can cause deterioration of roadways not designed for heavy vehicle traffic. Construction vehicle traffic for the Project may add to this possible effect.

An ODOT interchange project at I-84 and Tower Road may coincide with the construction efforts of the Project.

If extended length detours occur due to the ODOT project, Project construction traffic may cause deterioration to detour roadways outside of the existing path to the Project site. This possibility will require further communication between the client, ODOT, and affected governing agencies as the ODOT project progresses in design and starts construction.

ODOT will handle detour routing and traffic control during "Tower Road Interchange bridge over I-84" construction.

7.6 Left-Turn Lane Analysis

None of the analyzed turning movements meet the minimum left-turn lane criteria. Hence, a separate storage lane for left turns is not required for any of the studied intersections.

7.7 Right-Turn Lane Analysis

The northbound right-turn movement of the Powerline Road / I-84 eastbound ramps intersection meets criteria for a right-turn lane according to Exhibit 12-2 from the APM. Other analyzed turning movements do not meet minimum turn-lane criteria.

7.8 Collision Analysis

The January 2018 to December 2022 collision history at the study intersections was reviewed. The collision rate is greater than the critical collision rate at the intersection of Tower Road and I-84 westbound ramp. However, most of the collisions resulted in property damage only and none of the collisions are fatal. Hence, further study might not be necessary due to the low number of severe crashes. There are no reported crashes at the Tower Road / I-84 eastbound ramps and Tower Road / Boardman Airport Lane intersections and they are not a safety concern from a collision perspective.

7.9 Transit, Pedestrian, and Bicycle Facilities

There are no sidewalks, bike lanes, or curb ramps providing access to the site currently. There is not any transit service near the site location. There are no pedestrian and bicycle master plans, and only a mention of possible future transit servicing to the nearby City of Boardman in the Morrow County Coordinated Transportation Plan.

7.10 Intersection Sight Distance

The proposed access intersection sight distances will meet AASHTO intersection requirements and are not a concern.

7.11 On-Site Parking

The proposed 246 parking spaces, including 9 accessible parking stalls, 5 accessible van parking stalls, and 16 electric vehicle parking stalls are based on the maximum number of employees during the largest shift at peak season and meet code requirements.

8 RECOMMENDATIONS

The traffic impact analysis supports the following recommendations.

8.1 Construction Mitigation

If extended length detours occur due to the ODOT project, Project construction traffic may cause enhanced deterioration to detour roadways outside of the existing path to the Project site.

8.2 Right-Turn Lane Analysis

While northbound right-turn lane movement for the Tower Road/I-84 eastbound ramps intersection does meet that criteria, further study is not recommended. A combination of factors, including the high percentage of right turn movements through the lane, lack of LOS or v/c ratio issues, and the fact that right turn lane criteria is still met in the 2023 Existing Conditions and 2026 Future Without Project volumes speaks to the lack of need for an additional right-turn lane for the northbound movement for safety or operational purposes. Further study on this matter can be conducted by ODOT.

8.3 Transit, Pedestrian, and Bicycle Facilities

It is recommended that all driveways, sidewalks, and curb ramps to access the site, constructed with the project should comply with the current ADA guidelines.

9 REFERENCES

AASHTO (American Association of State Highway and Transportation Officials). (2018). *A Policy on the Geometric Design of Highways and Streets*, 7th Edition.

ITE (Institute of Transportation Engineers). (2021). *Trip Generation Manual*, 11th Edition.

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ODOT (Oregon Department of Transportation). *Active 2021–2024 Statewide Transportation Improvement Program*.

Transportation Research Board, National Research Council. (2016). *Highway Capacity Manual*, 6th Edition.

Figures

Figure 1. Vicinity Map

Figure 2. Site Plan

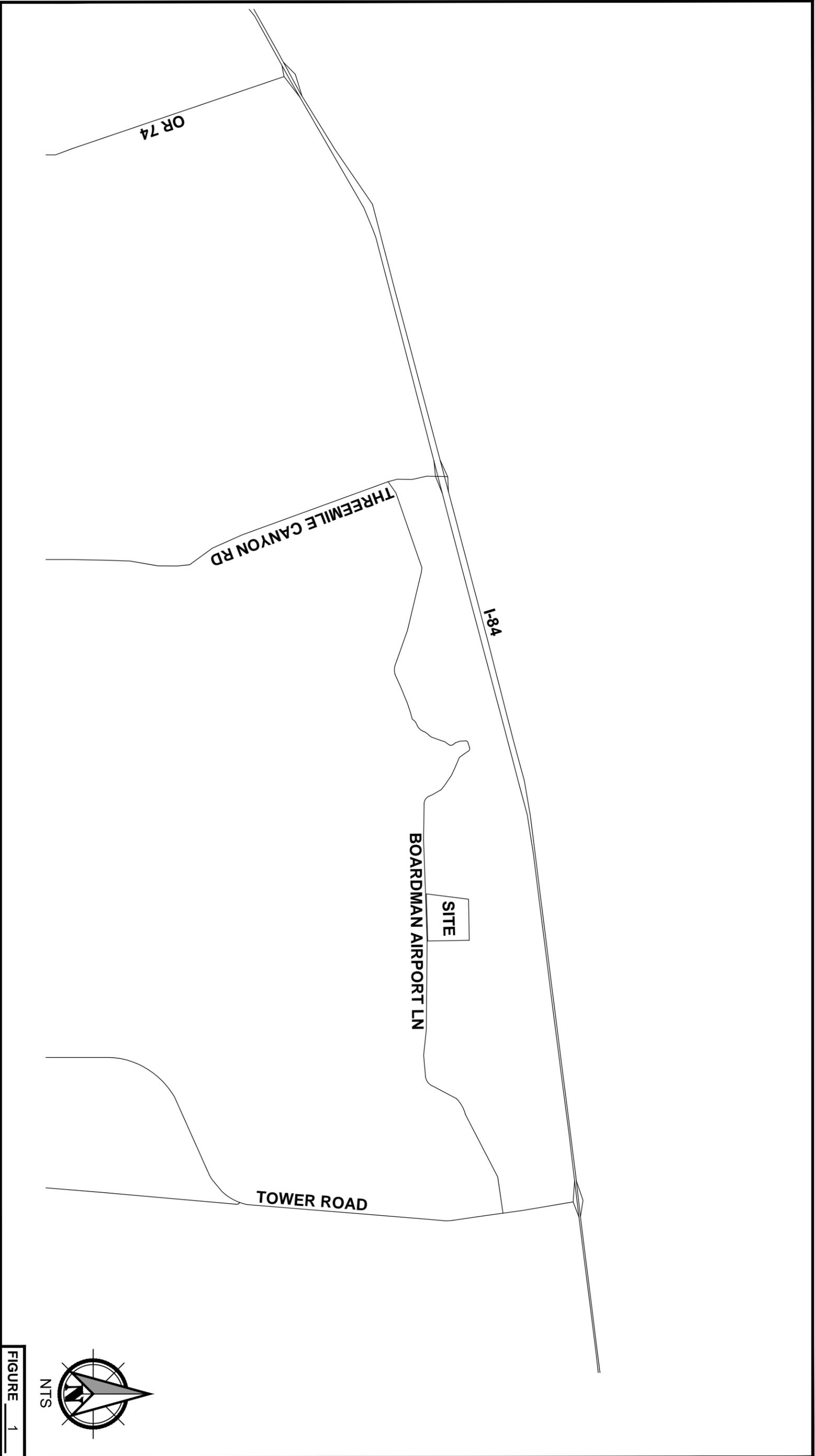
Figure 3. Existing Lane Configurations and Traffic Control

Figure 4. 2023 Existing Volumes

Figure 5. 2026 Without Project Volumes

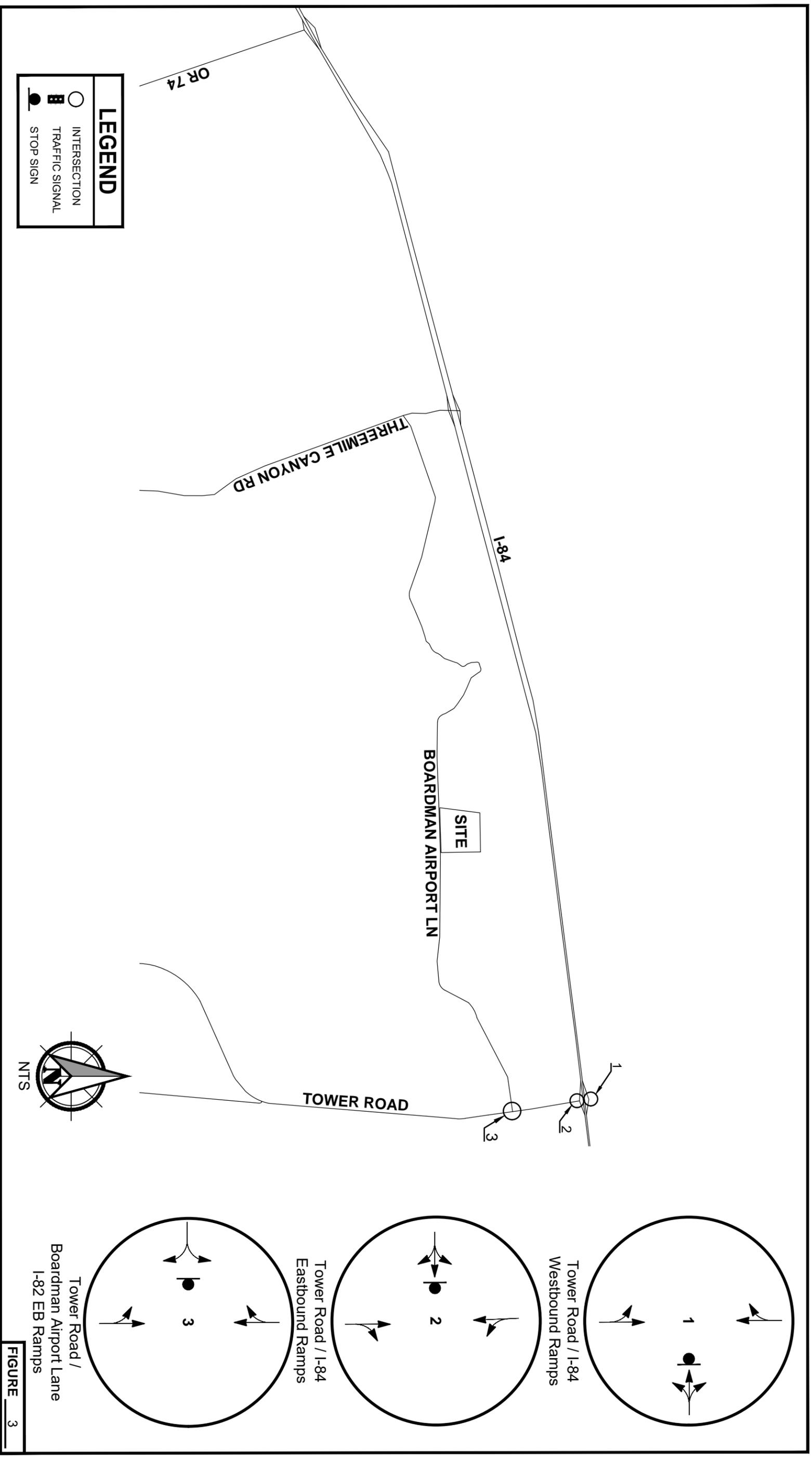
Figure 6. Trip Distribution and Assignment

Figure 7. 2026 With Project Volumes



Vicinity Map
Boardman Data Center

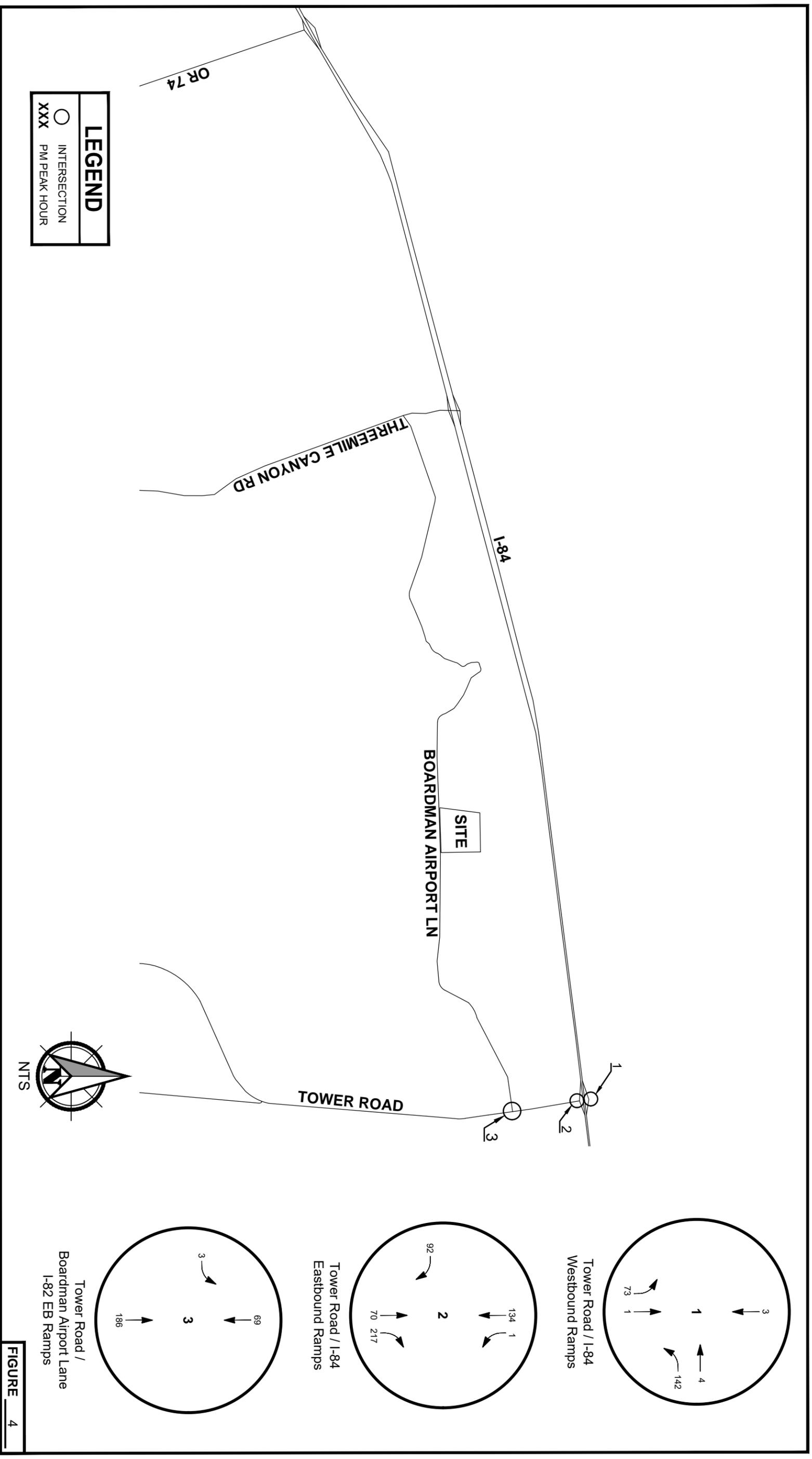




Existing Lane Configuration and Traffic Control

Boardman Data Center

FIGURE 3



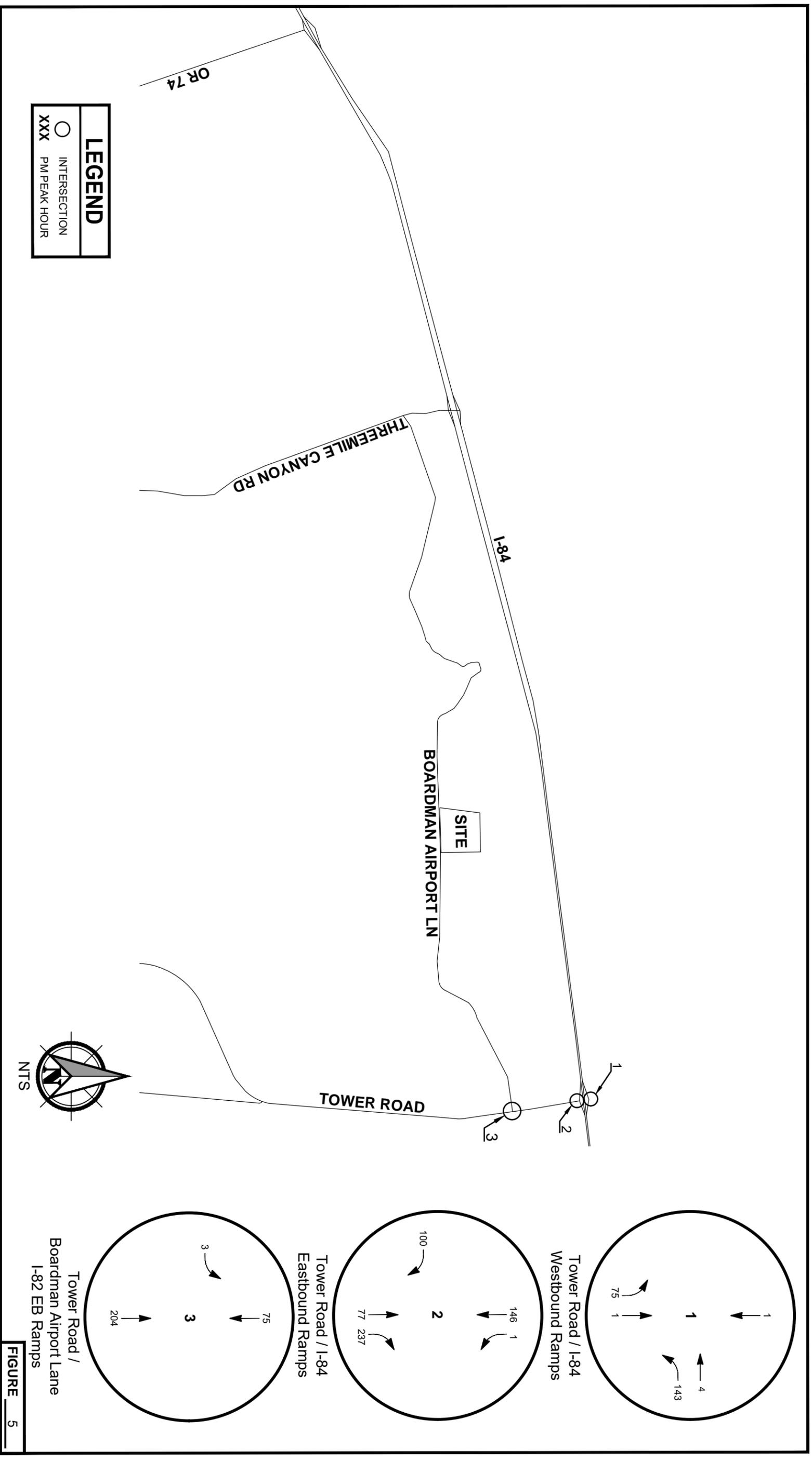
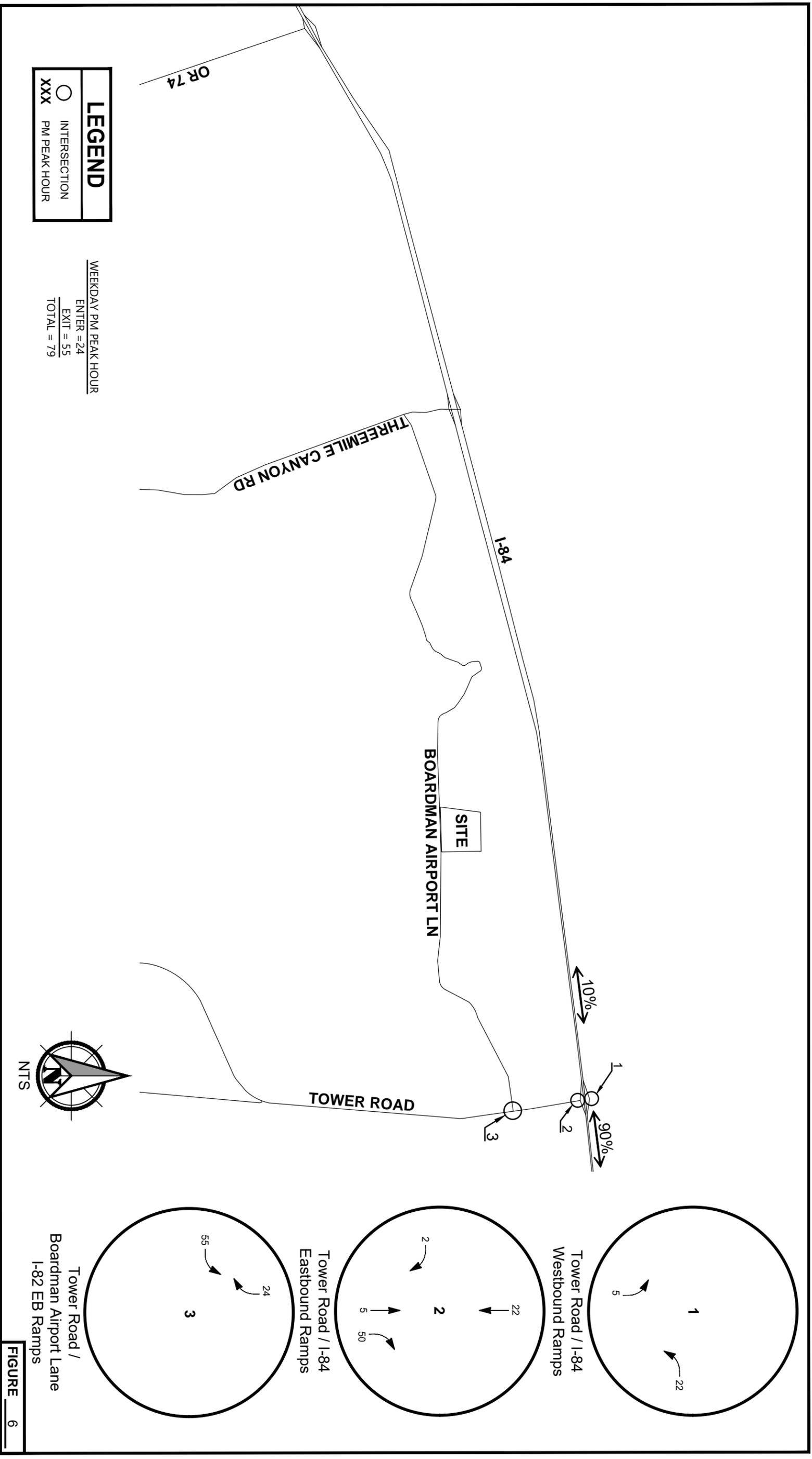


FIGURE 5

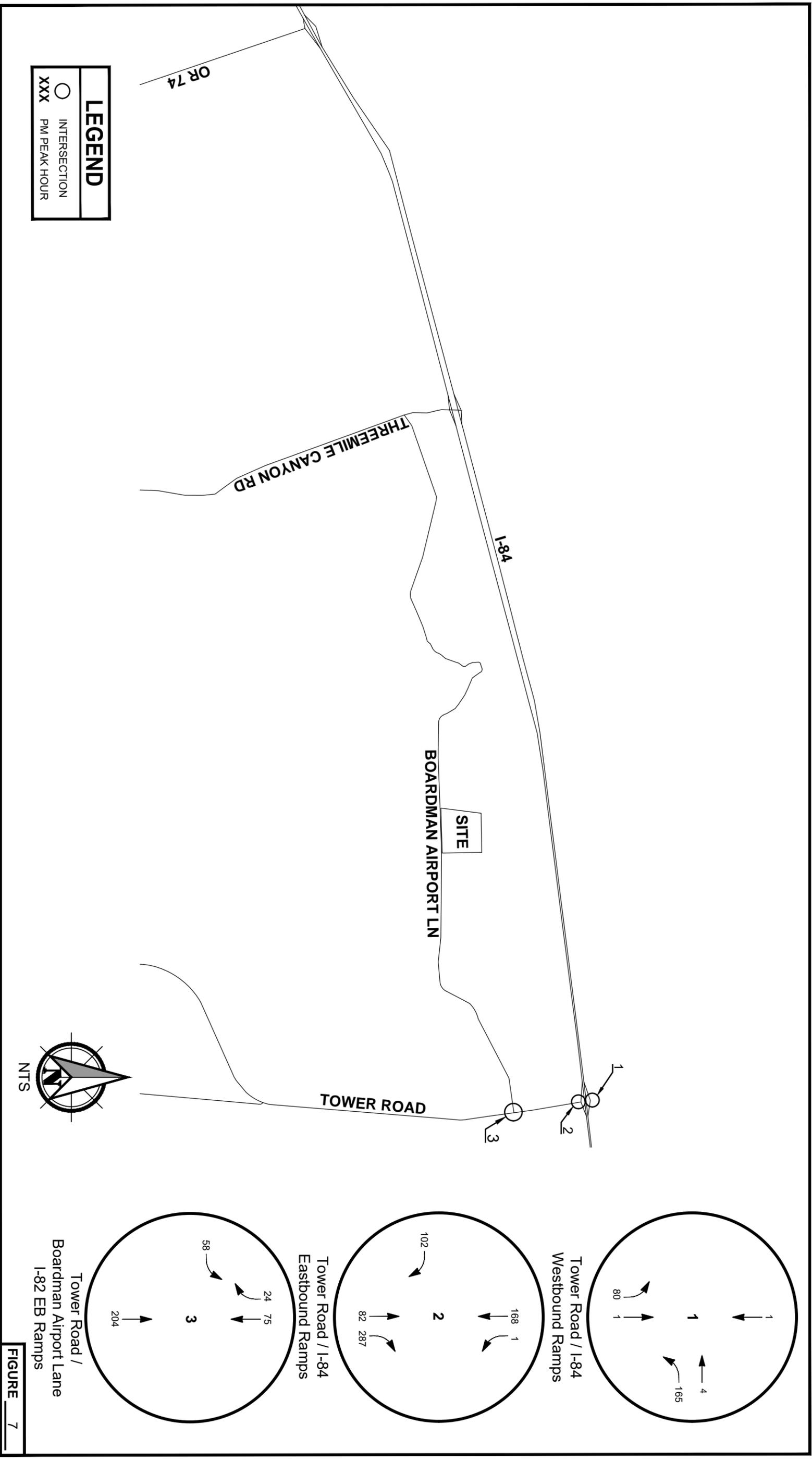
2026 Without Project Volumes

Boardman Data Center



Trip Distribution and Assignment

Boardman Data Center



2026 With Project Volumes
Boardman Data Center

FIGURE 7

Appendix A

Traffic Counts

12:45 PM	0	0	0	0	0	21	1	0	0	7	0	0	0	0	0	29	151
1:00 PM	0	0	0	0	0	19	0	1	0	14	0	0	0	0	0	34	170
1:15 PM	0	0	0	0	0	24	0	1	0	11	0	0	0	0	1	37	178
1:30 PM	0	0	0	0	0	36	0	0	0	14	0	0	0	0	1	51	182
1:45 PM	0	0	0	0	0	31	0	0	0	16	1	0	0	0	0	48	163
2:00 PM	0	0	0	0	0	24	0	0	0	15	2	0	0	0	1	42	146
2:15 PM	0	0	0	0	0	25	0	2	0	14	0	0	0	0	0	41	144
2:30 PM	0	0	0	0	0	15	0	0	0	16	1	0	0	0	0	32	132
2:45 PM	0	0	0	0	0	23	0	0	0	6	1	0	0	0	1	31	139
3:00 PM	0	0	0	0	0	31	0	1	0	8	0	0	0	0	0	40	146
3:15 PM	0	0	0	0	0	19	1	0	0	9	0	0	0	0	0	29	151
3:30 PM	0	0	0	0	0	32	0	0	0	6	0	0	0	0	1	39	165
3:45 PM	0	0	0	0	0	23	0	0	0	15	0	0	0	0	0	38	161
4:00 PM	0	0	0	0	0	23	3	0	0	18	1	0	0	0	0	45	154
4:15 PM	0	0	0	0	0	27	0	0	0	15	0	0	0	0	1	43	138
4:30 PM	0	0	0	0	0	27	0	1	0	7	0	0	0	0	0	35	125
4:45 PM	0	0	0	0	0	20	0	0	0	11	0	0	0	0	0	31	116
5:00 PM	0	0	0	0	0	14	3	0	0	11	1	0	0	0	0	29	109
5:15 PM	0	0	0	0	0	21	0	0	0	9	0	0	0	0	0	30	99
5:30 PM	0	0	0	0	0	15	0	0	0	11	0	0	0	0	0	26	92
5:45 PM	0	0	0	0	0	12	0	0	0	12	0	0	0	0	0	24	83
6:00 PM	0	0	0	0	0	10	2	0	0	7	0	0	0	0	0	19	75
6:15 PM	0	0	0	0	0	17	0	0	0	5	1	0	0	0	0	23	71
6:30 PM	0	0	0	0	0	11	0	0	0	6	0	0	0	0	0	17	62
6:45 PM	0	0	0	0	0	9	0	0	0	7	0	0	0	0	0	16	64
7:00 PM	0	0	0	0	0	11	0	0	0	4	0	0	0	0	0	15	61
7:15 PM	0	0	0	0	0	8	0	0	0	5	1	0	0	0	0	14	60
7:30 PM	0	0	0	0	0	15	0	0	0	4	0	0	0	0	0	19	57
7:45 PM	0	0	0	0	0	11	0	0	0	2	0	0	0	0	0	13	44
8:00 PM	0	0	0	0	0	8	1	0	0	5	0	0	0	0	0	14	49
8:15 PM	0	0	0	0	0	5	1	0	0	5	0	0	0	0	0	11	47
8:30 PM	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	6	49
8:45 PM	0	0	0	0	0	14	0	0	0	4	0	0	0	0	0	18	51
9:00 PM	0	0	0	0	0	7	0	0	0	5	0	0	0	0	0	12	42
9:15 PM	0	0	0	0	0	6	0	0	0	7	0	0	0	0	0	13	
9:30 PM	0	0	0	0	0	6	0	0	0	2	0	0	0	0	0	8	
9:45 PM	0	0	0	0	0	4	0	0	0	4	1	0	0	0	0	9	
Count Total	0	0	0	0	0	1,284	16	12	1	624	17	0	0	0	9	6	1,969
Peak Hour	0	0	0	0	0	147	0	0	0	53	2	0	0	0	0	2	204

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
6:00 AM	0	3	3	0	6	6:00 AM	0	0	0	0	0	6:00 AM	0	0	0	0	0
6:15 AM	0	5	4	0	9	6:15 AM	0	0	0	0	0	6:15 AM	0	0	0	0	0
6:30 AM	0	1	9	0	10	6:30 AM	0	0	0	0	0	6:30 AM	0	0	0	0	0
6:45 AM	0	6	17	0	23	6:45 AM	0	0	0	0	0	6:45 AM	0	0	0	0	0
7:00 AM	0	10	14	0	24	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:15 AM	0	8	16	0	24	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:30 AM	0	6	14	0	20	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:45 AM	0	7	9	0	16	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
8:00 AM	0	6	11	0	17	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:15 AM	0	1	9	0	10	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
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9:00 AM	0	7	13	0	20	9:00 AM	0	0	0	0	0	9:00 AM	0	0	0	0	0
9:15 AM	0	11	9	0	20	9:15 AM	0	0	0	0	0	9:15 AM	0	0	0	0	0
9:30 AM	0	2	12	0	14	9:30 AM	0	0	0	0	0	9:30 AM	0	0	0	0	0
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10:30 AM	0	8	12	0	20	10:30 AM	0	0	0	0	0	10:30 AM	0	0	0	0
10:45 AM	0	3	6	0	9	10:45 AM	0	0	0	0	0	10:45 AM	0	0	0	0
11:00 AM	0	5	7	0	12	11:00 AM	0	0	0	0	0	11:00 AM	0	0	0	0
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9:45 PM	0	2	2	0	4	9:45 PM	0	0	0	0	0	9:45 PM	0	0	0	0
Count Total	0	287	613	0	900	Count Total	0	0	0	0	0	Count Total	0	0	0	0
Peak Hour	0	15	33	0	48	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0



Location: 2 TOWER RD & I-84 EB RAMPS AM

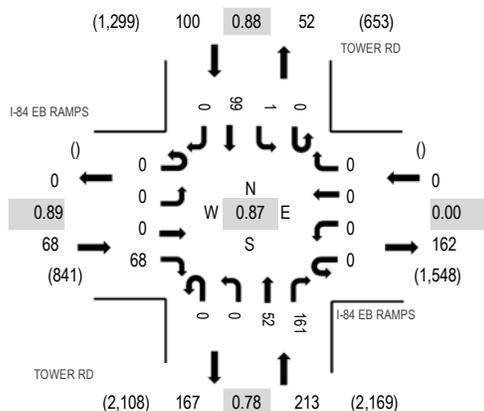
Date: Tuesday, October 25, 2022

Peak Hour: 04:00 PM - 05:00 PM

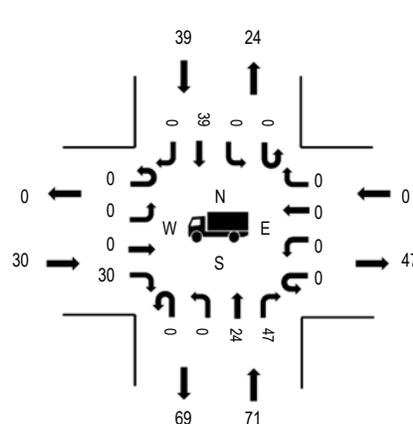
Peak 15-Minutes: 04:15 PM - 04:30 PM

Peak Hour

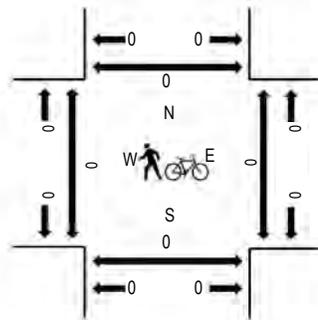
Motorized Vehicles



Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	44.1%	0.89
WB	0.0%	0.00
NB	33.3%	0.78
SB	39.0%	0.88
All	36.7%	0.87

Traffic Counts - Motorized Vehicles

Interval Start Time	I-84 EB RAMPS Eastbound				I-84 EB RAMPS Westbound				TOWER RD Northbound				TOWER RD Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
6:00 AM	0	0	0	5	0	0	0	0	0	0	18	12	0	0	25	0	60	275
6:15 AM	0	0	0	6	0	0	0	0	0	0	16	15	0	0	39	0	76	280
6:30 AM	0	0	0	5	0	0	0	0	0	0	10	15	0	1	40	0	71	288
6:45 AM	0	0	0	4	0	0	0	0	0	0	11	11	0	0	42	0	68	293
7:00 AM	0	0	0	11	0	0	0	0	0	0	14	16	0	0	24	0	65	298
7:15 AM	0	0	0	16	0	0	0	0	0	0	11	24	0	0	33	0	84	295
7:30 AM	0	0	0	8	0	0	0	0	0	0	16	27	0	0	25	0	76	270
7:45 AM	0	1	1	15	0	0	0	0	0	0	14	18	0	0	24	0	73	274
8:00 AM	0	0	0	12	0	0	0	0	0	0	6	21	0	1	22	0	62	271
8:15 AM	0	0	0	9	0	0	0	0	0	0	10	17	0	0	23	0	59	268
8:30 AM	0	0	1	9	0	0	0	0	0	0	19	24	0	0	27	0	80	287
8:45 AM	0	0	0	14	0	0	0	0	0	0	15	19	0	0	22	0	70	269
9:00 AM	0	0	0	14	0	0	0	0	0	0	9	16	0	0	20	0	59	275
9:15 AM	0	0	0	11	0	0	0	0	0	0	13	33	0	0	21	0	78	278
9:30 AM	0	0	0	14	0	0	0	0	0	0	11	13	0	1	23	0	62	282
9:45 AM	0	0	1	12	0	0	0	0	0	0	15	24	0	0	24	0	76	281
10:00 AM	0	0	0	10	0	0	0	0	0	0	9	24	0	0	19	0	62	269
10:15 AM	0	0	1	17	0	0	0	0	0	0	12	28	0	0	24	0	82	287
10:30 AM	0	0	0	13	0	0	0	0	0	0	15	17	0	0	16	0	61	285
10:45 AM	0	0	0	13	0	0	0	0	0	0	12	20	0	0	19	0	64	320
11:00 AM	0	0	0	23	0	0	0	0	0	0	6	32	0	1	18	0	80	352
11:15 AM	0	0	0	22	0	0	0	0	0	0	10	24	0	1	23	0	80	339
11:30 AM	0	0	0	27	0	0	0	0	0	0	9	35	0	3	22	0	96	332
11:45 AM	0	0	1	27	0	0	0	0	0	0	10	38	0	1	19	0	96	298
12:00 PM	0	0	0	11	0	0	0	0	0	0	9	31	0	0	16	0	67	255
12:15 PM	0	0	0	9	0	0	0	0	0	0	11	29	0	0	24	0	73	256
12:30 PM	0	0	0	9	0	0	0	0	0	0	12	23	0	0	18	0	62	271

12:45 PM	0	0	0	10	0	0	0	0	0	0	7	14	0	0	22	0	53	296
1:00 PM	0	0	0	17	0	0	0	0	0	0	13	21	0	0	17	0	68	337
1:15 PM	0	0	0	20	0	0	0	0	0	0	11	31	0	0	26	0	88	353
1:30 PM	0	0	0	15	0	0	0	0	0	0	15	21	0	2	34	0	87	352
1:45 PM	0	0	0	16	0	0	0	0	0	0	16	29	0	1	32	0	94	332
2:00 PM	0	0	0	25	0	0	0	0	0	0	17	19	0	1	22	0	84	315
2:15 PM	0	0	0	16	0	0	0	0	0	0	16	28	0	1	26	0	87	315
2:30 PM	0	0	0	10	0	0	0	0	0	0	16	24	0	1	16	0	67	303
2:45 PM	0	0	1	15	0	0	0	0	0	0	6	32	0	1	22	0	77	312
3:00 PM	0	0	0	14	0	0	0	0	0	0	8	30	0	1	31	0	84	310
3:15 PM	0	0	1	13	0	0	0	0	0	0	9	33	0	1	18	0	75	315
3:30 PM	0	0	0	20	0	0	0	0	0	0	6	18	0	0	32	0	76	349
3:45 PM	0	0	0	12	0	0	0	0	0	0	15	24	0	1	23	0	75	373
4:00 PM	0	0	0	13	0	0	0	0	0	0	19	32	0	0	25	0	89	381
4:15 PM	0	0	0	17	0	0	0	0	0	0	15	49	0	0	28	0	109	364
4:30 PM	0	0	0	20	0	0	0	0	0	0	8	45	0	0	27	0	100	347
4:45 PM	0	0	0	18	0	0	0	0	0	0	10	35	0	1	19	0	83	352
5:00 PM	0	0	0	14	0	0	0	0	0	0	13	31	0	0	14	0	72	352
5:15 PM	0	0	0	21	0	0	0	0	0	0	8	42	0	1	20	0	92	362
5:30 PM	0	0	0	19	0	0	0	0	0	0	10	61	0	0	15	0	105	339
5:45 PM	0	0	0	22	0	0	0	0	0	0	12	37	0	1	11	0	83	284
6:00 PM	0	0	0	22	0	0	0	0	0	0	7	44	0	0	9	0	82	252
6:15 PM	0	0	0	12	0	0	0	0	0	0	6	34	0	0	17	0	69	219
6:30 PM	0	0	0	13	0	0	0	0	0	0	6	20	0	0	11	0	50	180
6:45 PM	0	0	0	11	0	0	0	0	0	0	7	24	0	0	9	0	51	167
7:00 PM	0	0	0	12	0	0	0	0	0	0	4	22	0	0	11	0	49	149
7:15 PM	0	0	0	6	0	0	0	0	0	0	7	8	0	0	9	0	30	131
7:30 PM	0	0	0	6	0	0	0	0	0	0	3	14	0	0	14	0	37	124
7:45 PM	0	0	0	8	0	0	0	0	0	0	2	12	0	0	11	0	33	113
8:00 PM	0	0	0	8	0	0	0	0	0	0	5	9	0	0	9	0	31	115
8:15 PM	0	0	0	7	0	0	0	0	0	0	5	6	0	1	4	0	23	108
8:30 PM	0	0	0	4	0	0	0	0	0	0	3	16	0	0	3	0	26	118
8:45 PM	0	0	0	7	0	0	0	0	0	0	4	11	0	1	12	0	35	119
9:00 PM	0	0	0	4	0	0	0	0	0	0	5	8	0	0	7	0	24	103
9:15 PM	0	0	0	11	0	0	0	0	0	0	6	8	0	0	8	0	33	
9:30 PM	0	0	0	3	0	0	0	0	0	0	4	15	0	0	5	0	27	
9:45 PM	0	0	0	6	0	0	0	0	0	0	5	4	0	0	4	0	19	
Count Total	0	1	7	833	0	0	0	0	0	0	652	1,517	0	24	1,275	0	4,309	
Peak Hour	0	0	0	68	0	0	0	0	0	0	52	161	0	1	99	0	381	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
6:00 AM	2	8	0	3	13	6:00 AM	0	0	0	0	0	6:00 AM	0	0	0	0	0
6:15 AM	3	11	0	3	17	6:15 AM	0	0	0	0	0	6:15 AM	0	0	0	0	0
6:30 AM	1	9	0	10	20	6:30 AM	0	0	0	0	0	6:30 AM	0	0	0	0	0
6:45 AM	3	15	0	17	35	6:45 AM	0	0	0	0	0	6:45 AM	0	0	0	0	0
7:00 AM	6	19	0	14	39	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:15 AM	3	23	0	17	43	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:30 AM	5	15	0	13	33	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:45 AM	6	14	0	10	30	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
8:00 AM	5	15	0	10	30	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:15 AM	2	17	0	10	29	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:30 AM	4	16	0	12	32	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:45 AM	2	12	0	12	26	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
9:00 AM	4	14	0	14	32	9:00 AM	0	0	0	0	0	9:00 AM	0	0	0	0	0
9:15 AM	2	26	0	9	37	9:15 AM	0	0	0	0	0	9:15 AM	0	0	0	0	0
9:30 AM	6	8	0	12	26	9:30 AM	0	0	0	0	0	9:30 AM	0	0	0	0	0
9:45 AM	5	15	0	11	31	9:45 AM	0	0	0	0	0	9:45 AM	0	0	0	0	0
10:00 AM	5	15	0	14	34	10:00 AM	0	0	0	0	0	10:00 AM	0	0	0	0	0
10:15 AM	5	22	0	10	37	10:15 AM	0	0	0	0	0	10:15 AM	0	0	0	0	0

10:30 AM	4	17	0	11	32	10:30 AM	0	0	0	0	0	10:30 AM	0	0	0	0
10:45 AM	4	13	0	7	24	10:45 AM	0	0	0	0	0	10:45 AM	0	0	0	0
11:00 AM	10	15	0	6	31	11:00 AM	0	0	0	0	0	11:00 AM	0	0	0	0
11:15 AM	10	13	0	14	37	11:15 AM	0	0	0	0	0	11:15 AM	0	0	0	0
11:30 AM	8	17	0	13	38	11:30 AM	0	0	0	0	0	11:30 AM	0	0	0	0
11:45 AM	8	19	0	8	35	11:45 AM	0	0	0	0	0	11:45 AM	0	0	0	0
12:00 PM	5	19	0	6	30	12:00 PM	0	0	0	0	0	12:00 PM	0	0	0	0
12:15 PM	2	20	0	13	35	12:15 PM	0	0	0	0	0	12:15 PM	0	0	0	0
12:30 PM	5	12	0	8	25	12:30 PM	0	0	0	0	0	12:30 PM	0	0	0	0
12:45 PM	1	6	0	10	17	12:45 PM	0	0	0	0	0	12:45 PM	0	0	0	0
1:00 PM	6	11	0	8	25	1:00 PM	0	0	0	0	0	1:00 PM	0	0	0	0
1:15 PM	11	16	0	10	37	1:15 PM	0	0	0	0	0	1:15 PM	0	0	0	0
1:30 PM	6	9	0	18	33	1:30 PM	0	0	0	0	0	1:30 PM	0	0	0	0
1:45 PM	6	22	0	16	44	1:45 PM	0	0	0	0	0	1:45 PM	0	0	0	0
2:00 PM	12	13	0	14	39	2:00 PM	0	0	0	0	0	2:00 PM	0	0	0	0
2:15 PM	7	21	0	14	42	2:15 PM	0	0	0	0	0	2:15 PM	0	0	0	0
2:30 PM	4	21	0	9	34	2:30 PM	0	0	0	0	0	2:30 PM	0	0	0	0
2:45 PM	5	20	0	12	37	2:45 PM	0	0	0	0	0	2:45 PM	0	0	0	0
3:00 PM	7	18	0	19	44	3:00 PM	0	0	0	0	0	3:00 PM	0	0	0	0
3:15 PM	6	21	0	9	36	3:15 PM	0	0	0	0	0	3:15 PM	0	0	0	0
3:30 PM	4	9	0	11	24	3:30 PM	0	0	0	0	0	3:30 PM	0	0	0	0
3:45 PM	7	17	0	12	36	3:45 PM	0	0	0	0	0	3:45 PM	0	0	0	0
4:00 PM	3	21	0	15	39	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0
4:15 PM	10	21	0	10	41	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0
4:30 PM	9	16	0	7	32	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0
4:45 PM	8	13	0	7	28	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0
5:00 PM	4	15	0	7	26	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0
5:15 PM	6	10	0	13	29	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0
5:30 PM	10	13	0	5	28	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0
5:45 PM	4	19	0	6	29	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0
6:00 PM	4	15	0	7	26	6:00 PM	0	0	0	0	0	6:00 PM	0	0	0	0
6:15 PM	6	14	0	7	27	6:15 PM	0	0	0	0	0	6:15 PM	0	0	0	0
6:30 PM	8	6	0	6	20	6:30 PM	0	0	0	0	0	6:30 PM	0	0	0	0
6:45 PM	5	9	0	4	18	6:45 PM	0	0	0	0	0	6:45 PM	0	0	0	0
7:00 PM	2	9	0	7	18	7:00 PM	0	0	0	0	0	7:00 PM	0	0	0	0
7:15 PM	3	7	0	6	16	7:15 PM	0	0	0	0	0	7:15 PM	0	0	0	0
7:30 PM	2	8	0	6	16	7:30 PM	0	0	0	0	0	7:30 PM	0	0	0	0
7:45 PM	6	9	0	7	22	7:45 PM	0	0	0	0	0	7:45 PM	0	0	0	0
8:00 PM	6	8	0	6	20	8:00 PM	0	0	0	0	0	8:00 PM	0	0	0	0
8:15 PM	1	6	0	3	10	8:15 PM	0	0	0	0	0	8:15 PM	0	0	0	0
8:30 PM	3	12	0	1	16	8:30 PM	0	0	0	0	0	8:30 PM	0	0	0	0
8:45 PM	2	7	0	8	17	8:45 PM	0	0	0	0	0	8:45 PM	0	0	0	0
9:00 PM	2	8	0	4	14	9:00 PM	0	0	0	0	0	9:00 PM	0	0	0	0
9:15 PM	3	8	0	4	15	9:15 PM	0	0	0	0	0	9:15 PM	0	0	0	0
9:30 PM	3	7	0	1	11	9:30 PM	0	0	0	0	0	9:30 PM	0	0	0	0
9:45 PM	1	5	0	2	8	9:45 PM	0	0	0	0	0	9:45 PM	0	0	0	0
Count Total	318	889	0	598	1,805	Count Total	0	0	0	0	0	Count Total	0	0	0	0
Peak Hour	30	71	0	39	140	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0

12:45 PM	0	0	0	0	0	6	0	0	0	0	7	0	0	4	5	22	104
1:00 PM	0	0	0	0	0	2	0	3	0	0	6	4	0	4	6	0	107
1:15 PM	0	0	0	0	0	1	0	0	0	0	14	1	0	1	5	0	117
1:30 PM	0	0	0	0	0	1	1	1	0	0	13	4	0	1	14	0	119
1:45 PM	0	0	0	0	0	0	0	1	0	0	11	0	0	2	11	0	106
2:00 PM	0	0	0	0	0	3	0	4	0	0	13	1	0	2	12	0	106
2:15 PM	0	0	0	0	0	2	0	1	0	0	7	1	0	6	7	0	108
2:30 PM	0	0	0	0	0	0	0	1	0	0	8	1	0	4	8	0	111
2:45 PM	0	0	0	0	0	0	0	3	0	0	8	3	0	1	10	0	122
3:00 PM	0	0	0	0	0	2	0	1	0	0	12	4	0	3	15	0	110
3:15 PM	0	0	0	0	0	0	0	1	0	0	19	1	0	0	6	0	121
3:30 PM	0	0	0	0	0	3	0	0	0	0	10	1	0	7	12	0	163
3:45 PM	0	0	0	0	0	1	0	0	0	0	7	2	0	1	2	0	194
4:00 PM	0	0	0	0	0	3	0	5	0	0	16	8	0	3	13	0	210
4:15 PM	0	0	0	0	0	4	0	2	0	0	32	16	0	4	11	0	185
4:30 PM	0	0	0	0	0	4	0	2	0	0	28	13	0	6	11	0	180
4:45 PM	0	0	0	0	0	0	0	0	0	0	22	4	0	0	3	0	189
5:00 PM	0	0	0	0	0	1	0	0	0	0	12	6	0	2	2	0	188
5:15 PM	0	0	0	0	0	1	0	1	0	0	32	15	0	7	8	0	219
5:30 PM	0	0	0	0	0	1	0	4	0	0	43	16	0	5	4	0	188
5:45 PM	0	0	0	0	0	0	0	1	0	0	15	3	0	4	5	0	147
6:00 PM	0	0	0	0	0	1	0	3	0	0	29	10	0	7	4	0	140
6:15 PM	0	0	0	0	0	0	0	3	0	0	11	6	0	7	6	0	114
6:30 PM	0	0	0	0	0	1	0	3	0	0	15	5	0	3	5	0	89
6:45 PM	0	0	0	0	0	0	0	0	0	0	14	4	0	2	1	0	66
7:00 PM	0	0	0	0	0	0	0	0	0	0	11	10	0	6	1	0	58
7:15 PM	0	0	0	0	0	0	0	1	0	0	5	0	0	1	1	0	43
7:30 PM	0	0	0	0	0	0	0	0	0	0	3	2	0	1	3	0	43
7:45 PM	0	0	0	0	0	0	0	1	0	0	6	1	0	2	3	0	39
8:00 PM	0	0	0	0	0	0	0	2	0	0	4	2	0	2	3	0	30
8:15 PM	0	0	0	0	0	0	0	1	0	0	2	2	0	2	1	0	25
8:30 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	23
8:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	1	1	0	26
9:00 PM	0	0	0	0	0	0	0	3	0	0	2	0	0	0	3	0	27
9:15 PM	0	0	0	0	0	0	0	2	0	0	2	0	0	0	2	0	6
9:30 PM	0	0	0	0	0	0	0	1	0	0	2	0	0	4	1	0	8
9:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	0	1	2	0	5
Count Total	0	1	0	0	0	93	1	115	0	0	676	175	0	137	579	1	1,778
Peak Hour	0	0	0	0	0	3	0	9	0	0	119	44	0	23	21	0	219

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles in Crosswalk

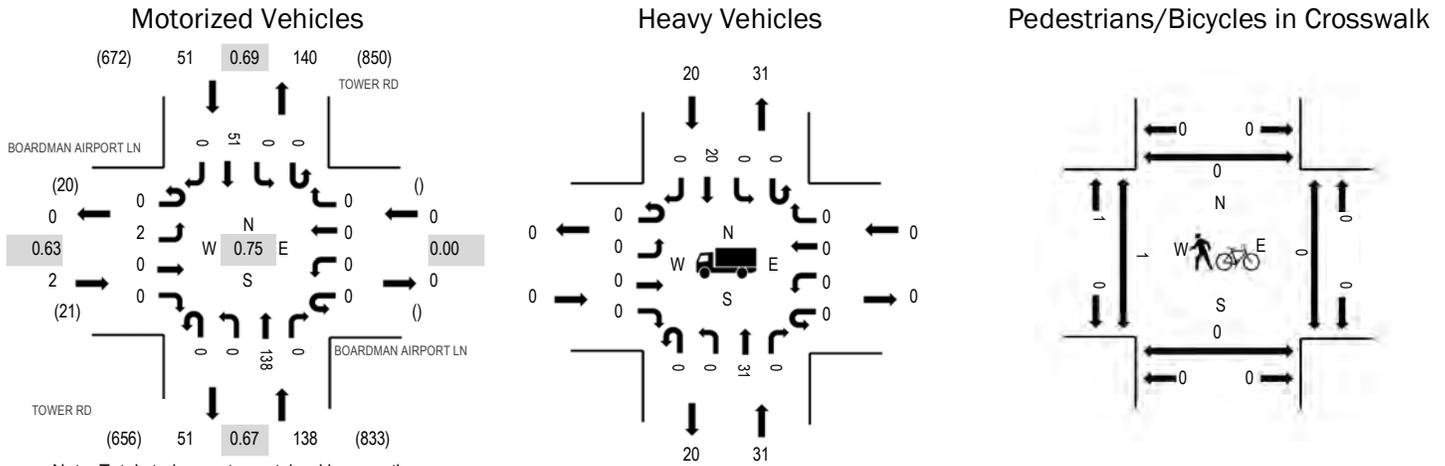
Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
6:00 AM	0	1	0	1	2	6:00 AM	0	0	0	0	0	6:00 AM	0	0	0	0	0
6:15 AM	0	0	0	1	1	6:15 AM	0	0	0	0	0	6:15 AM	0	0	0	0	0
6:30 AM	0	2	0	4	6	6:30 AM	0	0	0	0	0	6:30 AM	0	0	0	0	0
6:45 AM	0	4	0	5	9	6:45 AM	0	0	0	0	0	6:45 AM	0	0	0	0	0
7:00 AM	0	2	0	12	14	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:15 AM	0	3	0	10	13	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:30 AM	0	5	1	4	10	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:45 AM	0	2	0	4	6	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
8:00 AM	0	4	0	4	8	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:15 AM	0	7	0	5	12	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:30 AM	0	9	0	8	17	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:45 AM	0	3	0	5	8	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
9:00 AM	0	4	1	5	10	9:00 AM	0	0	0	0	0	9:00 AM	0	0	0	0	0
9:15 AM	0	9	2	5	16	9:15 AM	0	0	0	0	0	9:15 AM	0	0	0	0	0
9:30 AM	0	3	0	6	9	9:30 AM	0	0	0	0	0	9:30 AM	0	0	0	0	0
9:45 AM	0	5	0	10	15	9:45 AM	0	0	0	0	0	9:45 AM	0	0	0	0	0
10:00 AM	0	7	0	5	12	10:00 AM	0	0	0	0	0	10:00 AM	0	0	0	0	0
10:15 AM	0	11	0	6	17	10:15 AM	0	0	0	0	0	10:15 AM	0	0	0	0	0

10:30 AM	0	7	0	9	16	10:30 AM	0	0	0	0	0	10:30 AM	0	0	0	0
10:45 AM	0	3	1	1	5	10:45 AM	0	0	0	0	0	10:45 AM	0	0	0	0
11:00 AM	0	5	0	5	10	11:00 AM	0	0	0	0	0	11:00 AM	0	0	0	0
11:15 AM	0	9	1	11	21	11:15 AM	0	0	0	0	0	11:15 AM	0	0	0	0
11:30 AM	0	6	1	7	14	11:30 AM	0	0	0	0	0	11:30 AM	0	0	0	0
11:45 AM	0	7	0	6	13	11:45 AM	0	0	0	0	0	11:45 AM	0	0	0	0
12:00 PM	0	11	0	4	15	12:00 PM	0	0	0	0	0	12:00 PM	0	0	0	0
12:15 PM	0	10	1	10	21	12:15 PM	0	0	0	0	0	12:15 PM	0	0	0	0
12:30 PM	0	4	1	7	12	12:30 PM	0	0	0	0	0	12:30 PM	0	0	0	0
12:45 PM	0	4	0	4	8	12:45 PM	0	0	0	0	0	12:45 PM	0	0	0	0
1:00 PM	0	4	0	4	8	1:00 PM	0	0	0	0	0	1:00 PM	0	0	0	0
1:15 PM	0	8	0	3	11	1:15 PM	0	0	0	0	0	1:15 PM	0	0	0	0
1:30 PM	0	8	0	8	16	1:30 PM	0	0	1	0	1	1:30 PM	0	0	0	0
1:45 PM	0	8	0	7	15	1:45 PM	0	0	0	1	1	1:45 PM	0	0	0	0
2:00 PM	0	7	2	8	17	2:00 PM	0	0	0	0	0	2:00 PM	0	0	0	0
2:15 PM	0	4	0	3	7	2:15 PM	0	0	0	0	0	2:15 PM	0	0	0	0
2:30 PM	0	6	0	6	12	2:30 PM	0	0	0	0	0	2:30 PM	0	0	0	0
2:45 PM	0	4	0	7	11	2:45 PM	0	0	0	0	0	2:45 PM	0	0	0	0
3:00 PM	0	10	0	10	20	3:00 PM	0	0	0	0	0	3:00 PM	0	0	0	0
3:15 PM	0	7	0	5	12	3:15 PM	0	0	0	0	0	3:15 PM	0	0	0	0
3:30 PM	0	4	1	4	9	3:30 PM	0	0	0	0	0	3:30 PM	0	0	0	0
3:45 PM	0	5	1	1	7	3:45 PM	0	0	0	0	0	3:45 PM	0	0	0	0
4:00 PM	0	7	1	11	19	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0
4:15 PM	0	12	0	5	17	4:15 PM	0	0	0	0	0	4:15 PM	1	0	0	1
4:30 PM	0	6	0	3	9	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0
4:45 PM	0	6	0	1	7	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0
5:00 PM	0	3	0	2	5	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0
5:15 PM	0	5	0	6	11	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0
5:30 PM	0	4	0	3	7	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0
5:45 PM	0	4	0	2	6	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0
6:00 PM	0	6	0	4	10	6:00 PM	0	0	0	0	0	6:00 PM	0	0	0	0
6:15 PM	0	3	0	3	6	6:15 PM	0	0	0	0	0	6:15 PM	0	0	0	0
6:30 PM	0	1	0	5	6	6:30 PM	0	0	0	0	0	6:30 PM	0	0	0	0
6:45 PM	0	3	0	0	3	6:45 PM	0	0	0	0	0	6:45 PM	0	0	0	0
7:00 PM	0	3	0	1	4	7:00 PM	0	0	0	0	0	7:00 PM	0	0	0	0
7:15 PM	0	1	0	1	2	7:15 PM	0	0	0	0	0	7:15 PM	0	0	0	0
7:30 PM	0	2	0	3	5	7:30 PM	0	0	0	0	0	7:30 PM	0	0	0	0
7:45 PM	0	3	0	2	5	7:45 PM	0	0	0	0	0	7:45 PM	0	0	0	0
8:00 PM	0	2	0	3	5	8:00 PM	0	0	0	0	0	8:00 PM	0	0	0	0
8:15 PM	0	1	0	1	2	8:15 PM	0	0	0	0	0	8:15 PM	0	0	0	0
8:30 PM	0	2	0	1	3	8:30 PM	0	0	0	0	0	8:30 PM	0	0	0	0
8:45 PM	0	1	0	1	2	8:45 PM	0	0	0	0	0	8:45 PM	0	0	0	0
9:00 PM	0	1	0	1	2	9:00 PM	0	0	0	0	0	9:00 PM	0	0	0	0
9:15 PM	0	2	0	1	3	9:15 PM	0	0	0	0	0	9:15 PM	0	0	0	0
9:30 PM	0	2	0	1	3	9:30 PM	0	0	0	0	0	9:30 PM	0	0	0	0
9:45 PM	0	0	0	2	2	9:45 PM	0	0	0	0	0	9:45 PM	0	0	0	0
Count Total	0	302	14	293	609	Count Total	0	0	1	1	2	Count Total	1	0	0	1
Peak Hour	0	19	0	15	34	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0



Location: 4 TOWER RD & BOARDMAN AIRPORT LN AM
Date: Tuesday, October 25, 2022
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:15 PM - 04:30 PM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.63
WB	0.0%	0.00
NB	22.5%	0.67
SB	39.2%	0.69
All	26.7%	0.75

Traffic Counts - Motorized Vehicles

Interval Start Time	BOARDMAN AIRPORT LN Eastbound				BOARDMAN AIRPORT LN Westbound				TOWER RD Northbound				TOWER RD Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
6:00 AM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	17	0	22	138
6:15 AM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	26	0	33	150
6:30 AM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	45	0	50	141
6:45 AM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	28	0	33	114
7:00 AM	0	0	0	0	0	0	0	0	0	0	8	0	0	0	23	3	34	100
7:15 AM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	18	1	24	94
7:30 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	15	2	23	93
7:45 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	15	0	19	103
8:00 AM	0	1	0	0	0	0	0	0	0	0	8	0	0	0	18	1	28	100
8:15 AM	0	0	0	0	0	0	0	0	0	0	11	0	0	0	12	0	23	84
8:30 AM	0	2	0	0	0	0	0	0	0	0	12	0	0	0	19	0	33	84
8:45 AM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	11	0	16	69
9:00 AM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	5	0	12	71
9:15 AM	0	0	0	0	0	0	0	0	0	0	10	0	0	0	13	0	23	76
9:30 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	12	0	18	78
9:45 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	12	0	18	81
10:00 AM	0	0	0	0	0	0	0	0	0	0	9	0	0	0	8	0	17	76
10:15 AM	0	0	0	0	0	0	0	0	0	0	15	0	0	0	10	0	25	80
10:30 AM	0	1	0	0	0	0	0	0	0	0	9	0	0	0	11	0	21	86
10:45 AM	0	0	0	0	0	0	0	0	0	0	8	0	0	0	5	0	13	92
11:00 AM	0	0	0	0	0	0	0	0	0	0	9	0	0	0	11	1	21	106
11:15 AM	0	0	0	0	0	0	0	0	0	0	16	0	0	0	15	0	31	116
11:30 AM	0	0	0	0	0	0	0	0	0	0	13	0	0	0	14	0	27	121
11:45 AM	0	0	0	0	0	0	0	0	0	0	13	0	0	0	13	1	27	119
12:00 PM	0	1	0	0	0	0	0	0	0	0	21	0	0	0	8	1	31	109
12:15 PM	0	0	0	0	0	0	0	0	0	0	20	0	0	0	16	0	36	98
12:30 PM	0	0	0	0	0	0	0	0	0	0	10	0	0	0	15	0	25	83

12:45 PM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	10	17	91	
1:00 PM	0	2	0	0	0	0	0	0	0	1	9	0	0	0	8	0	20	95
1:15 PM	0	1	0	0	0	0	0	0	0	1	14	0	0	0	5	0	21	104
1:30 PM	0	2	0	0	0	0	0	0	0	0	15	0	0	0	13	3	33	99
1:45 PM	0	0	0	0	0	0	0	0	0	0	10	0	0	0	11	0	21	84
2:00 PM	0	0	0	0	0	0	0	0	0	0	14	0	0	0	15	0	29	85
2:15 PM	0	2	0	0	0	0	0	0	0	0	6	0	0	0	8	0	16	88
2:30 PM	0	1	0	0	0	0	0	0	0	0	8	0	0	0	8	1	18	97
2:45 PM	0	1	0	0	0	0	0	0	0	0	11	0	0	0	10	0	22	108
3:00 PM	0	0	0	0	0	0	0	0	0	0	15	0	0	0	17	0	32	97
3:15 PM	0	0	0	0	0	0	0	0	0	0	20	0	0	0	5	0	25	106
3:30 PM	0	0	0	0	0	0	0	0	0	1	11	0	0	0	17	0	29	145
3:45 PM	0	0	0	0	0	0	0	0	0	0	9	0	0	0	2	0	11	174
4:00 PM	0	0	0	0	0	0	0	0	0	0	24	0	0	0	17	0	41	191
4:15 PM	0	0	0	0	0	0	0	0	0	0	48	0	0	0	16	0	64	171
4:30 PM	0	1	0	0	0	0	0	0	0	0	42	0	0	0	15	0	58	164
4:45 PM	0	1	0	0	0	0	0	0	0	0	24	0	0	0	3	0	28	171
5:00 PM	0	2	0	0	0	0	0	0	0	0	16	0	0	0	3	0	21	165
5:15 PM	0	0	0	0	0	0	0	0	0	1	47	0	0	0	9	0	57	187
5:30 PM	0	0	0	0	0	0	0	0	0	0	60	0	0	0	5	0	65	153
5:45 PM	0	2	0	0	0	0	0	0	0	0	15	0	0	0	4	1	22	114
6:00 PM	0	1	0	0	0	0	0	0	0	0	37	0	0	0	5	0	43	111
6:15 PM	0	0	0	0	0	0	0	0	0	0	17	0	0	0	6	0	23	91
6:30 PM	0	0	0	0	0	0	0	0	0	0	20	0	0	0	6	0	26	73
6:45 PM	0	0	0	0	0	0	0	0	0	0	18	0	0	0	1	0	19	55
7:00 PM	0	0	0	0	0	0	0	0	0	0	22	0	0	0	1	0	23	46
7:15 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	1	0	5	32
7:30 PM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	3	0	8	32
7:45 PM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	3	0	10	28
8:00 PM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	3	0	9	21
8:15 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	1	0	5	17
8:30 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	4	16
8:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	15
9:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	5	15
9:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4	
9:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	
9:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3	
Count Total	0	21	0	0	0	0	0	0	0	4	829	0	0	0	656	16	1,526	
Peak Hour	0	2	0	0	0	0	0	0	0	0	138	0	0	0	51	0	191	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
6:00 AM	0	1	0	1	2	6:00 AM	0	0	0	0	0	6:00 AM	0	0	0	0	0
6:15 AM	0	4	0	1	5	6:15 AM	0	0	0	0	0	6:15 AM	0	0	0	0	0
6:30 AM	0	2	0	2	4	6:30 AM	0	0	0	0	0	6:30 AM	0	0	0	0	0
6:45 AM	0	4	0	5	9	6:45 AM	0	0	0	0	0	6:45 AM	0	0	0	0	0
7:00 AM	0	2	0	12	14	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:15 AM	0	3	0	9	12	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:30 AM	0	5	0	5	10	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:45 AM	0	2	0	4	6	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
8:00 AM	0	4	0	4	8	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:15 AM	0	7	0	4	11	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:30 AM	0	9	0	6	15	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:45 AM	0	3	0	5	8	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
9:00 AM	0	5	0	5	10	9:00 AM	0	0	0	0	0	9:00 AM	0	0	0	0	0
9:15 AM	0	7	0	6	13	9:15 AM	0	0	0	0	0	9:15 AM	0	0	0	0	0
9:30 AM	0	3	0	7	10	9:30 AM	0	0	0	0	0	9:30 AM	0	0	0	0	0
9:45 AM	0	4	0	7	11	9:45 AM	0	0	0	0	0	9:45 AM	0	0	0	0	0
10:00 AM	0	7	0	7	14	10:00 AM	0	0	0	0	0	10:00 AM	0	0	0	0	0
10:15 AM	0	11	0	6	17	10:15 AM	0	0	0	0	0	10:15 AM	0	0	0	0	0

10:30 AM	0	7	0	9	16	10:30 AM	0	0	0	0	0	10:30 AM	0	0	0	0
10:45 AM	0	3	0	2	5	10:45 AM	0	0	0	0	0	10:45 AM	0	0	0	0
11:00 AM	0	5	0	4	9	11:00 AM	0	0	0	0	0	11:00 AM	0	0	0	0
11:15 AM	0	9	0	12	21	11:15 AM	0	0	0	0	0	11:15 AM	0	0	0	0
11:30 AM	0	6	0	7	13	11:30 AM	0	0	0	0	0	11:30 AM	0	0	0	0
11:45 AM	0	7	0	6	13	11:45 AM	0	0	0	0	0	11:45 AM	0	0	0	0
12:00 PM	0	11	0	4	15	12:00 PM	0	0	0	0	0	12:00 PM	0	0	0	0
12:15 PM	0	10	0	10	20	12:15 PM	0	0	0	0	0	12:15 PM	0	0	0	0
12:30 PM	0	4	0	9	13	12:30 PM	0	0	0	0	0	12:30 PM	0	0	0	0
12:45 PM	0	4	0	4	8	12:45 PM	0	0	0	0	0	12:45 PM	0	0	0	0
1:00 PM	0	5	0	4	9	1:00 PM	0	0	0	0	0	1:00 PM	0	0	0	0
1:15 PM	0	8	0	3	11	1:15 PM	0	0	0	0	0	1:15 PM	0	0	0	0
1:30 PM	0	7	0	8	15	1:30 PM	0	0	0	0	0	1:30 PM	0	0	0	0
1:45 PM	0	8	0	7	15	1:45 PM	0	0	0	0	0	1:45 PM	0	0	0	0
2:00 PM	0	7	0	10	17	2:00 PM	0	0	0	0	0	2:00 PM	0	0	0	0
2:15 PM	0	4	0	3	7	2:15 PM	0	0	0	0	0	2:15 PM	0	0	0	0
2:30 PM	0	6	0	6	12	2:30 PM	0	0	0	0	0	2:30 PM	0	0	0	0
2:45 PM	0	5	0	7	12	2:45 PM	0	0	0	0	0	2:45 PM	0	0	0	0
3:00 PM	0	9	0	10	19	3:00 PM	0	0	0	0	0	3:00 PM	0	0	0	0
3:15 PM	0	7	0	4	11	3:15 PM	0	0	0	0	0	3:15 PM	0	0	0	0
3:30 PM	0	4	0	7	11	3:30 PM	0	0	0	0	0	3:30 PM	0	0	0	0
3:45 PM	0	5	0	1	6	3:45 PM	0	0	0	0	0	3:45 PM	0	0	0	0
4:00 PM	0	7	0	12	19	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0
4:15 PM	0	12	0	4	16	4:15 PM	0	0	0	0	0	4:15 PM	1	0	0	1
4:30 PM	0	6	0	3	9	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0
4:45 PM	0	6	0	1	7	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0
5:00 PM	0	3	0	2	5	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0
5:15 PM	0	5	0	6	11	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0
5:30 PM	0	4	0	3	7	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0
5:45 PM	0	4	0	2	6	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0
6:00 PM	0	6	0	3	9	6:00 PM	0	0	0	0	0	6:00 PM	0	0	0	0
6:15 PM	0	3	0	3	6	6:15 PM	0	0	0	0	0	6:15 PM	0	0	0	0
6:30 PM	0	1	0	5	6	6:30 PM	0	0	0	0	0	6:30 PM	0	0	0	0
6:45 PM	0	2	0	0	2	6:45 PM	0	0	0	0	0	6:45 PM	0	0	0	0
7:00 PM	0	4	0	1	5	7:00 PM	0	0	0	0	0	7:00 PM	0	0	0	0
7:15 PM	0	0	0	1	1	7:15 PM	0	0	0	0	0	7:15 PM	0	0	0	0
7:30 PM	0	2	0	3	5	7:30 PM	0	0	0	0	0	7:30 PM	0	0	0	0
7:45 PM	0	3	0	2	5	7:45 PM	0	0	0	0	0	7:45 PM	0	0	0	0
8:00 PM	0	2	0	3	5	8:00 PM	0	0	0	0	0	8:00 PM	0	0	0	0
8:15 PM	0	1	0	1	2	8:15 PM	0	0	0	0	0	8:15 PM	0	0	0	0
8:30 PM	0	2	0	1	3	8:30 PM	0	0	0	0	0	8:30 PM	0	0	0	0
8:45 PM	0	1	0	1	2	8:45 PM	0	0	0	0	0	8:45 PM	0	0	0	0
9:00 PM	0	1	0	1	2	9:00 PM	0	0	0	0	0	9:00 PM	0	0	0	0
9:15 PM	0	2	0	1	3	9:15 PM	0	0	0	0	0	9:15 PM	0	0	0	0
9:30 PM	0	2	0	1	3	9:30 PM	0	0	0	0	0	9:30 PM	0	0	0	0
9:45 PM	0	0	0	2	2	9:45 PM	0	0	0	0	0	9:45 PM	0	0	0	0
Count Total	0	303	0	295	598	Count Total	0	0	0	0	0	Count Total	1	0	0	1
Peak Hour	0	31	0	20	51	Peak Hour	0	0	0	0	0	Peak Hour	1	0	0	1

Appendix B

Trip Generation Calculations

Project Name: Broadman Data Center
 Project No:
 Country:
 Analyst Name: Namu Tmilisina
 Date: 9/18/2023
 State/Province:
 Analysis Region:

PROJECT DETAILS
 Type of Project:
 City:
 Built-up Area(Sq.ft):
 Clients Name:
 ZIP/Postal Code:
 No. of Scenarios: 2

SCENARIO SUMMARY

Scenarios	Name	No. of Land Uses	Phases of Development	No. of Years to Project Traffic	User Group	Estimated New Vehicle Trips		
						Entry	Exit	Total
Scenario - 1	Weekday Average Daily Trips	1	1	0		431	431	862
Scenario - 2	Weekday PM Peak Hour	1	1	0		24	55	79

Scenario - 1

Scenario Name: **Weekday Average Daily Trips**

User Group:

Dev. phase: 1

No. of Years to Project: 0
Traffic: 0

Analyst Note:

Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method		Entry Split%	Exit Split%	Total
					Rate/Equation	Average			
160 - Data Center	General Urban/Suburban	10000 Sq. Ft. GFA	871.2	Weekday	0.99	Average	431	431	862
Data Source: Trip Generation Manual, 11th Ed									

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
160 - Data Center	100	100	1	1	50	50

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Person Trips by Vehicle		Person Trips by Other Modes		Total Baseline Site Person Trips	
	Entry	Exit	Entry	Exit	Entry	Exit
160 - Data Center	431	431	0	0	431	431
INTERNAL VEHICLE TRIP REDUCTION						

LAND USE GROUP ASSIGNMENT:

Land Use	Others	Land Use Group
160 - Data Center		

BALANCED PERSON TRIPS:

INTERNAL PERSON TRIPS:

160 - Data Center		Entry	Exit	Total
Internal Person Trips From		0	0	0
Total Internal Person Trips		0	0	0

INTERNAL VEHICLE TRIPS AND CAPTURE:

160 - Data Center		0	0	0
Total Internal Person Trips		0	0	0
Vehicle Mode Share		100%	100%	-
Vehicle Occupancy		1.00	1.00	-
Total Vehicle Internal Trips		0	0	0
Total External Vehicle Trips		431	431	862
Internal Vehicle Trip Capture		0%	0%	0%

PASS-BY VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Pass-by Vehicle Trip %		Pass-by Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
160 - Data Center	431	431	0.00%	0.00%	0	0

DIVERTED VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Diverted Vehicle Trip %		Diverted Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
160 - Data Center	431	431	0.00%	0.00%	0	0

EXTRA VEHICLE TRIP REDUCTION

Land Use	[External - (Pass-by + Diverted)] Vehicle Trips		Extra Vehicle Trip Reduction %		Extra Reduced Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
160 - Data Center	431	431	0.00%	0.00%	0	0

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		Total
	Entry	Exit	
160 - Data Center	431	431	862

RESULTS

Site Totals		Entry	Exit	Total
Vehicle Trips Before Reduction		431	431	862
Vehicle Trips After Multi-modal Adjustment		431	431	862
Internal Vehicle Trips		0	0	0
External Vehicle Trips		431	431	862
Internal Vehicle Trip Capture		0%	0%	0%
Pass-by Vehicle Trips		0	0	0
Diverted Vehicle Trips		0	0	0
Extra Reduced Vehicle Trips		0	0	0
New Vehicle Trips		431	431	862

Scenario - 2

Scenario Name: **Weekday PM Peak Hour**

User Group:

Dev. phase: 1

No. of Years to Project: 0
Traffic: 0

Analyst Note:

Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method		Entry Split%	Exit Split%	Total
					Rate/Equation	Split%			
160 - Data Center	General Urban/Suburban	10000 Sq. Ft. GFA	871.2	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Average	0.09	24	55	79
Data Source: Trip Generation Manual, 11th Ed							30%	70%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
160 - Data Center	100	100	1	1	30	70

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Person Trips by Vehicle		Person Trips by Other Modes		Total Baseline Site Person Trips	
	Entry	Exit	Entry	Exit	Entry	Exit
160 - Data Center	24	55	0	0	24	55
					79	79

INTERNAL VEHICLE TRIP REDUCTION

LAND USE GROUP ASSIGNMENT:

Land Use	Land Use Group
160 - Data Center	Others

BALANCED PERSON TRIPS:

INTERNAL PERSON TRIPS:

160 - Data Center	Entry	Exit	Total
Internal Person Trips From	0	0	0
Total Internal Person Trips	0	0	0

INTERNAL VEHICLE TRIPS AND CAPTURE:

160 - Data Center	Entry	Exit	Total
Total Internal Person Trips	0	0	0
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	0	0	0
Total External Vehicle Trips	24	55	79
Internal Vehicle Trip Capture	0%	0%	0%

PASS-BY VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Pass-by Vehicle Trip %		Pass-by Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
160 - Data Center	24	55	0.00%	0.00%	0	0

DIVERTED VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Diverted Vehicle Trip %		Diverted Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
160 - Data Center	24	55	0.00%	0.00%	0	0

EXTRA VEHICLE TRIP REDUCTION

Land Use	(External - (Pass-by + Diverted)) Vehicle Trips		Extra Vehicle Trip Reduction %		Extra Reduced Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
160 - Data Center	24	55	0.00%	0.00%	0	0

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		Total
160 - Data Center	Entry	Exit	Total
	24	55	79

RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	24	55	79
Vehicle Trips After Multi-modal Adjustment	24	55	79
Internal Vehicle Trips	0	0	0
External Vehicle Trips	24	55	79
Internal Vehicle Trip Capture	0%	0%	0%
Pass-by Vehicle Trips	0	0	0
Diverted Vehicle Trips	0	0	0
Extra Reduced Vehicle Trips	0	0	0
New Vehicle Trips	24	55	79

Appendix C

Level of Service Calculations

HCM 6th TWSC
1: Tower Rd & I-84 Westbound Ramp

07/01/2024

Intersection												
Int Delay, s/veh	10.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕			↕	
Traffic Vol, veh/h	0	0	0	127	4	0	67	1	0	0	1	0
Future Vol, veh/h	0	0	0	127	4	0	67	1	0	0	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	48	33	2	48	2	2	2	2	2
Mvmt Flow	0	0	0	148	5	0	78	1	0	0	1	0

Major/Minor	Minor1		Major1		Major2		
Conflicting Flow All	158	158	1	1	0	-	-
Stage 1	157	157	-	-	-	-	-
Stage 2	1	1	-	-	-	-	-
Critical Hdwy	6.88	6.83	6.22	4.58	-	-	-
Critical Hdwy Stg 1	5.88	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.88	5.83	-	-	-	-	-
Follow-up Hdwy	3.932	4.297	3.318	2.632	-	-	-
Pot Cap-1 Maneuver	737	681	1084	1367	-	0	0
Stage 1	771	712	-	-	-	0	0
Stage 2	915	837	-	-	-	0	0
Platoon blocked, %					-	-	-
Mov Cap-1 Maneuver	695	0	1084	1367	-	-	-
Mov Cap-2 Maneuver	695	0	-	-	-	-	-
Stage 1	727	0	-	-	-	-	-
Stage 2	915	0	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	7.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBTWBLn1	SBT	SBR
Capacity (veh/h)	1367	-	695	-
HCM Lane V/C Ratio	0.057	-	0.219	-
HCM Control Delay (s)	7.8	0	11.6	-
HCM Lane LOS	A	A	B	-
HCM 95th %tile Q(veh)	0.2	-	0.8	-

HCM 6th TWSC
2: Tower Rd & I-84 Eastbound Ramp

07/01/2024

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	0	0	89	0	0	0	0	68	211	1	130	0
Future Vol, veh/h	0	0	89	0	0	0	0	68	211	1	130	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free								
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	44	2	2	2	2	46	29	2	39	2
Mvmt Flow	0	0	102	0	0	0	0	78	243	1	149	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	351	472	149	-	0	0	321	0	0
Stage 1	151	151	-	-	-	-	-	-	-
Stage 2	200	321	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.64	-	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.696	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	646	490	798	0	-	-	1239	-	0
Stage 1	877	772	-	0	-	-	-	-	0
Stage 2	834	652	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	645	0	798	-	-	-	1239	-	-
Mov Cap-2 Maneuver	645	0	-	-	-	-	-	-	-
Stage 1	877	0	-	-	-	-	-	-	-
Stage 2	833	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	798	1239	-
HCM Lane V/C Ratio	-	-	0.128	0.001	-
HCM Control Delay (s)	-	-	10.2	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0	-

HCM 6th TWSC 3: Tower Road & Boardman Airport Ln

07/01/2024

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	0	0	181	67	0
Future Vol, veh/h	3	0	0	181	67	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	2	2	2	22	39	2
Mvmt Flow	4	0	0	241	89	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	330	89	89	0	0
Stage 1	89	-	-	-	-
Stage 2	241	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	665	969	1506	-	-
Stage 1	934	-	-	-	-
Stage 2	799	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	665	969	1506	-	-
Mov Cap-2 Maneuver	665	-	-	-	-
Stage 1	934	-	-	-	-
Stage 2	799	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1506	-	665	-	-
HCM Lane V/C Ratio	-	-	0.006	-	-
HCM Control Delay (s)	0	-	10.4	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th TWSC
1: Tower Rd & I-84 Westbound Ramp

07/01/2024

Intersection												
Int Delay, s/veh	11.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕			↕	
Traffic Vol, veh/h	0	0	0	165	4	0	80	1	0	0	1	0
Future Vol, veh/h	0	0	0	165	4	0	80	1	0	0	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	48	33	2	48	2	2	2	2	2
Mvmt Flow	0	0	0	192	5	0	93	1	0	0	1	0

Major/Minor	Minor1		Major1		Major2		
Conflicting Flow All	188	188	1	1	0	-	-
Stage 1	187	187	-	-	-	-	-
Stage 2	1	1	-	-	-	-	-
Critical Hdwy	6.88	6.83	6.22	4.58	-	-	-
Critical Hdwy Stg 1	5.88	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.88	5.83	-	-	-	-	-
Follow-up Hdwy	3.932	4.297	3.318	2.632	-	-	-
Pot Cap-1 Maneuver	707	655	1084	1367	-	0	0
Stage 1	746	691	-	-	-	0	0
Stage 2	915	837	-	-	-	0	0
Platoon blocked, %					-	-	-
Mov Cap-1 Maneuver	659	0	1084	1367	-	-	-
Mov Cap-2 Maneuver	659	0	-	-	-	-	-
Stage 1	695	0	-	-	-	-	-
Stage 2	915	0	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.8	7.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBTWBLn1	SBT	SBR
Capacity (veh/h)	1367	-	659	-
HCM Lane V/C Ratio	0.068	-	0.298	-
HCM Control Delay (s)	7.8	0	12.8	-
HCM Lane LOS	A	A	B	-
HCM 95th %tile Q(veh)	0.2	-	1.2	-

HCM 6th TWSC
2: Tower Rd & I-84 Eastbound Ramp

07/01/2024

Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	0	0	102	0	0	0	0	82	287	1	168	0
Future Vol, veh/h	0	0	102	0	0	0	0	82	287	1	168	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free								
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	44	2	2	2	2	46	29	2	39	2
Mvmt Flow	0	0	117	0	0	0	0	94	330	1	193	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	454	619	193	-	0	0	424	0	0
Stage 1	195	195	-	-	-	-	-	-	-
Stage 2	259	424	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.64	-	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.696	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	564	404	752	0	-	-	1135	-	0
Stage 1	838	739	-	0	-	-	-	-	0
Stage 2	784	587	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	563	0	752	-	-	-	1135	-	-
Mov Cap-2 Maneuver	563	0	-	-	-	-	-	-	-
Stage 1	838	0	-	-	-	-	-	-	-
Stage 2	783	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	752	1135	-
HCM Lane V/C Ratio	-	-	0.156	0.001	-
HCM Control Delay (s)	-	-	10.7	8.2	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0	-

HCM 6th TWSC 3: Tower Road & Boardman Airport Ln

07/01/2024

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	58	0	0	204	75	24
Future Vol, veh/h	58	0	0	204	75	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	2	2	2	22	39	2
Mvmt Flow	77	0	0	272	100	32

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	388	116	132	0	0
Stage 1	116	-	-	-	-
Stage 2	272	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	616	936	1453	-	-
Stage 1	909	-	-	-	-
Stage 2	774	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	616	936	1453	-	-
Mov Cap-2 Maneuver	616	-	-	-	-
Stage 1	909	-	-	-	-
Stage 2	774	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1453	-	616	-	-
HCM Lane V/C Ratio	-	-	0.126	-	-
HCM Control Delay (s)	0	-	11.7	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

HCM 6th TWSC
1: Tower Rd & I-84 Westbound Ramp

07/01/2024

Intersection												
Int Delay, s/veh	10.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕			↕	
Traffic Vol, veh/h	0	0	0	143	4	0	75	1	0	0	1	0
Future Vol, veh/h	0	0	0	143	4	0	75	1	0	0	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	48	33	2	48	2	2	2	2	2
Mvmt Flow	0	0	0	166	5	0	87	1	0	0	1	0

Major/Minor	Minor1		Major1		Major2		
Conflicting Flow All	176	176	1	1	0	-	-
Stage 1	175	175	-	-	-	-	-
Stage 2	1	1	-	-	-	-	-
Critical Hdwy	6.88	6.83	6.22	4.58	-	-	-
Critical Hdwy Stg 1	5.88	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.88	5.83	-	-	-	-	-
Follow-up Hdwy	3.932	4.297	3.318	2.632	-	-	-
Pot Cap-1 Maneuver	719	665	1084	1367	-	0	0
Stage 1	756	699	-	-	-	0	0
Stage 2	915	837	-	-	-	0	0
Platoon blocked, %					-	-	-
Mov Cap-1 Maneuver	673	0	1084	1367	-	-	-
Mov Cap-2 Maneuver	673	0	-	-	-	-	-
Stage 1	708	0	-	-	-	-	-
Stage 2	915	0	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.2	7.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBTWBLn1	SBT	SBR
Capacity (veh/h)	1367	-	673	-
HCM Lane V/C Ratio	0.064	-	0.254	-
HCM Control Delay (s)	7.8	0	12.2	-
HCM Lane LOS	A	A	B	-
HCM 95th %tile Q(veh)	0.2	-	1	-

HCM 6th TWSC
2: Tower Rd & I-84 Eastbound Ramp

07/01/2024

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↔			↕	
Traffic Vol, veh/h	0	0	100	0	0	0	0	77	237	1	146	0
Future Vol, veh/h	0	0	100	0	0	0	0	77	237	1	146	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free								
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	44	2	2	2	2	46	29	2	39	2
Mvmt Flow	0	0	115	0	0	0	0	89	272	1	168	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	395	531	168	-	0	0	361	0	0
Stage 1	170	170	-	-	-	-	-	-	-
Stage 2	225	361	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.64	-	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.696	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	610	454	778	0	-	-	1198	-	0
Stage 1	860	758	-	0	-	-	-	-	0
Stage 2	812	626	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	609	0	778	-	-	-	1198	-	-
Mov Cap-2 Maneuver	609	0	-	-	-	-	-	-	-
Stage 1	860	0	-	-	-	-	-	-	-
Stage 2	811	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	778	1198	-
HCM Lane V/C Ratio	-	-	0.148	0.001	-
HCM Control Delay (s)	-	-	10.4	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0	-

HCM 6th TWSC 3: Tower Road & Boardman Airport Ln

07/01/2024

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	0	0	204	75	0
Future Vol, veh/h	3	0	0	204	75	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	2	2	2	22	39	2
Mvmt Flow	4	0	0	272	100	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	372	100	100	0	0
Stage 1	100	-	-	-	-
Stage 2	272	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	629	956	1493	-	-
Stage 1	924	-	-	-	-
Stage 2	774	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	629	956	1493	-	-
Mov Cap-2 Maneuver	629	-	-	-	-
Stage 1	924	-	-	-	-
Stage 2	774	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1493	-	629	-	-
HCM Lane V/C Ratio	-	-	0.006	-	-
HCM Control Delay (s)	0	-	10.8	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Appendix D

2024–2027 Oregon Department of Transportation (ODOT): Statewide Transportation Improvement Plan

Name: **I-84: from I-5 to the Idaho border**

Key: **22740**

Description **Install National Electric Vehicle Infrastructure (NEVI) fast charging stations every 50 miles along I-84 from I-5 to the Idaho border, to provide electric vehicle drivers with reliable, fast charging along major corridors in Oregon.**

Region: **5**

MPO: **Non-MPO, Portland Metro MPO**

Work Type: **ELECTRIC**

Applicant: **ODOT**

Status: **PROJECT SCHEDULED FOR CONSTRUCTION**

Location(s)-					
Mileposts	Length	Route	Highway	ACT	County(s)
0.00 to 42.08	42.08	US-30	COLUMBIA RIVER	REGION 1 ACT	MULTNOMAH
42.08 to 67.72	25.64	I-84	COLUMBIA RIVER	REGION 1 ACT	HOOD RIVER
67.72 to 99.86	32.14	I-84	COLUMBIA RIVER	LOWER JOHN DAY ACT	WASCO
99.86 to 114.59	14.73	I-84	COLUMBIA RIVER	LOWER JOHN DAY ACT	SHERMAN
114.59 to 149.51	34.92	I-84	COLUMBIA RIVER	LOWER JOHN DAY ACT	GILLIAM
149.51 to 177.36	27.85	I-84	COLUMBIA RIVER	NORTH EAST OREGON ACT	MORROW
177.36 to 243.99	66.63	US-30	OLD OREGON TRAIL	NORTH EAST OREGON ACT	UMATILLA
243.99 to 286.19	42.20	I-84	OLD OREGON TRAIL	NORTH EAST OREGON ACT	UNION
286.19 to 352.00	65.81	I-84	OLD OREGON TRAIL	NORTH EAST OREGON ACT	BAKER
352.00 to 378.00	26.00	I-84	OLD OREGON TRAIL	SOUTH EAST OREGON ACT	MALHEUR

Current Project Estimate							
	Planning	Prelim. Engineering	Right of Way	Utility Relocation	Construction	Other	Project Total
Year	2023	2024			2024		
Total	\$282,000.00	\$1,590,000.00			\$3,510,000.00		\$5,382,000.00
Fund 1	Y130 \$225,600.00	Y130 \$1,272,000.00			Y130 \$2,808,000.00		
Match	\$56,400.00	\$318,000.00			\$702,000.00		

Footnote:

Most Recent Approved Amendment

Amendment No: **21-24-2648** Approval Date: **1/24/2023**

Requested Action: **Add new project, using National Electric Vehicle Infrastructure (NEVI) program funds.**

Name: **Tower Road interchange bridge over I-84**

Key: **22880**

Description **Design for a future construction project that includes replacing bridge driving surface, new approach slabs, repair backwalls, and paving of Tower Road (within ODOT ROW) and rebuild roadway approaches.**

Region: **5**

MPO: **Non-MPO**

Work Type: **PRESRV, BRIDGE**

Applicant: **ODOT**

Status: **PROJECT FUNDED THROUGH FINAL PLANS**

Location(s)-					
Mileposts	Length	Route	Highway	ACT	County(s)
159.18 to 159.50	0.32	I-84	COLUMBIA RIVER	NORTH EAST OREGON ACT	MORROW
159.30 to 159.30	0.00		COLUMBIA RIVER	NORTH EAST OREGON ACT	MORROW

Current Project Estimate							
	Planning	Prelim. Engineering	Right of Way	Utility Relocation	Construction	Other	Project Total
Year		2023					
Total		\$452,000.00					\$452,000.00
Fund 1		Y001 \$402,683.27					
Match							
Fund 2		S070 \$35,165.59					
Match							
Fund 3		Z001 \$14,151.14					
Match							

Footnote:

Most Recent Approved Amendment

Amendment No: **21-24-3182** Approval Date: **4/10/2023**

Requested Action: **Add new project, moving the Preliminary Engineering phase from the 2024-2027 STIP for delivery in federal fiscal year 2023.**

From: BOYD David W <David.W.BOYD@odot.oregon.gov>
Sent: Thursday, January 11, 2024 1:08 PM
To: PJ McKelvey
Cc: Tacchini, Jason; Jesse Walt; John A. Manix; LANI Richard; HOWLAND Paul L; LAPP Thomas; MOLES Vicki L
Subject: RE: Tower Road / I-84 Rehab Project Conflict with Morrow County Development Project

PJ,

Here is what I have found out about the Tower Road Interchange project, Key #22880, it is currently in design with funding for construction possibly in 2026 or 2027.

Jason's contact was forwarded to Vicki Moles, public relations for the ODOT project.

Your responsibility for traffic control will be based upon any mitigation you will be required to provide and not the ODOT project. Any traffic control or detours needed for the project will be handled by the project. So, the participation of an Amazon representative in the project public meeting is highly recommended.

I have included our District office in this email for their information.

I look forward to receiving your TIA for review and comment to the Morrow County.

David W. Boyd, P.E.
 Region 5 Access Management Engineer
 3012 Island Ave, La Grande, OR 97850
 541-419-5977

From: PJ McKelvey <PJ.McKelvey@pbsusa.com>
Sent: Tuesday, January 9, 2024 2:32 PM
To: BOYD David W <David.W.BOYD@odot.oregon.gov>
Cc: Tacchini, Jason <jastacc@amazon.com>; Jesse Walt <jwalt@integrusarch.com>; John A. Manix <John.Manix@pbsusa.com>
Subject: Tower Road / I-84 Rehab Project Conflict with Morrow County Development Project

You don't often get email from pj.mckelvey@pbsusa.com. [Learn why this is important](#)

This message was sent from outside the organization. Treat attachments, links and requests with caution. Be conscious of the information you share if you respond.

Good afternoon David,

I'm messaging you in reference to an ongoing TIA for an industrial development out in Morrow County near the Boardman Airport. The project will ultimately have construction and typical trips routed through the Tower Road and I-84 interchange frequently.

Part of the TIA is consideration of the bridge preservation of the Tower Road interchange project (Key # 22880, see attached 21-24 STIP excerpt) and how its potential construction period may overlap into the construction of the development project.

Looking at both the 21-24 and 24-27 STIPs, it appears that the Tower Rd project is funded for preliminary design, but is not scheduled for further progress on either STIP. The development project is estimated to finish by 2029.

If the Tower Rd project is not anticipated to be under construction at any time from now until 2029, we can forgo potential traffic control and detour measures.

If you could please provide an email stating that the Tower Rd project will not be under construction by or during 2029, that would be helpful for us in determining out level of effort on traffic control measures in the TIA.

Thank you,

Pierce-Jon McKelvey, PE, PTOE

Project Traffic Engineer

PBS | *Celebrating 40 Years*

Our office has relocated to:

1325 SE Tech Center Dr., Suite 140, Vancouver, WA 98683

office: 360.213.0418

PJ.McKelvey@pbsusa.com

pbsusa.com

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Appendix E

SimTraffic Queue Reports

Queuing and Blocking Report

07/01/2024

Intersection: 1: Tower Rd & I-84 Westbound Ramp

Movement	WB	NB
Directions Served	LTR	LT
Maximum Queue (ft)	119	16
Average Queue (ft)	57	1
95th Queue (ft)	93	10
Link Distance (ft)	785	489
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Tower Rd & I-84 Eastbound Ramp

Movement	EB	SB
Directions Served	LTR	LT
Maximum Queue (ft)	97	13
Average Queue (ft)	48	0
95th Queue (ft)	80	8
Link Distance (ft)	961	489
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Tower Road & Boardman Airport Ln

Movement	EB
Directions Served	LR
Maximum Queue (ft)	27
Average Queue (ft)	3
95th Queue (ft)	16
Link Distance (ft)	2099
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 0

Queuing and Blocking Report

07/01/2024

Intersection: 1: Tower Rd & I-84 Westbound Ramp

Movement	WB	NB
Directions Served	LTR	LT
Maximum Queue (ft)	134	3
Average Queue (ft)	61	0
95th Queue (ft)	100	3
Link Distance (ft)	785	489
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Tower Rd & I-84 Eastbound Ramp

Movement	EB	SB
Directions Served	LTR	LT
Maximum Queue (ft)	96	13
Average Queue (ft)	47	1
95th Queue (ft)	80	8
Link Distance (ft)	961	489
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Tower Road & Boardman Airport Ln

Movement	EB
Directions Served	LR
Maximum Queue (ft)	61
Average Queue (ft)	25
95th Queue (ft)	48
Link Distance (ft)	2099
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 0

Appendix F

Left-Turn and Right-Turn Lane Analysis

Left Turn Lane Evaluation Process

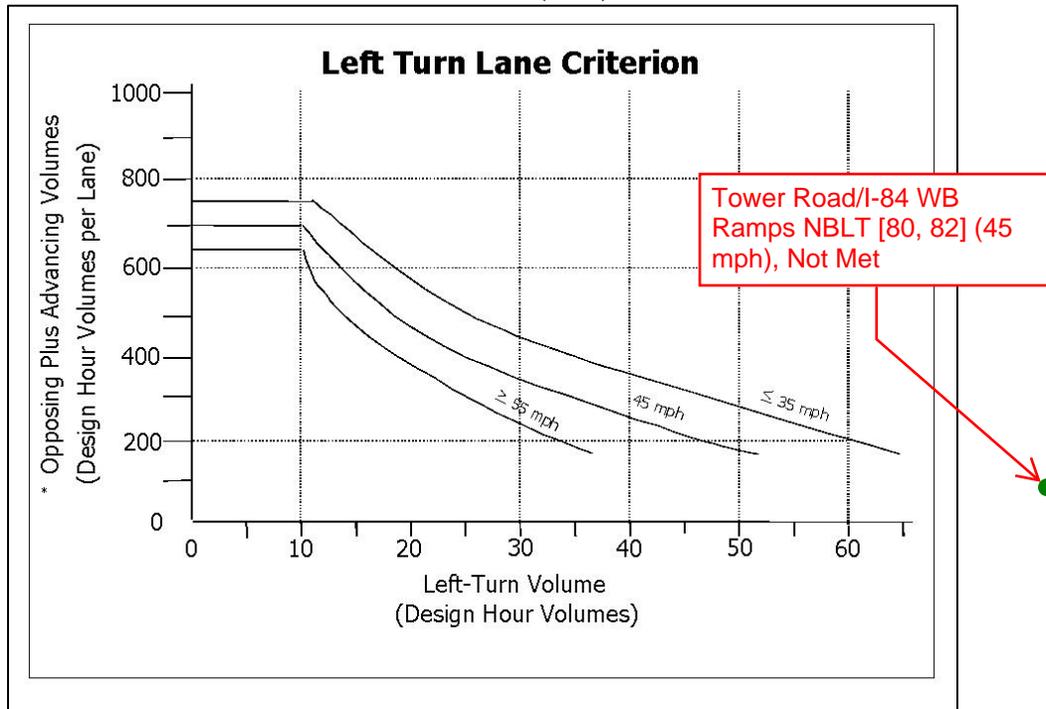
- A left turn lane should be installed, if criterion 1 (Volume) or 2 (Crash) or 3 (Special Cases) are met, unless a subsequent evaluation eliminate it as an option; and
- The Region Traffic Engineer must approve all proposed left turn lanes on state highways, regardless of funding source; and
- Left turn lane complies with Access Management Spacing Standards; and
- Left turn lane conforms to applicable local, regional and state plans.

Criterion 1: Vehicular Volume

The vehicular volume criterion is intended for application where the volume of intersecting traffic is the principal reason for considering installation of a left turn lane. The volume criterion is determined by the Texas Transportation Institute (TTI) curves in Exhibit 12-1.

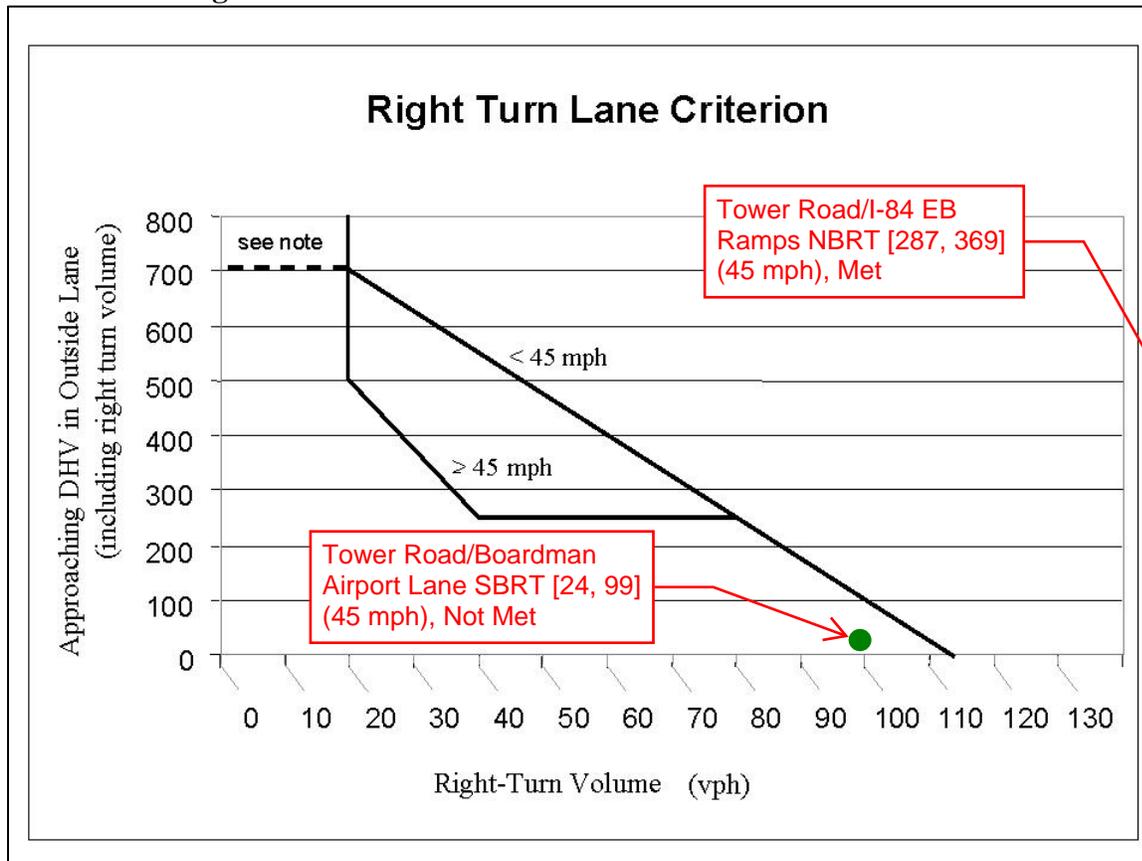
The criterion is not met from zero to ten left turn vehicles per hour, but indicates that careful consideration be given to installing a left turn lane due to the increased potential for rear-end collisions in the through lanes. While the turn volumes are low, the adverse safety and operations impacts may require installation of a left turn. The final determination will be based on a field study.

Exhibit 12-1 Left Turn Lane Criterion (TTI)



* (Advancing Volume/Number of Advancing Through Lanes) + (Opposing Volume/Number of Opposing Through Lanes)
Opposing left turns are not counted as opposing volumes

Exhibit 12-2 Right Turn Lane Criterion



Note: If there is no right turn lane, a shoulder needs to be provided. If this intersection is in a rural area and is a connection to a public street, a right turn lane is needed.

Criterion 2: Crash Experience

The crash experience criterion is satisfied when:

1. Adequate trial of other remedies with satisfactory observance and enforcement has failed to reduce the accident frequency; **and**
2. A history of crashes of the type susceptible to correction by a right turn lane; **and**
3. The safety benefits outweigh the associated improvements costs; **and**
4. The installation of the right turn lane minimizes impacts to the safety of vehicles, bicycles or pedestrians along the roadway.

Criterion 3: Special Cases

1. **Railroad Crossings:** If a railroad is parallel to the roadway and adversely affects right turns, a worst case scenario should be used in determining the storage requirements for the right turn lane design. The right turn lane storage length depends on the amount of time the roadway is closed, the expected number of vehicle arrivals and the location of the crossing or other obstruction. The analysis should consider all of the variables influencing the design of the right turn lane and may allow a design for conditions other than the worst case storage requirements, providing safety is not

Appendix G

Collision Rate Calculations and Data

Intersection: Date

Average daily traffic (ADT) passing through intersection

ADT	EB	<input type="text" value="680"/>
	SB	<input type="text" value="1000"/>
	WB	<input type="text" value="0"/>
	NB	<input type="text" value="2130"/>
M=	Millions of vehicles for a five-year period =	<input type="text" value="6.95325"/>

Rc= Critical collision rate =

Collision Rate

Number of collisions =
 Number of years =

Collision Rate =

ADT = 2023 PM Count x 10

PM Peak Hour = Approx. 10% of ADT

Exhibit 4-1: Intersection Crash Rates per MEV by Land Type and Traffic Control

	Rural				Urban			
	3SG	3ST	4SG	4ST	3SG	3ST	4SG	4ST
No. of Intersections	7	115	20	60	55	77	106	60
Mean Crash Rate	0.226	0.196	0.324	0.434	0.275	0.131	0.477	0.198
Median Crash Rate	0.163	0.092	0.320	0.267	0.252	0.105	0.420	0.145
Standard Deviation	0.185	0.314	0.223	0.534	0.155	0.121	0.273	0.176
Coefficient of Variation	0.819	1.602	0.688	1.230	0.564	0.924	0.572	0.889
90th Percentile Rate	0.464	0.475	0.579	1.080	0.509	0.293	0.860	0.408

Source: *Assessment of Statewide Intersection Safety Performance, FHWA-OR-RD-18, Portland State University and Oregon State University, June 2011, Table 4.1, p. 47.*

Note: Traffic control types include
 3SG (three-leg signalized),
 3ST (three-leg minor stop-control),
 4SG (four-leg signalized),
 4ST (four-leg minor stop-control).

Highway 002 ALL ROAD TYPES, MP 159 to 160, Both Add and Non-Add
mileage, 01/01/2018 to 12/31/2022

CRASH_ID	CRASH_ID	INVTG_AGENCY_SHORT_D	CRASH_DT	CNTY_NM	HWY_NO	HWY_MED_NM	MP_NO	ST_NM	WTHR_CON	RD_SURF_S	LGT_COND	VHCL_CMPS	VHCL_CMPS	PARTIC_TYP	INJ_SVRTY	AGE_VAL	SEX_CD	DRVR_LIC_S	DRVR_RES
230		ESC							ESC	HORT_DESC	SHORT_DESC	S_DIR_FRO	S_DIR_TO_S	SHORT_DE	SHORT_DES			TAT_SHORT	SHORT_DES
1837513	STATE		10/4/2019	Morrow	002	COLUMBIA RIVER	159.73		CLR	DRY	DARK	W	E	DRVR	INJB	23.2		OR-Y	OR-25
1837513	STATE		10/4/2019	Morrow	002	COLUMBIA RIVER	159.73		CLR	DRY	DARK	W	E	DRVR	NONE	29.1		OTH-Y	N-RES
1898053	STATE		6/22/2020	Morrow	002	COLUMBIA RIVER	159.94		CLR	DRY	DAY	W	E	DRVR	NONE	00.9		UNK	UNK
1898053	STATE		6/22/2020	Morrow	002	COLUMBIA RIVER	159.94		CLR	DRY	DAY	W	E	DRVR	NONE	00.9		UNK	UNK
1976271	STATE		9/3/2022	Morrow	002	COLUMBIA RIVER	160		CLR	DRY	DAY	W	E	DRVR	INJB	34.2		OTH-Y	N-RES
1976271	STATE		9/3/2022	Morrow	002	COLUMBIA RIVER	160		CLR	DRY	DAY	W	E	PSNG	INJB	12.1		OTH-Y	N-RES
1837442	COUNTY		11/10/2019	Morrow	002	COLUMBIA RIVER	159.3		CLR	DRY	DAY	W	E	DRVR	NONE	78.2		OR-Y	OR-25
1837442	COUNTY		11/10/2019	Morrow	002	COLUMBIA RIVER	159.3		CLR	DRY	DAY	W	E	DRVR	NONE	64.1		OTH-Y	N-RES
1837442	COUNTY		11/10/2019	Morrow	002	COLUMBIA RIVER	159.3		CLR	DRY	DAY	W	E	PSNG	INJC	62.2		UNK	UNK
1978359	STATE		3/2/2022	Morrow	002	COLUMBIA RIVER	159.3		RAIN	WET	DARK	W	E	DRVR	NONE	00.9		UNK	UNK
1978374	COUNTY		1/6/2022	Morrow	002	COLUMBIA RIVER	159.3		RAIN	ICE	DARK	W	S	DRVR	NONE	00.9		UNK	UNK
1819438	STATE		10/29/2018	Morrow	002	COLUMBIA RIVER	159.4		CLR	DRY	DAY	S	N	DRVR	NONE	00.9		UNK	UNK
1948330	COUNTY		1/1/2021	Morrow	002	COLUMBIA RIVER	159.4		CLD	WET	DARK	N	S	DRVR	NONE	00.9		UNK	UNK
1934239	NO RPT		11/30/2021	Morrow	002	COLUMBIA RIVER	159		CLR	DRY	DUSK	W	W	DRVR	NONE	00.2		OTH-Y	OR-25
1934239	NO RPT		11/30/2021	Morrow	002	COLUMBIA RIVER	159		CLR	DRY	DUSK	W	W	DRVR	INJC	32.1		OTH-Y	OR-25
1947945	COUNTY		12/31/2021	Morrow	002	COLUMBIA RIVER	158.77		SNOW	ICE	DAY	W	E	DRVR	NONE	00.9		UNK	UNK
1947945	COUNTY		12/31/2021	Morrow	002	COLUMBIA RIVER	158.77		SNOW	ICE	DAY	W	E	DRVR	NONE	00.9		UNK	UNK
1943578	STATE		12/31/2021	Morrow	002	COLUMBIA RIVER	159		CLD	ICE	DAY	W	W	DRVR	NONE	00.9		UNK	UNK
1857184	STATE		2/5/2019	Morrow	002	COLUMBIA RIVER	159.23		SNOW	ICE	DAY	W	W	DRVR	NONE	00.9		UNK	UNK
1968532	COUNTY		5/4/2022	Morrow	002	COLUMBIA RIVER	159.31		CLR	DRY	DARK	W	W	DRVR	INJB	18.2		OR-Y	OR-25
1978339	COUNTY		7/30/2022	Morrow	002	COLUMBIA RIVER	159.38		CLR	DRY	DAY	W	W	DRVR	NONE	00.9		UNK	UNK
1789026	STATE		10/25/2018	Morrow	002	COLUMBIA RIVER	159.83		CLD	DRY	DAY	W	W	DRVR	INJB	65.1		OTH-Y	N-RES
1898010	COUNTY		1/26/2020	Morrow			0.27	TOWER RD	CLR	DRY	DARK	S	N	DRVR	INJC	22.1		OR-Y	OR-25
1898010	COUNTY		1/26/2020	Morrow			0.27	TOWER RD	CLR	DRY	DARK	S	N	PSNG	INJC	53.1		UNK	UNK
1898010	COUNTY		1/26/2020	Morrow			0.27	TOWER RD	CLR	DRY	DARK	S	N	DRVR	NONE	66.1		OR-Y	OR-25
1898078	NO RPT		5/25/2020	Morrow			0.29	TOWER RD	CLR	DRY	DAY	S	N	DRVR	NONE	00.9		UNK	UNK
1898078	NO RPT		5/25/2020	Morrow			0.29	TOWER RD	CLR	DRY	DAY	N	N	DRVR	NONE	00.9		UNK	UNK
1982909	COUNTY		10/10/2022	Morrow			2.24	TOWER RD	CLR	DRY	DARK	N	S	DRVR	INJB	26.1		OR-Y	OR-25
1937187	COUNTY		10/20/2021	Morrow			2.8	TOWER RD	SNOW	ICE	DARK	UN	UN	DRVR	NONE	44.1		OR-Y	OR-25
1937187	COUNTY		10/20/2021	Morrow			2.8	TOWER RD	SNOW	ICE	DARK	UN	UN	PSNG	INJC	31.1			UNK
1976283	COUNTY		9/13/2022	Morrow			3.39	TOWER RD	CLR	DRY	DAY	E	W	DRVR	NONE	16.1		NONE	UNK
1976283	COUNTY		9/13/2022	Morrow			3.39	TOWER RD	CLR	DRY	DAY	E	W	PSNG	INJB	14.2			UNK
1937707	COUNTY		7/25/2021	Morrow			5	TOWER RD	CLR	DRY	DARK	N	S	DRVR	INJB	33.1		NONE	OR-25
1857361	COUNTY		2/25/2019	Morrow			6.44	TOWER RD	SNOW	ICE	DARK	S	N	DRVR	NONE	00.9		UNK	UNK
1857361	COUNTY		2/25/2019	Morrow			6.44	TOWER RD	SNOW	ICE	DARK	N	S	DRVR	NONE	00.9		UNK	UNK
1857350	COUNTY		2/25/2019	Morrow			6.44	TOWER RD	SNOW	ICE	DARK	N	S	DRVR	NONE	00.9		UNK	UNK
1959119	NO RPT		4/7/2021	Morrow			7.44	TOWER RD	CLR	DRY	DAWN	S	N	DRVR	NONE	00.9		UNK	UNK
1959119	NO RPT		4/7/2021	Morrow			7.44	TOWER RD	CLR	DRY	DAWN	N	S	DRVR	NONE	00.9		UNK	UNK
1867805	COUNTY		10/28/2019	Morrow			7.94	TOWER RD	CLR	DRY	DARK	N	S	DRVR	NONE	00.9		UNK	UNK
1935112	COUNTY		12/21/2021	Morrow			1.86	TOWER RD	SNOW	ICE	DAY	N	S	DRVR	INJC	52.1		OTH-Y	N-RES
1903980	NO RPT		10/10/2020	Morrow			999.99	TOWER RD	UNK	UNK	DARK	UN	UN	DRVR	NONE	00.9		UNK	UNK
1857276	COUNTY		2/11/2019	Morrow			999.99	TOWER RD	SNOW	ICE	DLIT	S	N	DRVR	NONE	00.9		UNK	UNK
1857276	COUNTY		2/11/2019	Morrow			999.99	TOWER RD	SNOW	ICE	DLIT	S	N	DRVR	NONE	00.9		UNK	UNK

APPENDIX D
TURNING MOVEMENT CALCULATIONS

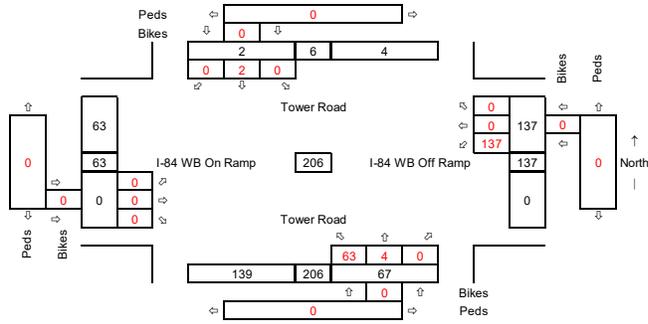
Synchro ID: 1
Existing
 Average Weekday
 PM Peak-Hour

Date: 1/25/2024

Data Source: IDAX

PHF: 0.91

EB HVF= 0%
 WB HVF= 52%
 NB HVF= 42%
 SB HVF= 0%

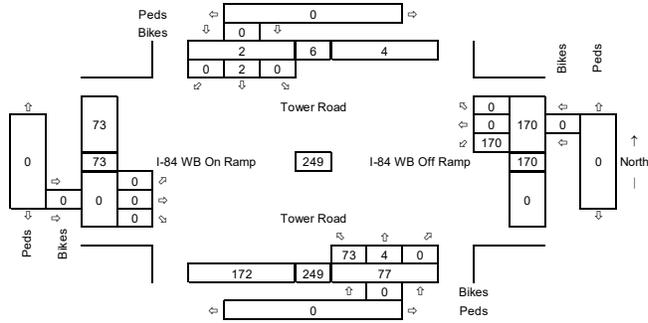


No-Build
 Average Weekday
 PM Peak-Hour

Year: 2028

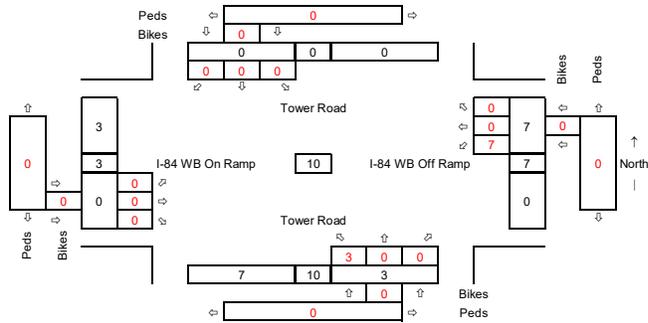
Years of Growth = 4
 Growth Rate = 2%
 Growth Factor = 1.08

Grow Peds? No
 Grow Bikes? No

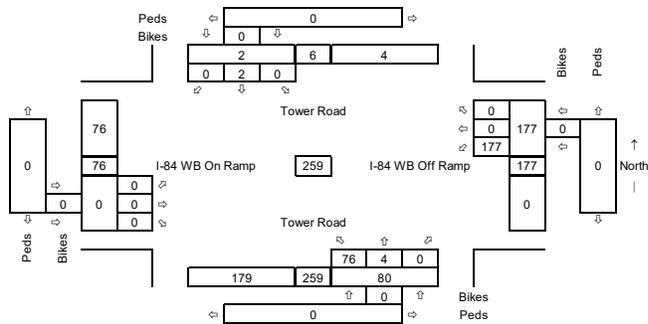


Development Trips
 Average Weekday
 PM Peak-Hour

East Tower Road Campus

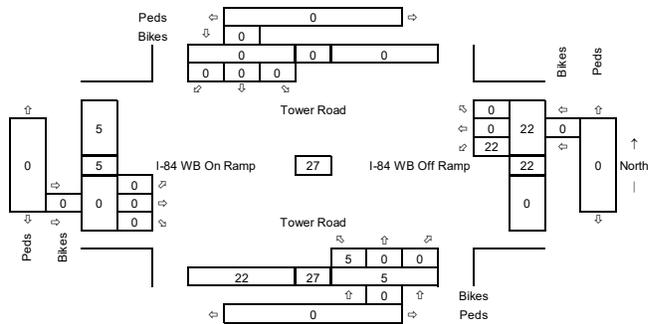


Build Trips
 Average Weekday
 PM Peak-Hour



Pipeline Development
 Average Weekday
 PM Peak-Hour

Boardman Data Center



Synchro ID: 2

Existing

Average Weekday
PM Peak-Hour

Date: 1/25/2024

Data Source: IDAX

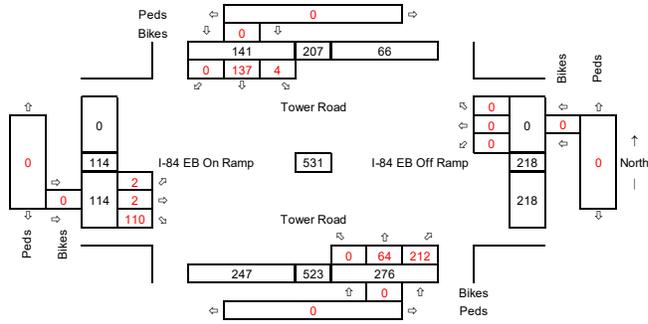
PHF: 0.87

EB HVF= 45%

WB HVF= 0%

NB HVF= 39%

SB HVF= 52%



No-Build

Average Weekday
PM Peak-Hour

Year: 2028

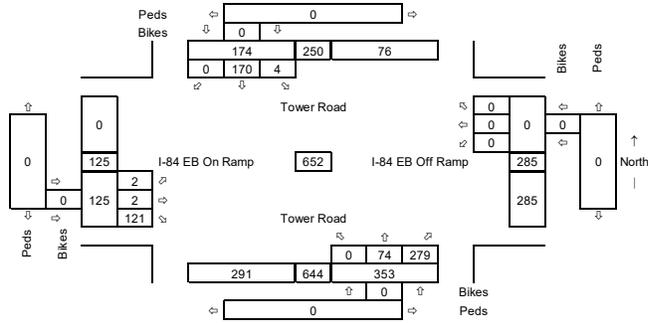
Years of Growth = 4

Growth Rate = 2%

Growth Factor = 1.08

Grow Peds? No

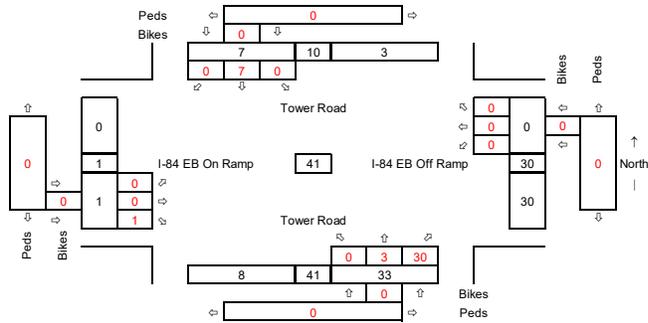
Grow Bikes? No



Development Trips

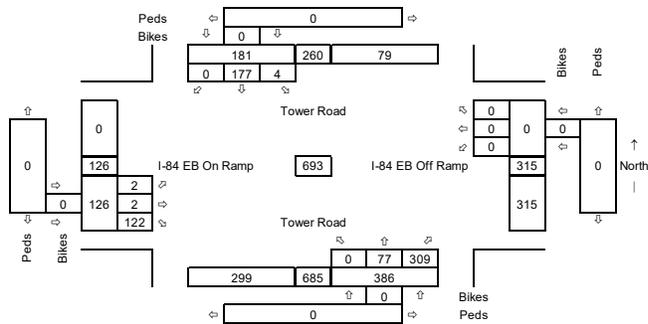
Average Weekday
PM Peak-Hour

East Tower Road Campus



Build Trips

Average Weekday
PM Peak-Hour



Pipeline Development

Average Weekday
PM Peak-Hour

Boardman Data Center



Synchro ID: 3

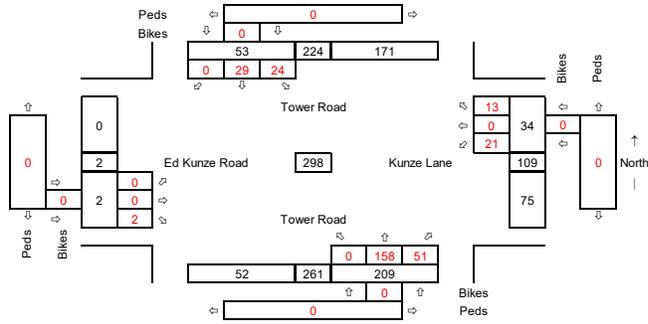
Existing
Average Weekday
PM Peak-Hour

Date: 1/25/2024

Data Source: IDAX

PHF: 0.89

EB HVF= 100%
WB HVF= 5%
NB HVF= 13%
SB HVF= 15%

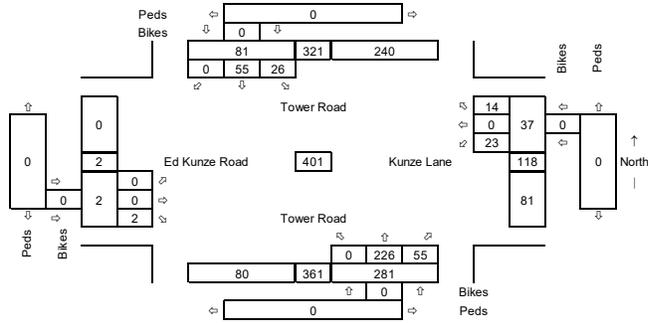


No-Build
Average Weekday
PM Peak-Hour

Year: 2028

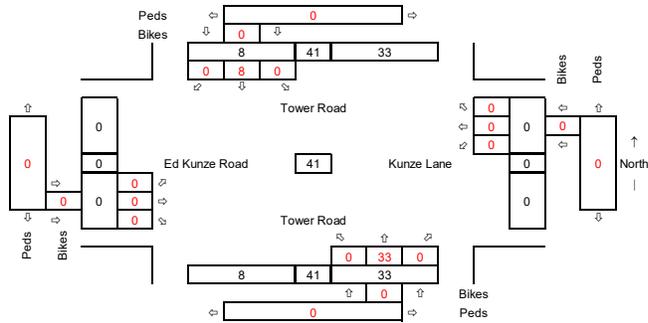
Years of Growth = 4
Growth Rate = 2%
Growth Factor = 1.08

Grow Peds? No
Grow Bikes? No

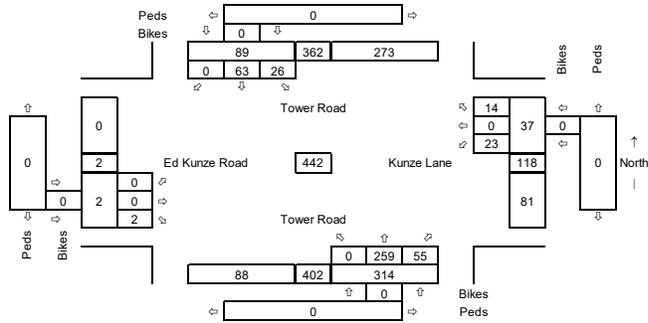


Development Trips
Average Weekday
PM Peak-Hour

East Tower Road Campus

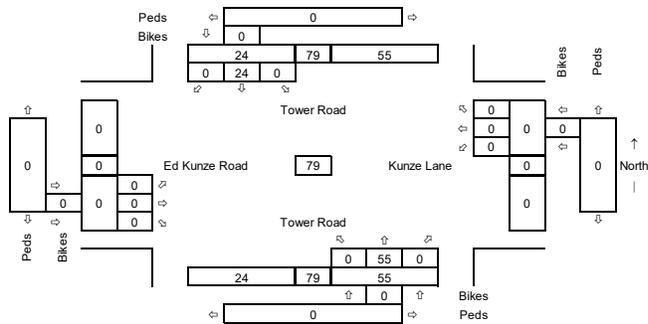


Build Trips
Average Weekday
PM Peak-Hour



Pipeline Development
Average Weekday
PM Peak-Hour

Boardman Data Center



Synchro ID: 4

Existing
Average Weekday
PM Peak-Hour

Date: 1/25/2024

Data Source: IDAX

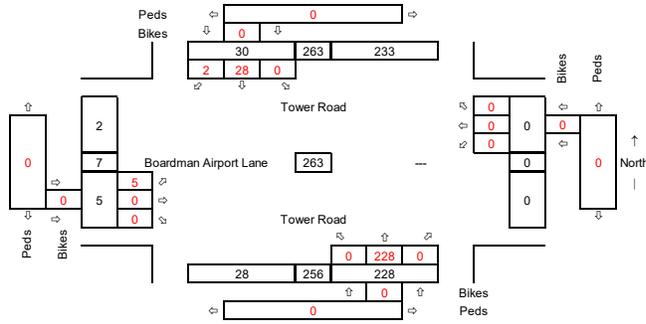
PHF: 0.82

EB HVF= 33%

WB HVF= 0%

NB HVF= 12%

SB HVF= 44%



No-Build
Average Weekday
PM Peak-Hour

Year: 2028

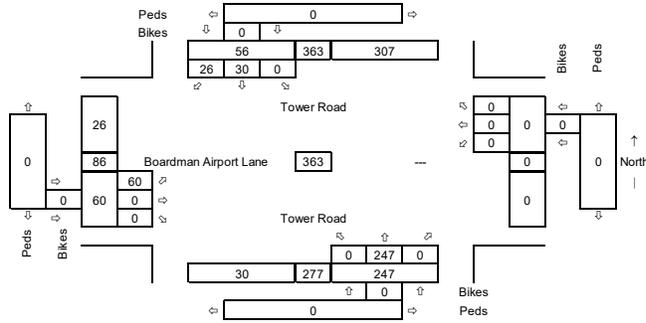
Years of Growth = 4

Growth Rate = 2%

Growth Factor = 1.08

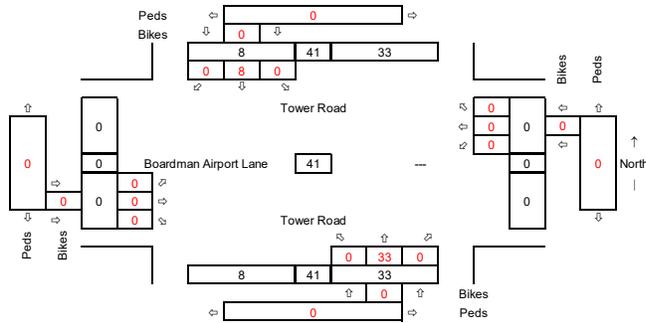
Grow Peds? No

Grow Bikes? No



Development Trips
Average Weekday
PM Peak-Hour

East Tower Road Campus

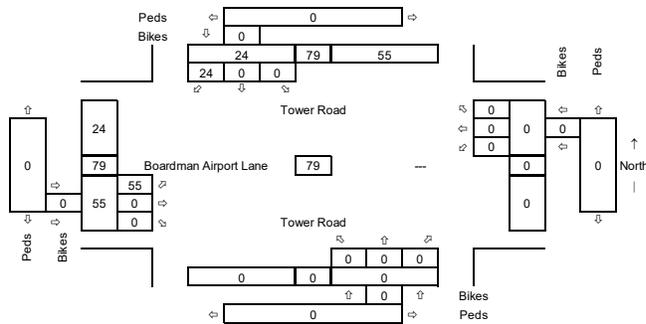


Build Trips
Average Weekday
PM Peak-Hour



Pipeline Development
Average Weekday
PM Peak-Hour

Boardman Data Center



Synchro ID: 5

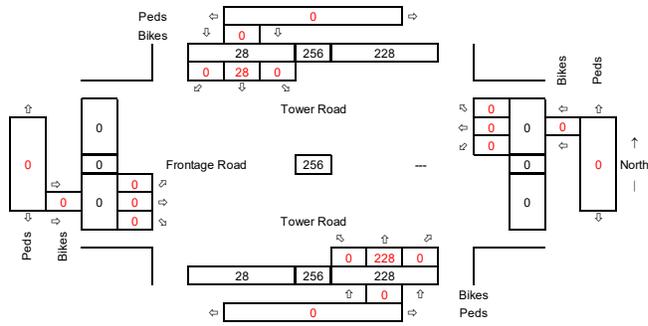
Existing
Average Weekday
PM Peak-Hour

Date: 1/25/2024

Data Source: IDAX

PHF: 0.82

EB HVF= 0%
WB HVF= 0%
NB HVF= 12%
SB HVF= 44%

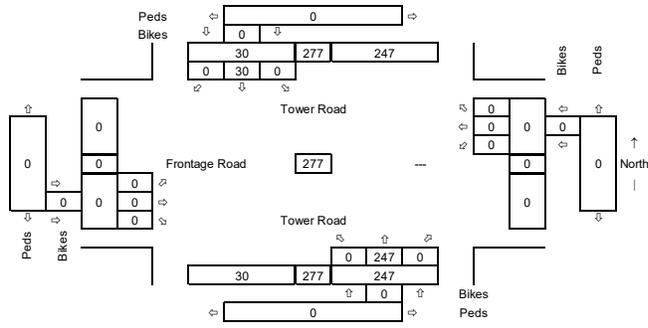


No-Build
Average Weekday
PM Peak-Hour

Year: 2028

Years of Growth = 4
Growth Rate = 2%
Growth Factor = 1.08

Grow Peds? No
Grow Bikes? No



Development Trips
Average Weekday
PM Peak-Hour

East Tower Road Campus

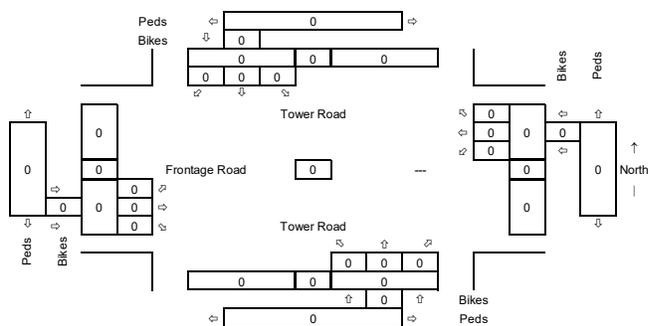


Build Trips
Average Weekday
PM Peak-Hour



Pipeline Development
Average Weekday
PM Peak-Hour

Boardman Data Center



Synchro ID: 6

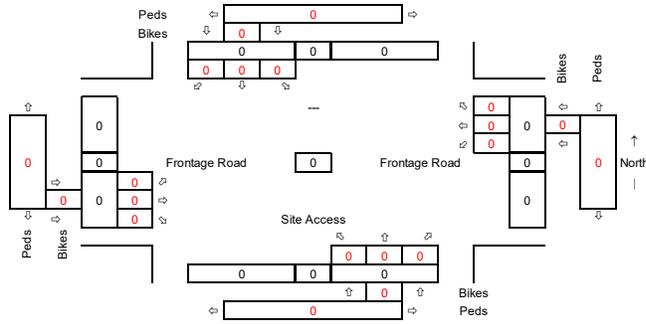
Existing
Average Weekday
PM Peak-Hour

Date: 1/25/2024

Data Source: IDAX

PHF: 0.85

EB HVF= 0%
WB HVF= 0%
NB HVF= 0%
SB HVF= 0%

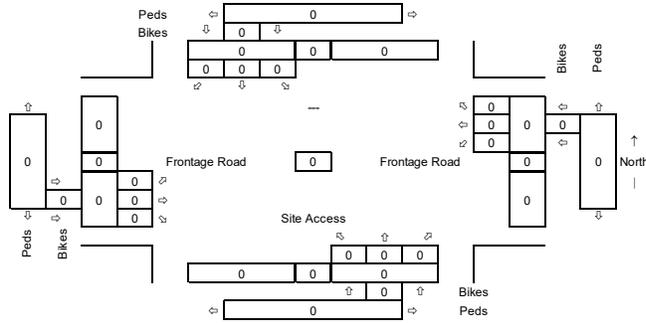


No-Build
Average Weekday
PM Peak-Hour

Year: 2028

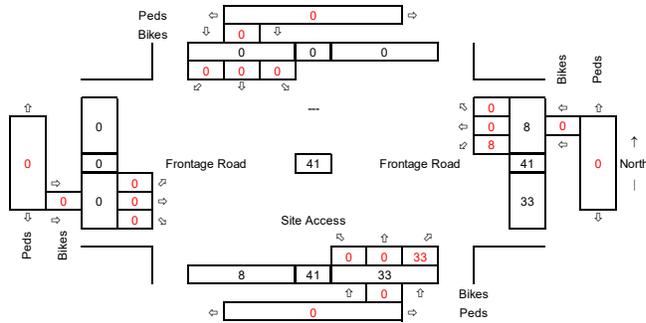
Years of Growth = 4
Growth Rate = 2%
Growth Factor = 1.08

Grow Peds? No
Grow Bikes? No

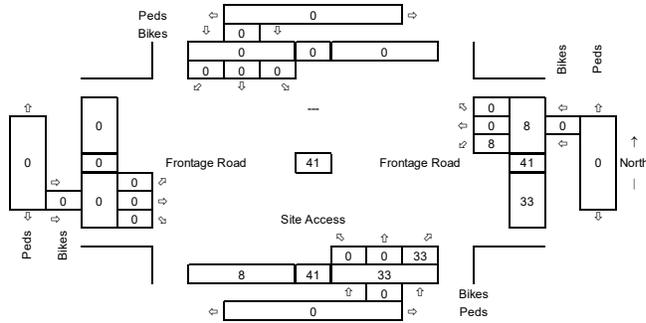


Development Trips
Average Weekday
PM Peak-Hour

East Tower Road Campus

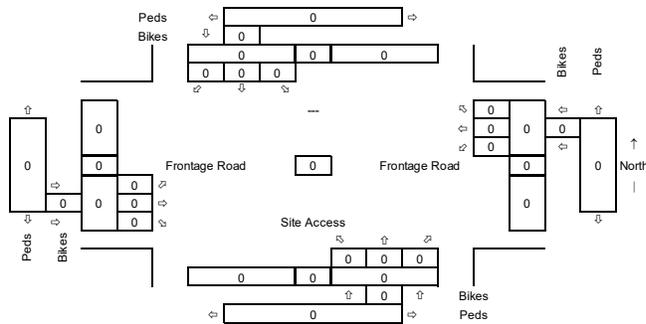


Build Trips
Average Weekday
PM Peak-Hour



Pipeline Development
Average Weekday
PM Peak-Hour

Boardman Data Center



APPENDIX E
LEVEL OF SERVICE CALCULATIONS

HCM 7th TWSC

1: Tower Road & I-84 WB Ramps

Existing Conditions

Intersection												
Int Delay, s/veh	10											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					+			+			+	
Traffic Vol, veh/h	0	0	0	137	0	0	63	4	0	0	2	0
Future Vol, veh/h	0	0	0	137	0	0	63	4	0	0	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	52	52	52	42	42	42	0	0	0
Mvmt Flow	0	0	0	151	0	0	69	4	0	0	2	0

Major/Minor	Minor1		Major1		Major2		
Conflicting Flow All	145	145	4	2	0	-	-
Stage 1	143	143	-	-	-	-	-
Stage 2	2	2	-	-	-	-	-
Critical Hdwy	6.92	7.02	6.72	4.52	-	-	-
Critical Hdwy Stg 1	5.92	6.02	-	-	-	-	-
Critical Hdwy Stg 2	5.92	6.02	-	-	-	-	-
Follow-up Hdwy	3.968	4.468	3.768	2.578	-	-	-
Pot Cap-1 Maneuver	743	664	950	1394	-	0	0
Stage 1	775	692	-	-	-	0	0
Stage 2	905	804	-	-	-	0	0
Platoon blocked, %					-	-	-
Mov Cap-1 Maneuver	706	0	950	1394	-	-	-
Mov Cap-2 Maneuver	706	0	-	-	-	-	-
Stage 1	737	0	-	-	-	-	-
Stage 2	905	0	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	11.48	7.26	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBTWBLn1	SBT	SBR
Capacity (veh/h)	1390	-	706	-
HCM Lane V/C Ratio	0.05	-	0.213	-
HCM Control Delay (s/veh)	7.7	0	11.5	-
HCM Lane LOS	A	A	B	-
HCM 95th %tile Q(veh)	0.2	-	0.8	-

HCM 7th TWSC

2: Tower Road & I-84 EB Ramps

Existing Conditions

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		+						+			+	
Traffic Vol, veh/h	2	2	110	0	0	0	0	64	212	4	137	0
Future Vol, veh/h	2	2	110	0	0	0	0	64	212	4	137	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free								
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	45	45	45	0	0	0	39	39	39	52	52	52
Mvmt Flow	2	2	126	0	0	0	0	74	244	5	157	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	240	484	157	-	0	0	317	0	0
Stage 1	167	167	-	-	-	-	-	-	-
Stage 2	74	317	-	-	-	-	-	-	-
Critical Hdwy	6.85	6.95	6.65	-	-	-	4.62	-	-
Critical Hdwy Stg 1	5.85	5.95	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.85	5.95	-	-	-	-	-	-	-
Follow-up Hdwy	3.905	4.405	3.705	-	-	-	2.668	-	-
Pot Cap-1 Maneuver	663	425	787	0	-	-	1008	-	0
Stage 1	769	686	-	0	-	-	-	-	0
Stage 2	851	584	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	660	0	787	-	-	-	1008	-	-
Mov Cap-2 Maneuver	660	0	-	-	-	-	-	-	-
Stage 1	769	0	-	-	-	-	-	-	-
Stage 2	847	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v10.51		0	0.24
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	784	51	-
HCM Lane V/C Ratio	-	-	0.167	0.005	-
HCM Control Delay (s/veh)	-	-	10.5	8.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0	-

HCM 7th TWSC

3: Tower Road & Kunze Road/Kunze Lane

Existing Conditions

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		+			+			+			+	
Traffic Vol, veh/h	0	0	2	21	0	13	0	158	51	24	29	0
Future Vol, veh/h	0	0	2	21	0	13	0	158	51	24	29	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	100	100	100	5	5	5	13	13	13	15	15	15
Mvmt Flow	0	0	2	24	0	15	0	178	57	27	33	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	264	321	33	293	293	206	33	0	0	235	0	0
Stage 1	87	87	-	206	206	-	-	-	-	-	-	-
Stage 2	178	235	-	87	87	-	-	-	-	-	-	-
Critical Hdwy	8.1	7.5	7.2	7.15	6.55	6.25	4.23	-	-	4.25	-	-
Critical Hdwy Stg 1	7.1	6.5	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.1	6.5	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	4.4	4.9	4.2	3.545	4.045	3.345	2.317	-	-	2.335	-	-
Pot Cap-1 Maneuver	528	464	818	654	613	827	1511	-	-	1260	-	-
Stage 1	727	666	-	789	726	-	-	-	-	-	-	-
Stage 2	641	562	-	914	817	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	508	454	818	638	600	827	1511	-	-	1260	-	-
Mov Cap-2 Maneuver	508	454	-	638	600	-	-	-	-	-	-	-
Stage 1	711	652	-	789	726	-	-	-	-	-	-	-
Stage 2	630	562	-	891	800	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	9.41		10.45		0		3.59	
HCM LOS	A		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1511	-	-	818	699	815	-
HCM Lane V/C Ratio	-	-	-	0.003	0.055	0.021	-
HCM Control Delay (s/veh)	0	-	-	9.4	10.5	7.9	0
HCM Lane LOS	A	-	-	A	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0.1	-

HCM 7th TWSC

4: Tower Road & Boardman Airport Lane

Existing Conditions

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4	P	
Traffic Vol, veh/h	5	0	0	228	28	2
Future Vol, veh/h	5	0	0	228	28	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	33	33	12	12	44	44
Mvmt Flow	6	0	0	278	34	2

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	313	35	37	0	0
Stage 1	35	-	-	-	-
Stage 2	278	-	-	-	-
Critical Hdwy	6.73	6.53	4.22	-	-
Critical Hdwy Stg 1	5.73	-	-	-	-
Critical Hdwy Stg 2	5.73	-	-	-	-
Follow-up Hdwy	3.797	3.597	2.308	-	-
Pot Cap-1 Maneuver	620	955	1512	-	-
Stage 1	913	-	-	-	-
Stage 2	703	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	620	955	1512	-	-
Mov Cap-2 Maneuver	620	-	-	-	-
Stage 1	913	-	-	-	-
Stage 2	703	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v10.87		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1512	-	620	-	-
HCM Lane V/C Ratio	-	-	0.01	-	-
HCM Control Delay (s/veh)	0	-	10.9	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 7th TWSC

1: Tower Road & I-84 WB Ramps

2028 No-Build Conditions

Intersection												
Int Delay, s/veh	10.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					+			+			+	
Traffic Vol, veh/h	0	0	0	170	0	0	73	4	0	0	2	0
Future Vol, veh/h	0	0	0	170	0	0	73	4	0	0	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	52	52	52	42	42	42	0	0	0
Mvmt Flow	0	0	0	187	0	0	80	4	0	0	2	0

Major/Minor	Minor1		Major1		Major2		
Conflicting Flow All	167	167	4	2	0	-	0
Stage 1	165	165	-	-	-	-	-
Stage 2	2	2	-	-	-	-	-
Critical Hdwy	6.92	7.02	6.72	4.52	-	-	-
Critical Hdwy Stg 1	5.92	6.02	-	-	-	-	-
Critical Hdwy Stg 2	5.92	6.02	-	-	-	-	-
Follow-up Hdwy	3.968	4.468	3.768	2.578	-	-	-
Pot Cap-1 Maneuver	721	644	950	1394	-	0	0
Stage 1	757	676	-	-	-	0	0
Stage 2	905	804	-	-	-	0	0
Platoon blocked, %					-	-	-
Mov Cap-1 Maneuver	679	0	950	1394	-	-	-
Mov Cap-2 Maneuver	679	0	-	-	-	-	-
Stage 1	713	0	-	-	-	-	-
Stage 2	905	0	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	12.3	7.34	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBTWBLn1	SBT	SBR
Capacity (veh/h)	1390	-	679	-
HCM Lane V/C Ratio	0.058	-	0.275	-
HCM Control Delay (s/veh)	7.7	0	12.3	-
HCM Lane LOS	A	A	B	-
HCM 95th %tile Q(veh)	0.2	-	1.1	-

HCM 7th TWSC

2: Tower Road & I-84 EB Ramps

2028 No-Build Conditions

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↔			↔	
Traffic Vol, veh/h	2	2	121	0	0	0	0	74	279	4	170	0
Future Vol, veh/h	2	2	121	0	0	0	0	74	279	4	170	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free								
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	45	45	45	0	0	0	39	39	39	52	52	52
Mvmt Flow	2	2	139	0	0	0	0	85	321	5	195	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	290	610	195	-	0	0	406	0	0
Stage 1	205	205	-	-	-	-	-	-	-
Stage 2	85	406	-	-	-	-	-	-	-
Critical Hdwy	6.85	6.95	6.65	-	-	-	4.62	-	-
Critical Hdwy Stg 1	5.85	5.95	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.85	5.95	-	-	-	-	-	-	-
Follow-up Hdwy	3.905	4.405	3.705	-	-	-	2.668	-	-
Pot Cap-1 Maneuver	619	357	748	0	-	-	928	-	0
Stage 1	737	659	-	0	-	-	-	-	0
Stage 2	840	530	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	616	0	748	-	-	-	928	-	-
Mov Cap-2 Maneuver	616	0	-	-	-	-	-	-	-
Stage 1	737	0	-	-	-	-	-	-	-
Stage 2	836	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v10.98		0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	745	41	-
HCM Lane V/C Ratio	-	-	0.193	0.005	-
HCM Control Delay (s/veh)	-	-	11	8.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0	-

HCM 7th TWSC

3: Tower Road & Kunze Road/Kunze Lane

2028 No-Build Conditions

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		+			+			+			+	
Traffic Vol, veh/h	0	0	2	23	0	14	0	226	55	26	55	0
Future Vol, veh/h	0	0	2	23	0	14	0	226	55	26	55	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	100	100	100	5	5	5	13	13	13	15	15	15
Mvmt Flow	0	0	2	26	0	16	0	254	62	29	62	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	374	436	62	405	405	285	62	0	0	316	0	0
Stage 1	120	120	-	285	285	-	-	-	-	-	-	-
Stage 2	254	316	-	120	120	-	-	-	-	-	-	-
Critical Hdwy	8.1	7.5	7.2	7.15	6.55	6.25	4.23	-	-	4.25	-	-
Critical Hdwy Stg 1	7.1	6.5	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.1	6.5	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	4.4	4.9	4.2	3.545	4.045	3.345	2.317	-	-	2.335	-	-
Pot Cap-1 Maneuver	439	393	785	551	530	747	1474	-	-	1174	-	-
Stage 1	694	641	-	716	670	-	-	-	-	-	-	-
Stage 2	577	511	-	877	790	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	419	383	785	535	517	747	1474	-	-	1174	-	-
Mov Cap-2 Maneuver	419	383	-	535	517	-	-	-	-	-	-	-
Stage 1	676	625	-	716	670	-	-	-	-	-	-	-
Stage 2	565	511	-	852	770	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	9.6		11.45		0		2.61	
HCM LOS	A		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1474	-	-	785	599	578	-	-
HCM Lane V/C Ratio	-	-	-	0.003	0.069	0.025	-	-
HCM Control Delay (s/veh)	0	-	-	9.6	11.5	8.1	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0.1	-	-

HCM 7th TWSC

4: Tower Road & Boardman Airport Lane

2028 No-Build Conditions

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4	4	
Traffic Vol, veh/h	60	0	0	247	30	26
Future Vol, veh/h	60	0	0	247	30	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	33	33	12	12	44	44
Mvmt Flow	73	0	0	301	37	32

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	354	52	68	0	0
Stage 1	52	-	-	-	-
Stage 2	301	-	-	-	-
Critical Hdwy	6.73	6.53	4.22	-	-
Critical Hdwy Stg 1	5.73	-	-	-	-
Critical Hdwy Stg 2	5.73	-	-	-	-
Follow-up Hdwy	3.797	3.597	2.308	-	-
Pot Cap-1 Maneuver	586	934	1472	-	-
Stage 1	897	-	-	-	-
Stage 2	685	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	586	934	1472	-	-
Mov Cap-2 Maneuver	586	-	-	-	-
Stage 1	897	-	-	-	-
Stage 2	685	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v12.01		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1472	-	586	-	-
HCM Lane V/C Ratio	-	-	0.125	-	-
HCM Control Delay (s/veh)	0	-	12	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

HCM 7th TWSC

1: Tower Road & I-84 WB Ramps

2028 Build Conditions

Intersection												
Int Delay, s/veh	10.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					+			+			+	
Traffic Vol, veh/h	0	0	0	177	0	0	76	4	0	0	2	0
Future Vol, veh/h	0	0	0	177	0	0	76	4	0	0	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	52	52	52	42	42	42	0	0	0
Mvmt Flow	0	0	0	195	0	0	84	4	0	0	2	0

Major/Minor	Minor1		Major1		Major2		
Conflicting Flow All	174	174	4	2	0	-	0
Stage 1	171	171	-	-	-	-	-
Stage 2	2	2	-	-	-	-	-
Critical Hdwy	6.92	7.02	6.72	4.52	-	-	-
Critical Hdwy Stg 1	5.92	6.02	-	-	-	-	-
Critical Hdwy Stg 2	5.92	6.02	-	-	-	-	-
Follow-up Hdwy	3.968	4.468	3.768	2.578	-	-	-
Pot Cap-1 Maneuver	714	638	950	1394	-	0	0
Stage 1	751	672	-	-	-	0	0
Stage 2	905	804	-	-	-	0	0
Platoon blocked, %					-	-	-
Mov Cap-1 Maneuver	671	0	950	1394	-	-	-
Mov Cap-2 Maneuver	671	0	-	-	-	-	-
Stage 1	706	0	-	-	-	-	-
Stage 2	905	0	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.54	7.36	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBTWBLn1	SBT	SBR
Capacity (veh/h)	1390	-	671	-
HCM Lane V/C Ratio	0.06	-	0.29	-
HCM Ctrl Dly (s/v)	7.7	0	12.5	-
HCM Lane LOS	A	A	B	-
HCM 95th %tile Q(veh)	0.2	-	1.2	-

HCM 7th TWSC

2: Tower Road & I-84 EB Ramps

2028 Build Conditions

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	2	2	122	0	0	0	0	77	309	4	177	0
Future Vol, veh/h	2	2	122	0	0	0	0	77	309	4	177	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free								
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	45	45	45	0	0	0	39	39	39	52	52	52
Mvmt Flow	2	2	140	0	0	0	0	89	355	5	203	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	301	656	203	-	0	0	444	0	0
Stage 1	213	213	-	-	-	-	-	-	-
Stage 2	89	444	-	-	-	-	-	-	-
Critical Hdwy	6.85	6.95	6.65	-	-	-	4.62	-	-
Critical Hdwy Stg 1	5.85	5.95	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.85	5.95	-	-	-	-	-	-	-
Follow-up Hdwy	3.905	4.405	3.705	-	-	-	2.668	-	-
Pot Cap-1 Maneuver	609	335	740	0	-	-	896	-	0
Stage 1	731	653	-	0	-	-	-	-	0
Stage 2	837	509	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	606	0	740	-	-	-	896	-	-
Mov Cap-2 Maneuver	606	0	-	-	-	-	-	-	-
Stage 1	731	0	-	-	-	-	-	-	-
Stage 2	832	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v11.08		0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	737	40	-
HCM Lane V/C Ratio	-	-	0.197	0.005	-
HCM Control Delay (s/veh)	-	-	11.1	9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0	-

HCM 7th TWSC

3: Tower Road & Kunze Road/Kunze Lane

2028 Build Conditions

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		+			+			+			+	
Traffic Vol, veh/h	0	0	2	23	0	14	0	259	55	26	63	0
Future Vol, veh/h	0	0	2	23	0	14	0	259	55	26	63	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	100	100	100	5	5	5	13	13	13	15	15	15
Mvmt Flow	0	0	2	26	0	16	0	291	62	29	71	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	420	482	71	451	451	322	71	0	0	353	0	0
Stage 1	129	129	-	322	322	-	-	-	-	-	-	-
Stage 2	291	353	-	129	129	-	-	-	-	-	-	-
Critical Hdwy	8.1	7.5	7.2	7.15	6.55	6.25	4.23	-	-	4.25	-	-
Critical Hdwy Stg 1	7.1	6.5	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.1	6.5	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	4.4	4.9	4.2	3.545	4.045	3.345	2.317	-	-	2.335	-	-
Pot Cap-1 Maneuver	406	367	775	513	499	712	1463	-	-	1137	-	-
Stage 1	686	634	-	684	646	-	-	-	-	-	-	-
Stage 2	548	489	-	867	783	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	387	357	775	498	486	712	1463	-	-	1137	-	-
Mov Cap-2 Maneuver	387	357	-	498	486	-	-	-	-	-	-	-
Stage 1	667	618	-	684	646	-	-	-	-	-	-	-
Stage 2	536	489	-	842	763	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	9.66		11.92		0		2.41	
HCM LOS	A		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1463	-	-	775	562	526	-	-
HCM Lane V/C Ratio	-	-	-	0.003	0.074	0.026	-	-
HCM Control Delay (s/veh)	0	-	-	9.7	11.9	8.2	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0.1	-	-

HCM 7th TWSC

4: Tower Road & Boardman Airport Lane

2028 Build Conditions

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4	4	
Traffic Vol, veh/h	60	0	0	280	38	26
Future Vol, veh/h	60	0	0	280	38	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	33	33	12	12	44	44
Mvmt Flow	73	0	0	341	46	32

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	404	62	78	0	0
Stage 1	62	-	-	-	-
Stage 2	341	-	-	-	-
Critical Hdwy	6.73	6.53	4.22	-	-
Critical Hdwy Stg 1	5.73	-	-	-	-
Critical Hdwy Stg 2	5.73	-	-	-	-
Follow-up Hdwy	3.797	3.597	2.308	-	-
Pot Cap-1 Maneuver	547	922	1459	-	-
Stage 1	887	-	-	-	-
Stage 2	656	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	547	922	1459	-	-
Mov Cap-2 Maneuver	547	-	-	-	-
Stage 1	887	-	-	-	-
Stage 2	656	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v12.59		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1459	-	547	-	-
HCM Lane V/C Ratio	-	-	0.134	-	-
HCM Control Delay (s/veh)	0	-	12.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

HCM 7th TWSC

5: Tower Road & Frontage Road

2028 Build Conditions

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			4	4	
Traffic Vol, veh/h	33	0	0	247	30	8
Future Vol, veh/h	33	0	0	247	30	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	0	12	12	44	44
Mvmt Flow	40	0	0	301	37	10

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	343	41	46	0	0
Stage 1	41	-	-	-	-
Stage 2	301	-	-	-	-
Critical Hdwy	6.4	6.2	4.22	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.308	-	-
Pot Cap-1 Maneuver	658	1035	1499	-	-
Stage 1	986	-	-	-	-
Stage 2	755	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	658	1035	1499	-	-
Mov Cap-2 Maneuver	658	-	-	-	-
Stage 1	986	-	-	-	-
Stage 2	755	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v10.83		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1499	-	658	-	-
HCM Lane V/C Ratio	-	-	0.061	-	-
HCM Control Delay (s/veh)	0	-	10.8	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

HCM 7th TWSC

6: Site Access & Frontage Road

2028 Build Conditions

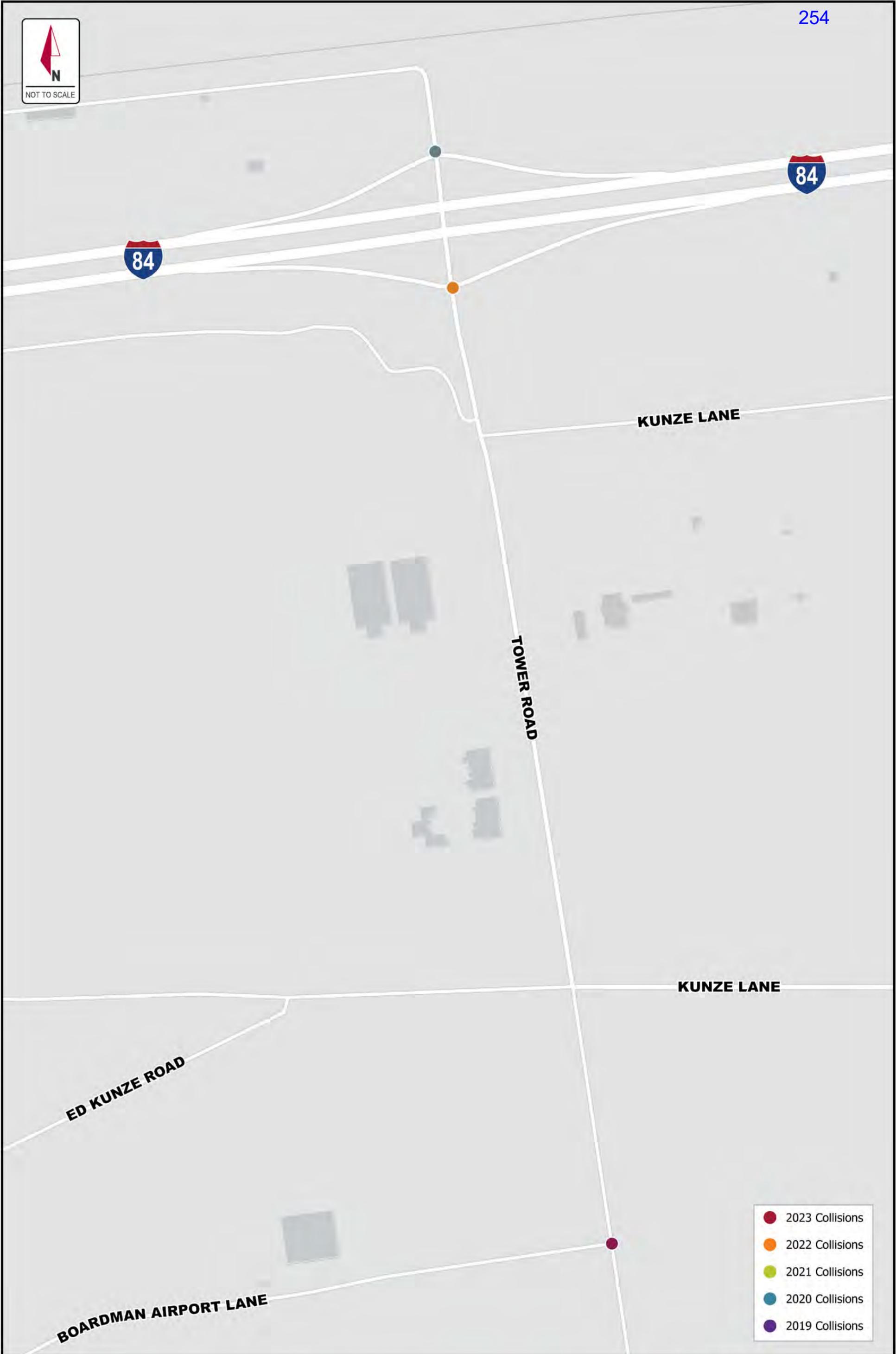
Intersection						
Int Delay, s/veh	8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1			1	1	
Traffic Vol, veh/h	0	0	8	0	0	33
Future Vol, veh/h	0	0	8	0	0	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	9	0	0	39

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	1	0	20
Stage 1	-	-	-	-	1
Stage 2	-	-	-	-	19
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1635	-	1002
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	1009
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1635	-	997
Mov Cap-2 Maneuver	-	-	-	-	997
Stage 1	-	-	-	-	1027
Stage 2	-	-	-	-	1003

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	7.21	8.43
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1089	-	-	1635	-
HCM Lane V/C Ratio	0.036	-	-	0.006	-
HCM Ctrl Dly (s/v)	8.4	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

APPENDIX F
COLLISION DATA



Collision Data Table

Tower Road East Campus - Morrow County, Oregon

255

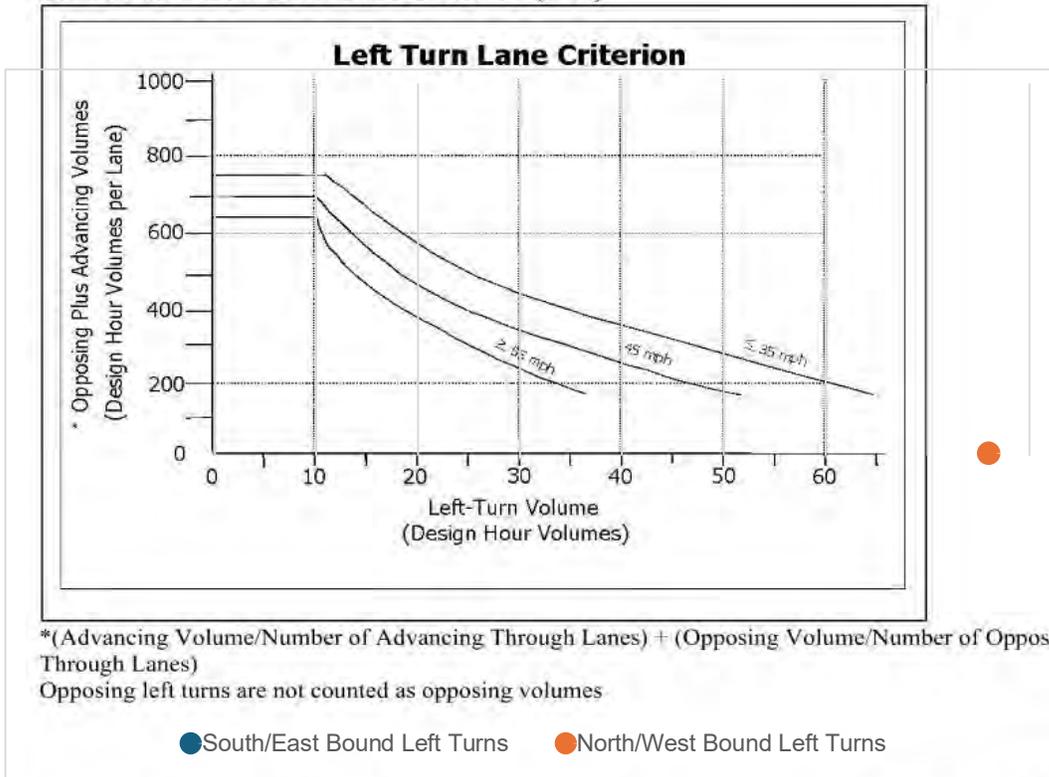
CRASH ID	DATE	TIME	PRIMARY ROADWAY	CROSS STREET	SEVERITY	# VEHICLES	# PEDS	# BIKES	COLLISION TYPE	CRASH CAUSE 1
2042269	2023-09-30	08:00 AM to 08:59 AM	Tower Road	Boardman Airport Lane	No Apparent Injury/PDO Crash (O)	2	0	0	Turning Movement	Improper Overtaking
2031965	2022-08-23	12:00 PM (Noon) to 12:59 PM	Tower Road	I-84 EB Ramps	No Apparent Injury/PDO Crash (O)	2	0	0	From same direction-all others, including parking	Made improper turn
1978374	2022-01-06	03:00 AM to 03:59 AM	Tower Road	I-84 EB Ramps	No Apparent Injury/PDO Crash (O)	1	0	0	Fixed object	Too fast for conditions (not exceed posted speed)
1978359	2022-03-02	05:00 AM to 05:59 AM	Tower Road	I-84 EB Ramps	No Apparent Injury/PDO Crash (O)	1	0	0	Fixed object	Other improper driving
1906366	2020-11-04	04:00 PM to 04:59 PM	Tower Road	I-84 WB Ramps	No Apparent Injury/PDO Crash (O)	2	0	0	From same direction - one turn, one straight	Inadequate or no brakes
1837442	2019-11-10	10:00 AM to 10:59 AM	Tower Road	I-84 EB Ramps	Possible Injury Crash (C)	2	0	0	From same direction - one stopped	Failed to avoid vehicle ahead

APPENDIX G
LEFT-TURN WARRANT EXHIBITS

Kimley»Horn

Tower Road at I-84 Westbound Ramps - 2028 Build Conditions

Exhibit 12-1 Left Turn Lane Criterion (TTI)



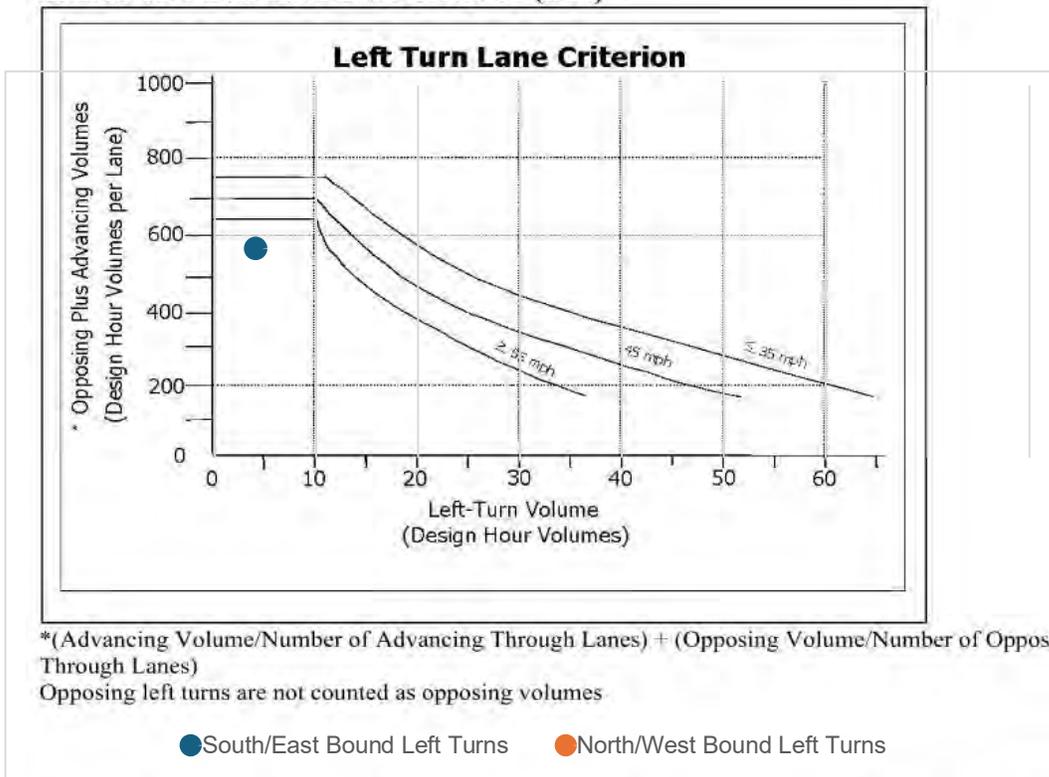
	=	Vehicles
South/East Bound Left Turns	=	
Opposing + Advancing Volume	=	
North/West Bound Left Turns	=	76
Opposing + Advancing Volume	=	6

Based on ODOT Analysis Procedures Manual Version 2: Exhibit 12-1, Page 12-2

Kimley»Horn

Tower Road at I-84 Eastbound Ramps - 2028 Build Conditions

Exhibit 12-1 Left Turn Lane Criterion (TTI)



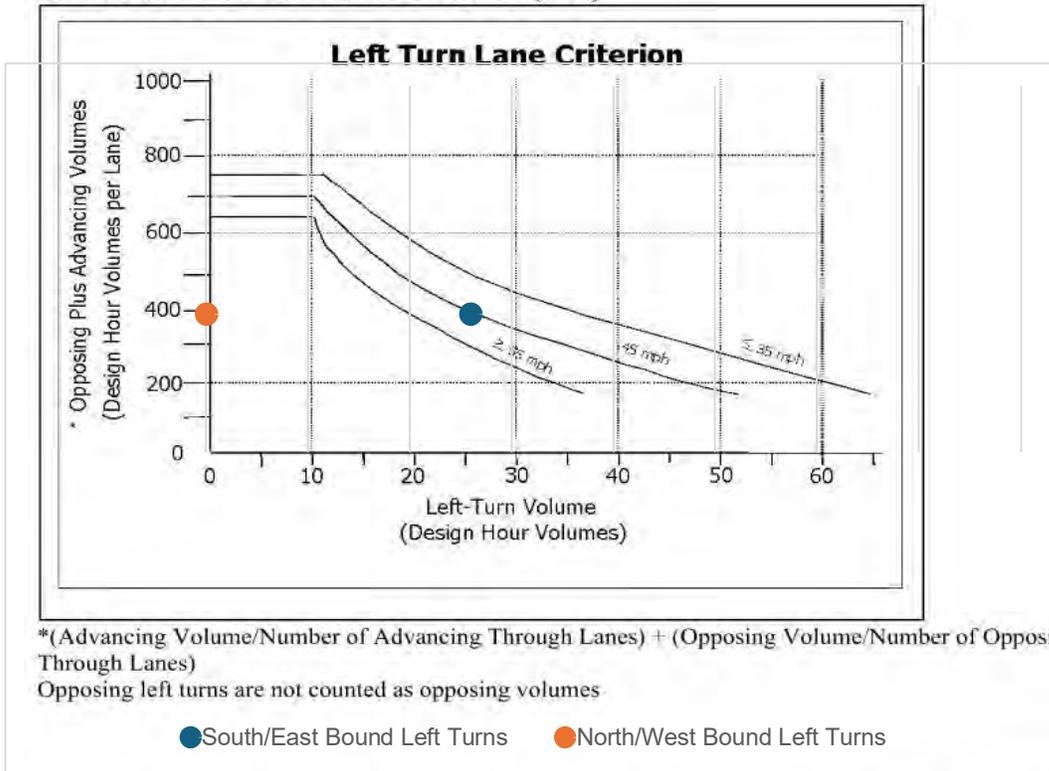
	=	Vehicles
South/East Bound Left Turns	=	4
Opposing + Advancing Volume	=	563
North/West Bound Left Turns	=	
Opposing + Advancing Volume	=	

Based on ODOT Analysis Procedures Manual Version 2: Exhibit 12-1, Page 12-2

Kimley»Horn

Tower Road at Kunze Lane - 2028 Build Conditions

Exhibit 12-1 Left Turn Lane Criterion (TTI)



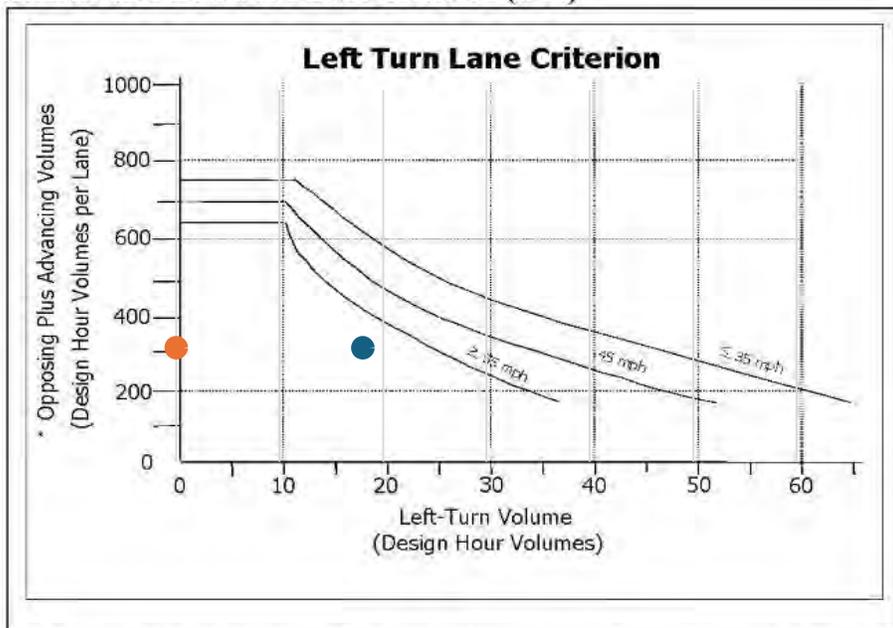
		Vehicles
South/East Bound Left Turns	=	26
Opposing + Advancing Volume	=	377
North/West Bound Left Turns	=	0
Opposing + Advancing Volume	=	377

Based on ODOT Analysis Procedures Manual Version 2: Exhibit 12-1, Page 12-2

Kimley»Horn

Tower Road at Kunze Lane - 2028 Build Conditions (I-84 Exit 159 Tower Road IAMP Volumes)

Exhibit 12-1 Left Turn Lane Criterion (TTI)



*(Advancing Volume/Number of Advancing Through Lanes) + (Opposing Volume/Number of Opposing Through Lanes)
 Opposing left turns are not counted as opposing volumes

● South/East Bound Left Turns ● North/West Bound Left Turns

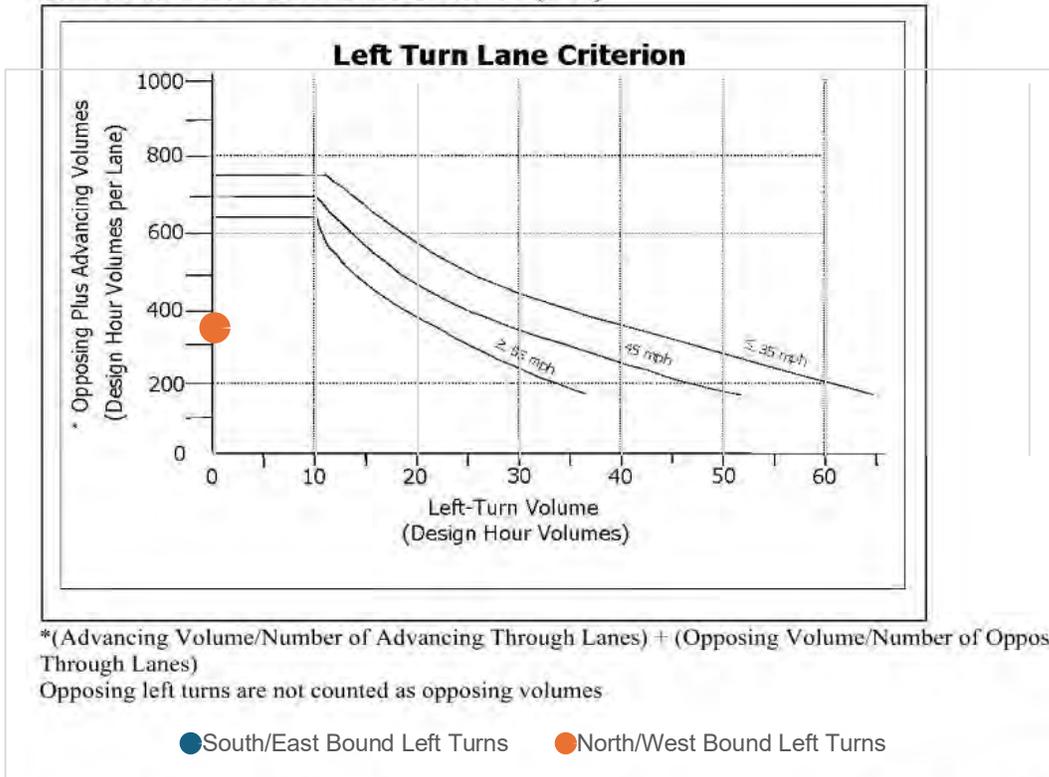
		Vehicles
South/East Bound Left Turns	=	18
Opposing + Advancing Volume	=	306
North/West Bound Left Turns	=	0
Opposing + Advancing Volume	=	306

Based on ODOT Analysis Procedures Manual Version 2: Exhibit 12-1, Page 12-2



Tower Road at Boardman Airport Lane - 2028 Build Conditions

Exhibit 12-1 Left Turn Lane Criterion (TTI)



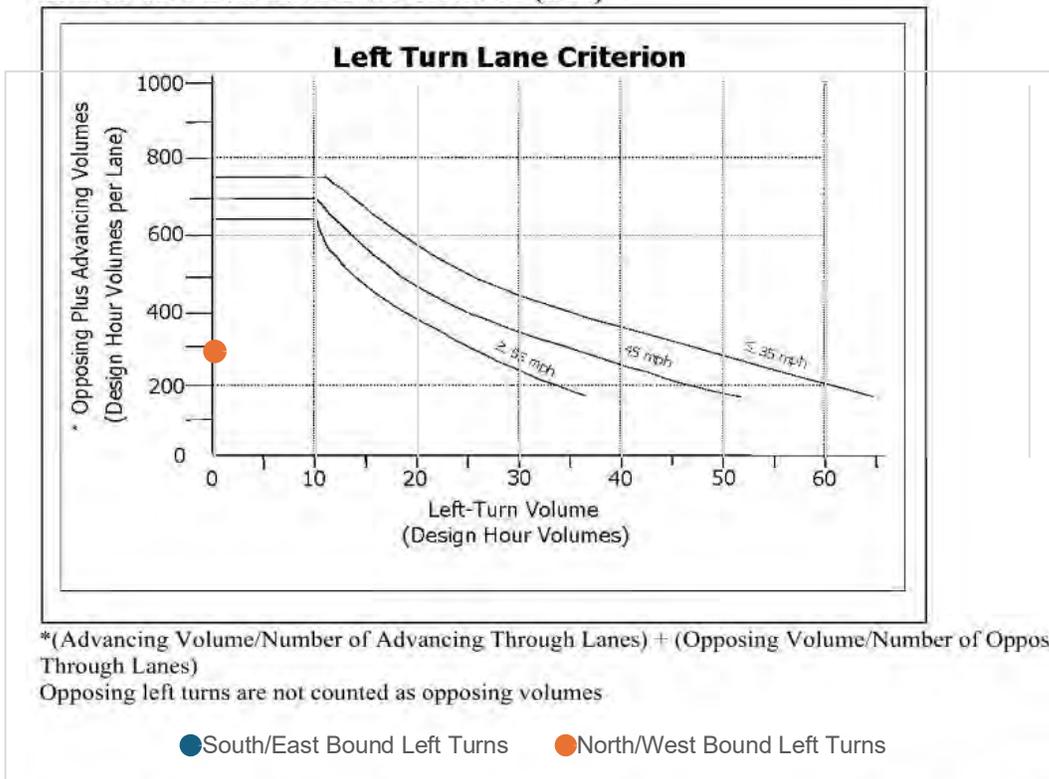
		Vehicles
South/East Bound Left Turns	=	
Opposing + Advancing Volume	=	
North/West Bound Left Turns	=	0
Opposing + Advancing Volume	=	344

Based on ODOT Analysis Procedures Manual Version 2: Exhibit 12-1, Page 12-2

Kimley»Horn

Tower Road at Frontage Road - 2028 Build Conditions

Exhibit 12-1 Left Turn Lane Criterion (TTI)



	=	Vehicles
South/East Bound Left Turns	=	
Opposing + Advancing Volume	=	
North/West Bound Left Turns	=	0
Opposing + Advancing Volume	=	285

Based on ODOT Analysis Procedures Manual Version 2: Exhibit 12-1, Page 12-2

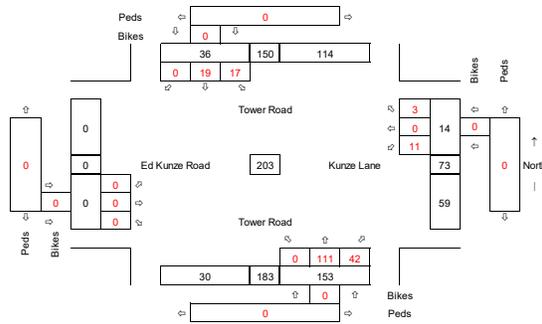
Synchro ID: 3
Existing
 Average Weekday
 PM Peak-Hour

Date: 7/16/2024

Data Source: IAMP

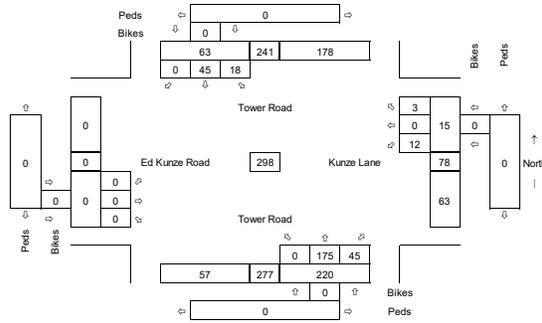
PHF: 0.86

EB HVF= 0%
 WB HVF= 0%
 NB HVF= 9%
 SB HVF= 23%



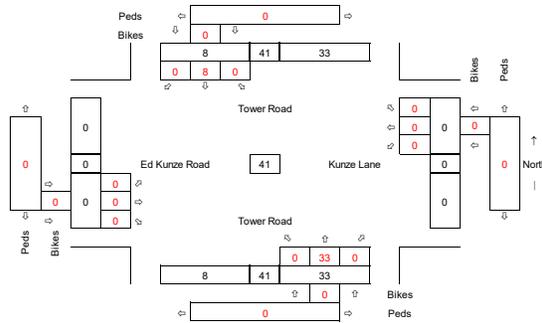
No-Build
 Average Weekday
 PM Peak-Hour
 Year: 2028
 Years of Growth = 4
 Growth Rate = 2%
 Growth Factor = 1.08

Grow Peds? No
 Grow Bikes? No

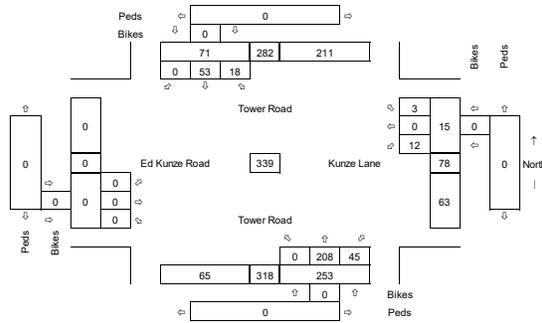


Development Trips
 Average Weekday
 PM Peak-Hour

East Tower Road Campus

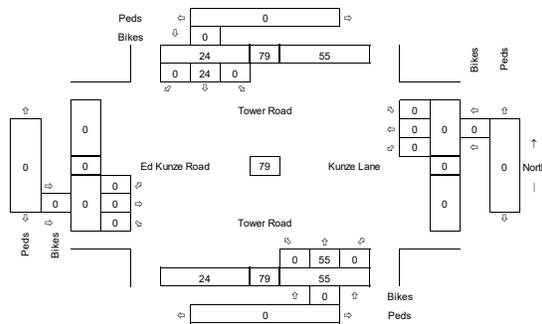


Build Trips
 Average Weekday
 PM Peak-Hour



Pipeline Development
 Average Weekday
 PM Peak-Hour

Boardman Data Center



From: [MARTIN Kelli N](#)
To: [Tamra Mabbott](#); [PENNINGER Teresa B](#); [JARVIS-SMITH Cheryl](#)
Cc: [Clint Shoemake](#); [LAPP Thomas](#)
Subject: RE: Notice of Application LUD-N-089-25
Date: Tuesday, December 30, 2025 8:15:13 AM
Attachments: [image001.png](#)

[EXTERNAL EMAIL] - STOP and VERIFY - This message came from outside of Morrow County Gov

Tamra,

Thanks for the great discussion last week. As we discussed, the analysis doesn't indicate mitigation is warranted. The V/C Ratios are well within the OHP Standard limits at the interchange ramps, and the LOS within the County standards. ODOT really has no comments of note to share.

Just a couple of notes, although with the V/C and LOS so far within standard I didn't dig too far into the analysis details.

Northern portion of Tower Road, North of MP 159.5, Station 110+71.02
V/C Ratios for ODOT: Intchg. Ramps are 0.75 per OHP, 0.70 HDM Std. ; Mainline I-84 is 0.70 per OHP, 0.60 HDM Std.

Per the County's Transportation System Plan (TSP – Reference 4), the County's target is LOS C for unincorporated areas. – this is consistent with what I found being utilize in the new IAMP for Tower Road.

At this point, the highest impacts would be had during construction. Suggest consideration of a road use agreement between the County and the Applicant to cover potential mitigation needs due to construction traffic for the project – as was required for the development on TL 110.

Please let me know if you have any other questions for us. Thank you for the opportunity to review and contribute.

Thanks,
Kelli

From: Tamra Mabbott <tmabbott@morrowcountyor.gov>
Sent: Monday, December 22, 2025 4:39 PM
To: PENNINGER Teresa B <Teresa.B.PENNINGER@odot.oregon.gov>; JARVIS-SMITH Cheryl <Cheryl.JARVIS-SMITH@odot.oregon.gov>; MARTIN Kelli N <Kelli.N.MARTIN@odot.oregon.gov>
Cc: Clint Shoemake <cshoemake@morrowcountyor.gov>
Subject: Re: Notice of Application LUD-N-089-25

This message was sent from outside the organization. Treat attachments, links and requests with caution. Be

conscious of the information you share if you respond.

Hello Kelli - thank you for the phone message on Thursday. I was out that afternoon and Friday. I am in tomorrow, 12/23 and then out until 12/29.

To answer your question, yes, we would absolutely accept your comments after 12/24, now that we know you have comments to share. If you want to request a hearing, that request should be by cob 12/24. We really would like your input on evaluating the TIA and in crafting appropriate conditions.

These data centers are challenging. Over the past couple years, David Boyd spent a lot of time looking at these and various TIAs. There are a number of other applications pending, and I would like to set aside time to talk with you about those. We have a permit modification pending for a campus at Lewis & Clark Drive/Hwy 730 and a whole new application just further out on Lewis & Clark Drive. Both will impact the intersection. We also adopted a code provision that would allow a "pre development agreement" to mitigate multiple developments. That is an entirely new concept to me and we yet to have an application but AWS requested it.

I will forward to you via a separate email, a "mini TIA" for a AWS campus amendment. I have a call on Monday 12/29 about that. I am particularly interested in your thoughts on that building addition. I am awaiting a reply from Todd Mobley, Traffic Engineer of Record, on that application.

Thank you again for following up!

Tamra

From: Tamra Mabbott <tmabbott@morrowcountyor.gov>

Sent: Wednesday, December 17, 2025 3:36 PM

To: PENNINGER Teresa B <teresa.b.penninger@odot.oregon.gov>; cheryl.jarvis-smith <cheryl.jarvis-smith@odot.oregon.gov>; MARTIN Kelli N <kelli.n.martin@odot.oregon.gov>

Cc: Clint Shoemake <cshoemake@morrowcountyor.gov>

Subject: Fw: Notice of Application LUD-N-089-25

Teresa and Cheryl - I'm bringing this back to your inbox; original email was last week 12/10.

Kelli - my apologies we did not include you directly in the 12/10 email.

I would very much appreciate your time to review and provide comment. If a call or meeting would be helpful please let me know. The comment period ends on 12/24 cob

but if you at least give me a few questions/comments, we can spend time after 12/24 working out specifics.

Summary

This LUD is for another AWS data center located at the intersection of Tower Road and (yet to be named) Bristow Lane. The TIA (attached) concludes that the project will not exceed LOS, and no mitigation is required. We asked the applicant, AWS, to add the AM peak traffic which they will provide, although they indicated that was only about 15 additional trips.

County will be requiring a Road Use Agreement (RUA) to mitigate construction traffic.

Today we received the latest version of the Tower Road IAMP which includes future projects along Tower Road, including one at this intersection.

Thank you!

From: Michaela Ramirez <mramirez@morrowcountyor.gov>

Sent: Wednesday, December 10, 2025 2:03 PM

To: HIATT Mike * DEQ <mike.hiatt@deq.oregon.gov>; Laura Gliem <Laura.GLEIM@deq.oregon.gov>; Dawn Hert <Dawn.Hert@dlcd.oregon.gov>; leigh.mcilvaine@state.or.us <leigh.mcilvaine@state.or.us>; Kyle.Stuart@osfm.oregon.gov <kyle.stuart@osfm.oregon.gov>; GOSS William H <william.h.goss@oha.oregon.gov>; PIKE Brandon <brandon.pike@odav.oregon.gov>; teresa.b.penninger@odot.state.or.us <teresa.b.penninger@odot.state.or.us>; Cheryl.JARVIS-SMITH@odot.state.or.us <cheryl.jarvis-smith@odot.state.or.us>; Chris Kowitz <chris.c.kowitz@water.oregon.gov>; kenneth.c.thiemann@water.oregon.gov <kenneth.c.thiemann@water.oregon.gov>; jessica.l.wuttke-campoamor@faa.gov <jessica.l.wuttke-campoamor@faa.gov>; Kim Peacher <kimberly.peacher@navy.mil>; mhughes@boardmanfd.com <mhughes@boardmanfd.com>; Brandon Hammond <hammondb@cityofboardman.com>; Mike Gorman <mgorman@morrowcountyor.gov>; Glenn McIntire <mcintireg@cityofboardman.com>; Steve Freeland <sfreeland@morrowcountyor.gov>; Eric Imes <eimes@morrowcountyor.gov>; Corey Sweeney <mcweed@co.morrow.or.us>; John Bowles <jbowles@morrowcountyor.gov>; Teara Farrow Ferman <tearafarrowferman@ctuir.org>; Jacob Cain (jacobc@portofmorrow.com) <jacobc@portofmorrow.com>; Mary Killion <mary.killion@outlook.com>

Cc: Tamra Mabbott <tmabbott@morrowcountyor.gov>

Subject: Notice of Application LUD-N-089-25

All,

You are provided this notice as an affected agency or adjoining landowner.

Attached is the Notice of Application Letter and supporting documents for Land Use Decision LUD-N-089-25, Leif Van Acker.

Please contact Tamra Mabbott at the Planning Department, tmabbott@morrowcountyor.gov, with any questions or to provide comments.

Morrow County Planning Dept.

Michaela Ramirez, Administrative Asst.

PO Box 40

Irrigon, OR 97844

541-922-4624



NEW EMAIL ADDRESS*** mramirez@morrowcountyor.gov



Letter of Intent

Dated: December 21, 2023

Port of Morrow, an Oregon Municipal Corporation
P.O Box 200
Boardman, Oregon 97818

Amazon Data Services, Inc.
410 Terry Avenue North
Seattle, WA 98109

This letter of intent is between Port of Morrow (POM) and Amazon Data Services, Inc. (ADS).

POM agrees to supply and sell up to 26 million gallons of water to ADS annually for the purpose of operating the Data facility (PDX154) located on Port of Morrow Airport property.

Water will be used for drinking, cleaning, flushing, cooling, potable drinking and any other purpose required to operate the data facility. Water will be available on a year-round basis for a length of time to be determined by ADS and Port of Morrow.

ADS will be responsible for all construction and delivery cost of the water from the POM source to the Data facility and in no event shall such costs be borne by the Port of Morrow.

Dated this 21st day of December, 2023.

Port of Morrow

Amazon Data Services, Inc.

DocuSigned by:
LISA MITTELSDORF

00311008382E449F
Lisa Mittelsdorf, Executive Director

DocuSigned by:
Josh Weissman

68784E59B2CD47C...





Oregon

Tina Kotek, Governor

269

Department of Environmental Quality
Eastern Region Bend Office
475 NE Bellevue Dr., Suite 110
Bend, OR 97701
(541) 388-6146
FAX (541) 388-8283
TTY 711

June 11, 2025

Tower Road East Project
c/o Anusha Andukuri
Amazon Data Services, Inc.
410 Terry Avenue North
Seattle, WA 98109

RE: Site Evaluation
PDX 154
0 Tower Rd
Boardman, OR 97818
T:4N, R: 24E, Sec.:00, Tax Lot: 136

Introduction

On March 19, 2025, the Medford DEQ office received, and completed processing, a complete site evaluation application to serve a proposed data center. On April 16th, 2025, I visited the property to evaluate the site and describe the twenty-seven test pits provided to determine suitability for an onsite wastewater treatment and disposal system. The site is located on tax lot 136.

Oregon Administrative Rule 340-071-0220, Table 2 establishes quantities of sewage flow from several types of establishments. The agent may also consider flow data collected from a similar facility. For this facility it is assumed to have a peak flow of 5000 gallons per day (gpd) and an average flow 2,500 gpd.

Site Evaluation Findings

Soil Conditions Test Pits 1-27

Test pits 1-12 were all similar to one another and located on the south east portion of the parcel just north of the mapped wetland. Test pits 1-12 had standing water between 4-25" below ground surface and were unable to be fully evaluated and even if so would be unlikely to be approvable even under dry conditions as conditions associated with saturation were present above the levels of standing water and would lend itself towards a denial of the area. Test Pits 13-27 were all similar to one another and were composed of loamy sand and in some test pits medium grain sand below 36" which is the bottom of the installation level for trenches allowed by rule for this soil type. There was a temporary water table found within these test pits that came as high as 21" below ground surface, this water table continued to trend deeper the farther north from the mapped wetland that they were located.

Conditions of Suitability

Test Pits 13-27:

Initial System: Alternative Treatment Technology, Conventional Sand Filter, or Recirculating Gravel Filter – Treatment Standard 1 for approvable test pits

Repair System: Alternative Treatment Technology, Conventional Sand Filter, or Recirculating Gravel Filter – Treatment Standard 1 for approvable test pits

Peak Design Flow: 5,000 gallons per day

Drainfield Sizing: 45 lf/150gpd.

Drainfield: Initial 1,500 linear feet, future repair 1,500 linear feet A stakeout of the initial and future repair drainfields is required.

Trench Depths: 18"-20" for equal distribution with hydrosplitter

Distribution Method: equal, with a hydrosplitter.

Minimum Trench Spacing: 10' center to center.

System Design Considerations

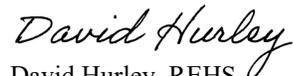
The minimum total septic tank volume must be twice the projected peak daily sewage flow. Please note: the system design must follow Large System Design Requirements in OAR 340-071-0520 and this includes a written assessment of the impact of the proposed system on the quality of public waters and public health, prepared by a registered geologist, or a certified engineering geologist qualified as a hydrogeologist. *The assessment should be submitted prior to making application so that DEQ can review the impact assessment and make any needed recommendations on whether additional treatment is needed other than indicated in this site evaluation report.*

The system designer must consider waste strength and design the septic system to meet the influent and effluent limitations established in a Water Pollution Control Facility permit. Please refer to the attached field worksheets and the preliminary site plan dated 6/10/2025, noting the approved drainfield areas. Please note cutting, filling, covering the area with asphalt or placement of a well within 100' of the approved area may invalidate this approval.

If you disagree with the decision of this report, you may apply for a site evaluation report review. The application for a site evaluation report review must be submitted to DEQ in writing within 60 days after the site evaluation report issued date and must include the application fees in OAR 340-071-0140. A senior DEQ staff person will be assigned the site evaluation report review application.

If you have any questions regarding this letter, or if I can be of any assistance, please contact me by phone at (541) 776-6130, or email at David.Hurley@deq.oregon.gov

Sincerely,



David Hurley, REHS
Natural Resource Specialist

Memorandum
Aug. 28, 2025
Page 1 of 2

Oregon Department of Environmental Quality Memorandum

Date: August 28, 2025.
To: David Hurley, Regional On-site Wastewater Specialist.
From: David Cole, RG, Senior Hydrogeologist.
Subject: Groundwater Impact Assessment, East Tower Road, Morrow County.

BACKGROUND AND SUMMARY

I have completed a review of the LOSS Impact Assessment Report that The Wallace Group prepared for Ms. Vicki Chu, P.E. The report is dated June 17, 2025. Individual Wallace Group contributors include Kiefer Kuhn (Staff Geologist, RG#2849), and Shane Cochran (Senior Geologist, RG# 2446).

Amazon plans to build a three hall data center west of Tower Road, south of U.S. Interstate 84 in Morrow County. To process the anticipated on-site septage that the facility will generate, the system includes a design daily maximum flow rate of 5,000 gallons per day.

On April 16, 2025, DEQ conducted a site evaluation to describe the forty-one test pits provided and determine the suitability for an onsite wastewater treatment and disposal system. The evaluation noted areas of standing water in 15 of the test pits. However, the evaluator found the remaining test pits (13 – 27) approvable.

The authors based the report's scope on the Washington State Department of Health's Level 1 Nitrate Balance Instructions for Large On-site Sewage Systems (LOSS). To complete the nitrate equation the consultant used the following default values:

- total nitrogen concentration in wastewater,
- nitrate concentration in precipitation,
- soil denitrification,
- hydraulic gradient, and
- aquifer thickness.

The rest of the model input data came from the following localized values:

- drain field area,
- distance from drain field to property boundary,
- aquifer width,
- saturated hydraulic conductivity,
- recharge, and
- nitrate concentration in upgradient groundwater.

The consultant stated that "A site visit and/or site reconnaissance were not part of this report scope". The National Resources Conservation Service (NRCS) Web Soil Survey data that the consultant cited shows that soils in the local area consist of Koehler loamy fine sand. The consultant also searched the Oregon Water Resources Department's well log database and found three irrigation wells and one domestic water well within a one-mile radius of the site. The wells have completed depths ranging from 320 to 948 feet below ground surface. The surficial sediments in and around the site do not support a surficial, unconfined aquifer. Any wells

Memorandum
Aug. 28, 2025
Page 2 of 2

completed in the area would have to tap the deep basalt aquifer.

Based on the conservative model default values and the site-specific values, the model predicts a nitrate concentration of 10.05 mg/L at the Point of Compliance, and 9.40 mg/L at the Alternate Point of Compliance. This protects groundwater regarding nitrate, which has an EPA Maximum Contaminate Level of 10 mg/L.

APPROVAL & RECOMMENDATION

I approve the report as written and recommend proceeding with processing the permit application.

PLAN APPROVED

Date 6/11/25 Signed

[Handwritten signature]

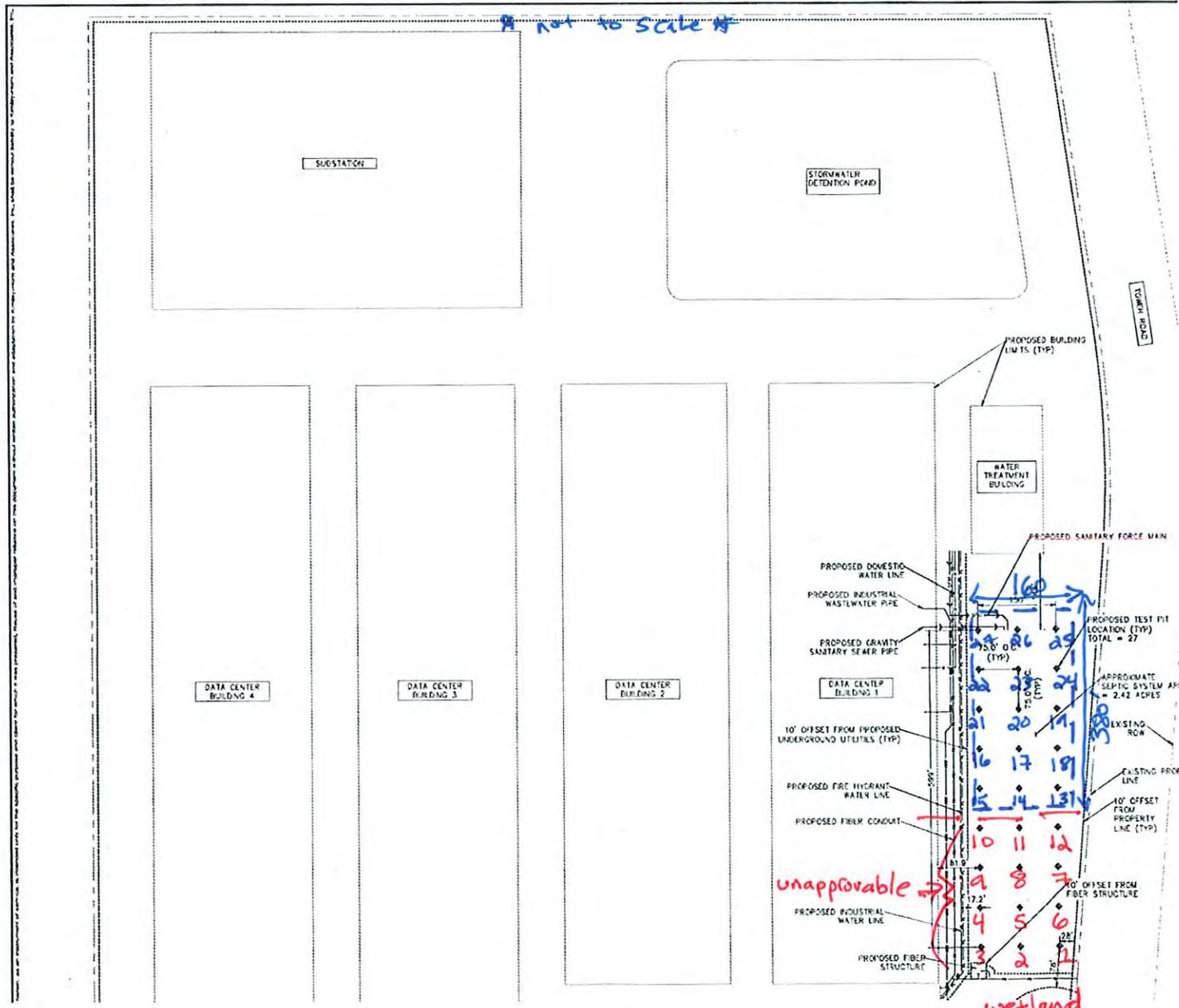
Test Pits 13-27 are approvable

- Treatment standard 1 w/ standard drainfield -

* initial * Replacement Area

* DF must be staked out *

* not to scale *



Fraser, Bennett

Subject: FW [EXTERNAL] Intent to Serve: Tower Road East- External Use

From: Cole Bode <Cole.Bode@umatillaelectric.com>

Sent: Wednesday, May 7, 2025 6:47 AM

To: Tacchini, Jason <jastacc@amazon.com>

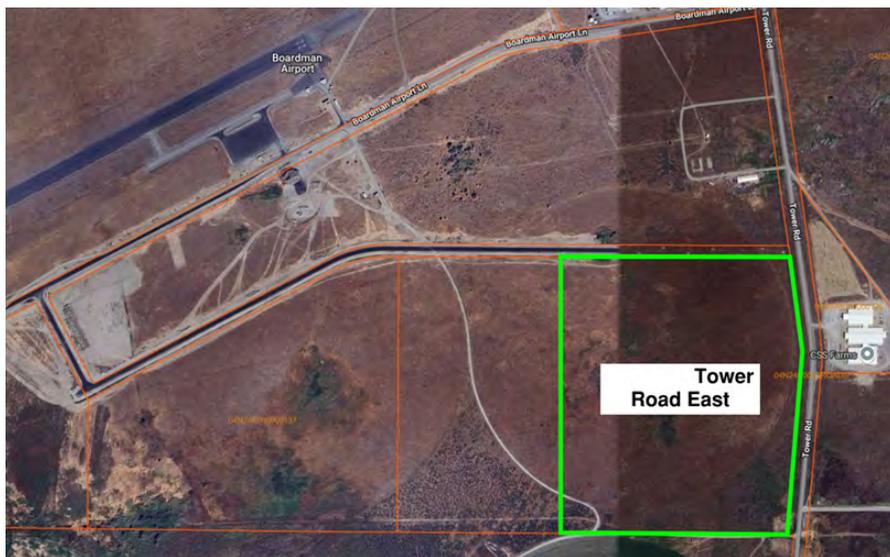
Cc: Goulet, Steven <sdgoulet@amazon.com>; Fraser, Bennett <fraserbe@amazon.com>; Metcalfe, Travis <tjmets@amazon.com>; Landon Jones <landon.jones@umatillaelectric.com>

Subject: [EXTERNAL] Intent to Serve: Tower Road East

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you can confirm the sender and know the content is safe.

Jason,

Umatilla Electric Cooperative, an Oregon Electric Cooperative organized under ORS Chapter 62, intends to construct electrical facilities, and serve electrical load to the proposed Amazon Data Services (ADS) datacenter campus, Tower Road East, to be located in Umatilla Electric Cooperative's service territory near Tower Road in Boardman, Oregon.



Cole Bode, PE

Vice President, Engineering

PH:541-561-3872

Umatilla Electric Cooperative



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Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, Oregon 97070

Telephone number: (503) 570-0800 Fax number: (503) 570-0855

MEMORANDUM

Date: January 28, 2026

To: Omar Cardenas, Sr. Real Estate Development Manager, AWS

From: Craig Tumer, PWS

**Re: Response to Morrow County Zoning Ordinance - Section 3.092 Airport Safety and
 Compatibility Overlay Zone, ASC Regarding Bird Attractants
 PHS #8306**

AWS proposes to construct the East Tower Road Data Center just south of the Boardman Airport in Morrow County, Oregon. The proposed development plan includes construction of an approximately eight-acre stormwater evaporation pond and two, two-acre non-contact cooling water evaporation ponds that have the potential to attract birds and create a safety hazard for aircraft using the airport, if not mitigated. Morrow County Zoning Ordinance Article 3 Section 3.092(G)(3) states the following regarding Land Use Compatibility Requirements relative to the Boardman Airport. “The uses shall not create a bird attractant. If the airport sponsor determines that there is a potential for attracting birds, the application shall include a study demonstrating that any hazard to use of the airport is mitigated.” This memorandum discusses the measures incorporated into the project design to reduce the attractiveness of the pond to birds and mitigate the potential safety hazards.

Existing Site Conditions and Proposed Development Plan

The project site is located on the west side of Tower Road, approximately 0.38 mile south of Boardman Airport Lane and on the south side of Airport Road B in Morrow County, Oregon. The project site consists of a single tax lot (Morrow County Tax Map 04N24E Tax Lot 136) totaling approximately 98.01 acres. Much of the site was used as agricultural crop land until at least 2016; however, the site has been fallow and has not been cropped since approximately that time, as indicated by historic aerial imagery available from Google Earth. Review of available online imagery and experience in the area indicates that the portion of the site that was previously cropped is vegetated largely with non-native grasses. A narrow band of vegetation containing a mix of native and non-native grasses and forbs and small shrubs such as rubber rabbitbrush (*Ericameria nauseosa*) is present outside the area that was formerly affected by the center-pivot irrigation system.

Memo re: Morrow County Zoning Ordinance - Section 3.092 Airport Safety and Compatibility Overlay Zone, ASC Regarding Bird Attractants

Pacific Habitat Services, Inc./ PHS #

January 28, 2026

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Development of the proposed East Tower Road Data Center project would result in the construction of four data center buildings and associated infrastructure. A proposed electrical substation and an approximately eight-acre stormwater evaporation pond would be constructed to the north of the proposed data center buildings, and two approximately two-acre non-contact cooling water evaporation ponds would be constructed south of the proposed buildings near the southeastern corner of the site. The stormwater evaporation pond would contain surface water up to approximately four to nine feet deep between the months of November and August. The two cooling water evaporation ponds would contain surface water up to approximately three feet deep, during the warmer months (April through October) when water is needed to cool the facility. The proposed stormwater evaporation pond and cooling-water evaporation ponds will be designed with 4:1 slopes on all sides. The ponds and side slopes will be lined with high-density polyethylene geomembrane liners. The entire area surrounding the ponds, including pond edges, side slopes, and adjacent areas, will not have any landscape plantings or be vegetated in any way.

Bird Populations in Project Vicinity and Potential for Bird-Related Safety Hazards at Project Site

In an Advisory Circular (AC) dated February 21, 2020 (AC No: 150/5200-33C), the Federal Aviation Administration (FAA) provides non-mandatory guidance on land uses that have the potential to attract hazardous wildlife on or near public-use airports. The AC identifies land uses that can provide substantial attractions to wildlife the FAA considers “hazardous wildlife,” recommends minimum separation distances between those land uses and airport facilities, and provides guidance on the use of measures to mitigate wildlife strike hazards. The AC identifies waste disposal operations, water management facilities (including stormwater management facilities), wetlands, dredge spoil containment areas, agricultural activities, aquaculture, golf courses, and landscaping among the land uses that potentially attract hazardous wildlife.

The stormwater evaporation pond and cooling water evaporation ponds included in the proposed project design could attract a variety of bird species that are known to occur in the project vicinity. The Umatilla National Wildlife Refuge (NWR), which includes over 23,500 acres of natural and managed wetlands as well as upland habitats extending along the Columbia River from approximately five miles west of the City of Boardman upstream to the City of Irrigon, provides habitat for large numbers of waterbirds, particularly in the winter and during spring and fall migration (i.e., late September through April, with lesser numbers of migrants continuing into May). Waterfowl such as Canada geese (*Branta canadensis*), cackling geese, (*Branta hutchinsii*), snow geese (*Anser caerulescens*), greater white-fronted geese (*Anser albifrons*), and mallards (*Anas platyrhynchos*) use habitats within the refuge, and many of these birds disperse to farmland in the region, including farm fields in the vicinity of the project site, where they forage in agricultural fields and rest on nearby ponds and reservoirs. Review of species maps available at www.eBird.org shows observations of flocks of these species in the agricultural fields and nearby waterbodies south and southwest of the Boardman Airport, with some observations in the agricultural fields along Tower Road south of the project site.

Other birds known to use the agricultural fields and nearby waterbodies in the project vicinity include a variety of migrant shorebirds, red-winged blackbirds (*Agelaius phoeniceus*), Brewer’s blackbirds (*Euphagus cyanocephalus*), yellow-headed blackbird (*Xanthocephalus xanthocephalus*), and several species of swallows. Shorebirds are attracted to waterbodies where they feed on aquatic invertebrates along the shoreline and in shallow water. Flocks of shorebirds are most likely to occur in the project vicinity during fall migration, primarily from mid-July through early October. Blackbirds are attracted to waterbodies where they nest and roost in dense vegetation, often near the edges of waterbodies. Blackbirds are present in the project vicinity throughout the year but are likely to occur in large flocks

Memo re: Morrow County Zoning Ordinance - Section 3.092 Airport Safety and Compatibility Overlay Zone, ASC Regarding Bird Attractants

Pacific Habitat Services, Inc./ PHS #

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primarily during the fall and winter months. Swallows are attracted to waterbodies where they forage for flying insects over open areas, and flocks of swallows occur in flocks around waterbodies primarily during spring and fall migration (March through May and August through October).

Related to the FAA's AC, Morrow County Zoning Ordinance Article 3, Section 3.092.G.(3) states that land uses in the Airport Safety and Compatibility Overlay Zone, "...shall not create a bird attractant. If the airport sponsor determines that there is a potential for attracting birds, the application shall include a study demonstrating that any hazard to use of the airport is mitigated." Section 3.092.G.(7) states that land uses in the Airport Safety and Compatibility Overlay Zone, "...shall not create a new or expanded water impoundment within 5,000 feet of the edge or end of a runway larger than one-quarter acre in size unless necessary for airport operations or approved in writing by the airport sponsor, the Department of Aviation, and the FAA."

The proposed stormwater evaporation pond will be constructed between 3,620 feet and 4,550 feet from the airport runway, and the proposed cooling water evaporation ponds will be constructed between approximately 4,700 feet and 5,280 feet from the runway. All ponds are outside of the approach corridor. As discussed above, the stormwater evaporation pond is expected to contain surface water from November through August. Because the stormwater evaporation pond will provide a large area of surface water (approximately eight acres) during the time of year when the largest numbers of waterfowl use the nearby agricultural fields, the stormwater evaporation pond may attract flocks of waterfowl as roosting habitat. The stormwater evaporation pond will also contain surface water during the time of year when it could potentially attract flocks of blackbirds, migrating shorebirds, and migrating swallows. The cooling water evaporation ponds are expected to contain surface water from April through October. The cooling water evaporation ponds will contain surface water during the time of year when waterfowl are present in the project vicinity; however, these ponds are expected to be less attractive to waterfowl for the following reasons:

- The cooling water evaporation ponds will not contain water during the time of year when flocking waterfowl would present the most risk to airport safety. The largest numbers of waterfowl are present in the project vicinity primarily in the winter and during spring and fall migration (primarily October through April). The cooling water evaporation ponds would not have water and would not attract waterfowl during that time period.
- Small numbers of some waterfowl species remain in the project vicinity April through October (the period in which the cooling water evaporation ponds are expected to contain water) to nest, but nesting/resident waterfowl would not be attracted to the cooling ponds because the cooling ponds will not provide vegetative cover for nesting or food resources, as described below.
- Unlike most birds, waterfowl molt all of their flight feathers and become flightless for much of June and July. During that period, waterfowl congregate in areas that provide water for roosting and food resources. Although the cooling ponds will provide water for roosting during their vulnerable flightless period, the ponds will not provide food resources for waterfowl (and the waterfowl will be unable to fly to other areas to forage); therefore, waterfowl would not be expected to be attracted to the cooling water evaporation ponds.

As with the stormwater evaporation pond, the cooling water evaporation ponds could potentially attract other birds, including shorebirds, blackbirds, and swallows, which could be safety hazards due to their proximity to the airport if not mitigated. The following paragraphs describe measures incorporated into the project design that mitigate hazards to use of the airport and demonstrate conformance with the Morrow County Zoning Ordinance sections referenced above.

**Memo re: Morrow County Zoning Ordinance - Section 3.092 Airport Safety and Compatibility Overlay
Zone, ASC Regarding Bird Attractants**

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Proposed Measures to Mitigate Bird-Related Safety Hazards

Because of the potential for waterbodies, including constructed stormwater ponds, to attract birds that can present potential safety hazards to aircraft and because the proposed project includes the construction of a stormwater evaporation pond and two cooling water evaporation ponds within 5,000 feet of the edge of an airport runway, the proposed project has been designed to include measures to mitigate the potential safety hazards and ensure compliance with Morrow County Zoning Ordinance Article 3 Section 3.092.

One of FAA's AC No: 150/5200-33C's recommendations is that stormwater facilities located on or near airport operation areas be designed and maintained for a maximum 48-hour detention period and remain dry between storms. The proposed stormwater evaporation pond is designed to contain surface water up to approximately four to nine feet deep between the months of November and April, and the two cooling water evaporation ponds would contain surface water up to approximately three feet deep between the months of April and August. Due to high bedrock throughout the project area, it is not possible to design the proposed ponds to infiltrate the water they collect; therefore, the pond design must rely on evaporation to remove water from the ponds. Furthermore, the water discharged to the non-contact cooling ponds is associated with the data center cooling system, and evaporation is required to empty the ponds prior to the winter months. For these reasons, the ponds will contain surface water for extended periods and cannot be designed to remain dry. Because of the high bedrock, the ponds cannot be located underground, and because of the reliance on evaporation to empty the ponds, the ponds cannot be covered by floating covers, as recommended by the AC, as the floating covers would impede the evaporation functions. Therefore, the proposed project has been designed to minimize detention times to the extent practicable and incorporate other measures recommended by the AC, which are outlined below, that mitigate potential bird-related safety hazards.

Vegetation Management

Vegetation along the shores of waterbodies and adjacent areas and submerged vegetation within waterbodies provide foraging, nesting and/or roosting habitat for waterfowl as well as other bird and wildlife species. For this reason, another of AC No: 150/5200-33C's recommendations is that all vegetation that could provide food or cover for hazardous wildlife should be eliminated from within and around waterbodies.

Areas adjacent to the ponds will have a gravel or paved surface and will not be planted in lawn grass or contain other vegetation, and there will be a 20-foot-wide gravel access road around the perimeter of the ponds. Additionally, the stormwater evaporation pond, the cooling water evaporation ponds, and their side slopes will be lined with high-density polyethylene geomembrane liners, as shown on project plans provided as part of the land use review. This liner will prevent the establishment of any vegetation that might attract birds or other wildlife to the ponds or adjacent areas. The absence of vegetation within and adjacent to the ponds will also minimize the accumulation of organic matter, which could provide habitat for insects and other invertebrates that could serve as additional food resources for birds. The absence of vegetative and invertebrate food resources will make the ponds less attractive to waterfowl and other birds, including shorebirds, blackbirds, and swallows.

Physical Barriers

For situations where stormwater facilities containing surface water are necessary for project design, AC No: 150/5200-33C recommends the use of physical barriers to prevent birds from accessing the waterbodies. As discussed above, barriers such as floating covers that would provide a solid cover over

**Memo re: Morrow County Zoning Ordinance - Section 3.092 Airport Safety and Compatibility Overlay
Zone, ASC Regarding Bird Attractants**

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the water surface cannot be used for the proposed project because of the need for water evaporation as the primary function of the water management. For storm pond, evaporation is needed due to high bedrock and no potential to infiltrate. Therefore, the applicant proposes covering the proposed stormwater evaporation pond with netting to prevent birds from accessing the water and ensuring that the pond does not attract birds. The netting will be suspended over the water with supports to allow for maintenance or other necessary activities within the ponds, and the netting will have a mesh size of less than two inches to avoid entangling and killing birds, as recommended by the AC.

The cooling water evaporation ponds are not anticipated to be attractive to waterfowl because of the reasons discussed above. Also, because the cooling water evaporation ponds will not have vegetation or other food resources, they are not anticipated to be attractive to flocks of other birds such as shorebirds, blackbirds, or swallows. For these reasons, additional mitigation measures are not recommended for these facilities, and netting is not proposed.

Summary

The proposed project includes the construction of a stormwater evaporation pond and two cooling water evaporation ponds within 5,000 feet of the southern edge of the Boardman Airport runway, but outside the approach corridor. Because of shallow bedrock and an inability to infiltrate the water collected in the ponds, it is necessary to rely on evaporation to empty the ponds, and these ponds will contain surface water for portions of the year. Because they will contain surface water, these ponds could attract waterfowl and other birds. Morrow County Zoning Ordinance Article 3, Section 3.092.G.(3) requires that land uses with the potential to attract birds within the Airport Safety and Compatibility Overlay must demonstrate that potential hazards have been mitigated and that waterbodies larger than one-quarter acre in size, within 5,000 feet of the edge or end of a runway, and not necessary for airport operations must be approved by the airport sponsor, the Department of Aviation, and the FAA. As described in this memorandum, all three ponds include landscaping and vegetation management design elements, and the stormwater pond also relies on the use of physical barriers to dissuade bird use of the ponds. These mitigation measures ensure the proposed project follows the guidelines recommended in the FAA's AC No: 150/5200-33C and conforms with Morrow County Zoning Ordinance Article 3, Section 3.092.G.

Based on my professional experience and review of the project proposal and applicable regulatory materials, including the Morrow County Zoning Ordinance and the FAA Advisory Circular, it is my best professional judgement that the proposed mitigation measures incorporated into the proposed stormwater and cooling ponds, as described above, will serve to mitigate the potential for bird attractant hazards to aviation operations associated with the proposed project. My professional qualifications are included in the attached resume.

Craig E. Tumer

Senior Biologist



Years of experience in field: 36

Education: B.S. Biology May 1989
College of William and Mary, Williamsburg, Virginia

Registrations/Certifications: Professional Wetland Scientist (#1290)
Professional Wetland Delineator (#0025)
ODOT Certified Biologist for Endangered Species

Professional Experience:

Craig has over thirty-eight years of experience providing environmental consulting services for a wide range of projects in both the public and private sectors. Craig has expertise conducting wetland delineations; habitat assessments and surveys for threatened and endangered birds, reptiles and plants; and environmental resource inventories.

He has extensive experience preparing federal and state permit applications and coordinating with federal and state regulatory agencies. Experience working with a diverse clientele to meet the needs of their land development, utility, and transportation improvement projects. He has highly effective writing style and report review abilities. He has a strong desire to balance economic growth with conservation needs and the responsible use of environmental resources to the benefit of all stakeholders

Representative Experience and Qualifications:

- Conducted habitat evaluations and searches for federally listed and state-listed threatened and endangered birds, reptiles, and plants in Oregon, the Mid-Atlantic, New England, and Southeastern U.S.
- Performed habitat assessments and prepared ESA consultation documents related to streaked horned larks at the Eugene, Oregon Airport.
- Addressed Port of Portland's wildlife hazard concerns as part of the design and permitting of nearby wetland mitigation sites.
- Reviewed wildlife and wetland sections of wind energy facility site certificate applications and associated habitat mitigation plans submitted to the Oregon Department of Energy and provided comments regarding completeness and additional information needs to the Department.
- Conducted surveys for nesting birds to address Migratory Bird Treaty Act issues for projects in Multnomah and Clackamas Counties.
- Performed bird surveys for various sites across throughout Oregon and in the eastern U.S.
- Conducted wetland delineations throughout the US, including the Pacific Northwest, Alaska, and the East Coast
- Conducted environmental resources inventories to map important wildlife habitats, potential endangered and threatened species' habitats, existing wetlands, plant communities, and invasive plant species.

February 10, 2026

Morrow County Planning Department
Attn: Tamra Mabbott and Clint Shoemake
215 NE Main Avenue
PO Box 40
Irrigon, OR 97844
tmabbott@morrowcountyor.gov
cshoemake@morrowcountyor.gov

VIA EMAIL

Re: Tower Road East Data Center (LUD-N-089-25)—Airport Sponsor Approval of Water Impoundments per MCZO 3.092(G)(7)

Dear Mrs. Mabbott and Mr. Shoemake:

The Port of Morrow, as airport sponsor for the Boardman Airport, has reviewed the Tower Road East Data Center land use application and the accompanying Bird Hazard Mitigation Study prepared by Pacific Habitat Services, Inc., authored by Craig Tumer, PWS. The Study addresses the proposed approximately 8-acre stormwater evaporation pond and two approximately 2-acre non-contact cooling water evaporation ponds that will be located within 5,000 feet of the Boardman Airport runway.

After careful review of the Bird Hazard Mitigation Study, the Port of Morrow agrees with the professional recommendations and conclusions of Mr. Tumer and concurs that the proposed mitigation measures—including vegetation management, high-density polyethylene geomembrane liners, and netting over the stormwater evaporation pond to prevent bird access—adequately addresses the potential for bird attractant hazards to aviation operations at the Boardman Airport.

Sincerely,



Lisa Mittelsdorf
Executive Director
Port of Morrow
Lisam@portofmorrow.com

PIKE Brandon

From: PIKE Brandon
Sent: Thursday, February 12, 2026 11:42 AM
To: Cardenas, Omar; Jacob Cain; Jeff Wilson; Wingo, Jared L (FAA)
Cc: Tacchini, Jason
Subject: RE: Morrow County-East Tower Road Bird Mitigation Plan-Boardman Airport

Hello Omar,

Thank you for contacting ODAV about this. We've reviewed your proposal and determined the following:

- Pursuant to Oregon Revised Statutes (ORS) 836.623, the proposal appears to meet the State-level requirements for water impoundments near public-use airports. While the proposal is within 5,000 feet of the runway for Boardman Airport, it *does not* fall under the approach corridor. The applicant and local jurisdiction are advised to review [ORS 836.623](#) and contact ODAV with any questions.
- The applicant is advised to coordinate with the airport sponsor, Morrow County, and the FAA to ensure compliance with their standards.

Let me know if you have further questions or concerns.

Thank you,

BRANDON PIKE

OREGON DEPARTMENT OF AVIATION (ODAV)
 AVIATION PLANNER



PHONE 971-372-1339

EMAIL brandon.pike@odav.oregon.gov

3040 25TH STREET SE, SALEM, OR 97302

WWW.OREGON.GOV/AVIATION

Alternative Contacts:

COAR Grants: Grants@ODAV.Oregon.Gov

Procurement / Contracts: Contracts@ODAV.Oregon.Gov

Pavement (PEP/PMP): Pavement@ODAV.Oregon.Gov

Land Use / Tall Structures: LandUse@ODAV.Oregon.Gov

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From: Cardenas, Omar <cardeom@amazon.com>
Sent: Thursday, January 29, 2026 3:57 PM
To: Jacob Cain <jacobc@portofmorrow.com>; Jeff Wilson <jeff.wilson@portofmorrow.com>; Wingo, Jared L (FAA) <jared.l.wingo@faa.gov>; PIKE Brandon <Brandon.PIKE@odav.oregon.gov>
Cc: Tacchini, Jason <jastacc@amazon.com>
Subject: Morrow County-East Tower Road Bird Mitigation Plan-Boardman Airport

You don't often get email from cardeom@amazon.com. [Learn why this is important](#)

This message was sent from outside the organization. Treat attachments, links and requests with caution. Be conscious of the information you share if you respond.

Mr. Cain, Mr. Wilson, Mr. Wingo, and Mr. Pike:

Good day to you all, I trust this email finds you well.

I am writing in reference to the AWS-East Tower Road Data Center Project located just southeast of Boardman Airport, in Morrow County, OR.

Attached you will find 3 documents:

- Cover letter
- Bird Mitigation Report
- Wildlife consultant's resume

We have previously contacted each of you in reference to this project and our desire to proactively address the water impoundment and bird hazard mitigation for this project.

If we could please ask each of you and your respective agencies to review the attached report and letter and confirm that our plan is sufficient and addresses the corresponding requirements for this development.

We are currently undergoing the entitlement process for this project, and will have a public hearing on **Tuesday, February 24th, 2026**. It would be greatly appreciated if we could have your responses prior to that meeting.

We are happy to provide additional information if needed or arrange a call if desired.

I thank you in advance for your time and attention to this time-sensitive item.

My contact info is below should you wish to reach out to me directly.

Sincerely,

-Omar



Omar Cardenas

Sr. Real Estate Development Manager

Data Center Supply Solutions

cardeom@amazon.com

C:732-921-7070

Van Acker, Leif

From: Peacher, Kimberly N CIV USN NAVFAC NW SVD WA (USA)
<kimberly.n.peacher.civ@us.navy.mil>
Sent: Friday, November 21, 2025 9:40 AM
To: Van Acker, Leif
Cc: Peterson, Christopher
Subject: RE: Tower Road Data Center project

Categories: External

Hello Leif,

Thank you.

Let me know if you need anything else on my end.

V/R,

Kimberly Peacher
Community Planning & Liaison Officer
Northwest Training Range Complex
(360) 930-4085
NIPR: Kimberly.peacher@navy.mil
SIPR: Kimberly.peacher@navy.smil.mil

From: Van Acker, Leif <Leif.VanAcker@kimley-horn.com>
Sent: Thursday, November 20, 2025 2:58 PM
To: Peacher, Kimberly N CIV USN NAVFAC NW SVD WA (USA) <kimberly.n.peacher.civ@us.navy.mil>
Cc: Peterson, Christopher <Christopher.Peterson@kimley-horn.com>
Subject: [Non-DoD Source] RE: Tower Road Data Center project

Thanks Kimberly – yes, that style of fixture is intended throughout the site, whether it be on light poles or building mounted.

Thanks,

Leif Van Acker, P.E.
Kimley-Horn | One SW Columbia Street, Suite 650, Portland, OR 97204
Direct: (503) 388-6392 | Mobile: (571) 535-1053

From: Peacher, Kimberly N CIV USN NAVFAC NW SVD WA (USA) <kimberly.n.peacher.civ@us.navy.mil>
Sent: Thursday, November 20, 2025 12:01 PM
To: Van Acker, Leif <Leif.VanAcker@kimley-horn.com>
Cc: Peterson, Christopher <Christopher.Peterson@kimley-horn.com>
Subject: RE: Tower Road Data Center project

Hello Leif,

Thank you for reaching out.

Still digging out of emails, but I did have the team review this proposal.

Based on the proposal, we don't anticipate any concerns. The lighting looks to be directed down and shaded. To clarify will that 'design' apply to all external lighting or just the poles?

Thank you.

V/R,

Kimberly Peacher
Community Planning & Liaison Officer
Northwest Training Range Complex
(360) 930-4085
NIPR: Kimberly.peacher@navy.mil
SIPR: Kimberly.peacher@navy.smil.mil

From: Van Acker, Leif <Leif.VanAcker@kimley-horn.com>
Sent: Wednesday, November 19, 2025 11:56 AM
To: Peacher, Kimberly N CIV USN NAVFAC NW SVD WA (USA) <kimberly.n.peacher.civ@us.navy.mil>
Cc: Peterson, Christopher <Christopher.Peterson@kimley-horn.com>
Subject: [Non-DoD Source] RE: Tower Road Data Center project

Good morning Kimberly,

I understand you all were furloughed over the last few weeks. I wanted to follow up on the below request to put it at the top of your inbox.

Let me know if there is anything else you need to begin your review and what your current timing is looking like for applications.

Thanks,

Leif Van Acker, P.E.
Kimley-Horn | One SW Columbia Street, Suite 650, Portland, OR 97204
Direct: (503) 388-6392 | Mobile: (571) 535-1053

From: Van Acker, Leif
Sent: Monday, November 3, 2025 4:52 PM
To: 'kimberly.n.peacher.civ@us.navy.mil' <kimberly.n.peacher.civ@us.navy.mil>
Cc: Peterson, Christopher <Christopher.Peterson@kimley-horn.com>
Subject: Tower Road Data Center project

Good morning Kimberly,

I was forwarded your information by Morrow County who indicated we should reach out regarding our upcoming land use application for a data center campus near Boardman Airport along Tower Road. I have attached a site plan exhibit showing where the property is located and which structures are being

proposed. This also identifies light pole locations and heights for your knowledge. I have also attached the light fixture cutsheet which shows the fixture is downward shielding.

Let me know if there is anything else you need to review on this request.'

Thanks,

Leif Van Acker, P.E.

Kimley-Horn | One SW Columbia Street, Suite 650, Portland, OR 97204

Direct: (503) 388-6392 | Mobile: (571) 535-1053

Morrow County Planning Department file number LUD N 089 25

I am writing to provide testimony and ask for this to be reviewed thoroughly by the Planning Commission. The Port of Morrow as the airport sponsor, OAR 660-013-0020 and the County must recognize that the airport is a significant resource. Land use that compromises aviation safety rises to a level of scrutiny beyond a Type II decision. The Port of Morrow as operator/sponsor has obligations to air safety. I have concerns as a landowner in the flight path and for the safety of air passengers and pilots. This application has the potential to attract hazardous wildlife species as outlined in 150-5200-33C (attached).

MCZO 3.076 A, Airport safety and compatibility uses permitted within the AI zone that are also located within the airport safety and compatibility overlay zone shall comply with the applicable standards in the airport safety and compatibility overlay zone.

The application violates the regulations in Section 3.092 airport safety and compatibility overlay zone. It also violates the purpose of the zone; the purpose of this overlay zone is to protect and support the continued operation of the Boardman public use airport by establishing compatibility and safety standards and to reduce potential safety hazards for people living working or recreating near the airport.

The map that was provided in the application shows airport hazards that are within the direct airport impact area, which is 5000 feet.

Morrow county 3.092

F, Procedures and application for land use or limited land use approval on property within this overlay zone shall provide the following information in addition to any other required information

F.1 Procedures require; A map or drawing showing the location of the property in relation to the airport's imaginary surfaces. Application fails to provide a map.

F. 2 Procedures require elevation profiles and a site plan drawn to scale including the location and height of all existing and proposed structures measured from the existing grade. Application fails to provide such a map.

G. Land use compatibility requirements any land use allowed in the underlying zone may be permitted in the overlying zone subject to the following standards

G1. The application fails to comply with the height standards in section E. Several structures provided in the map show that they will exceed the 35-foot limit.

G2. G2 states that the use shall not include a place of public assembly. The application states that there will be 35 workers on 24-hour shifts seven days a week. Parking lot design indicates that there may be up to 200 people gathered at this facility, therefore it would be considered a place of public assembly.

G3. G3 states that the usage shall not create a bird attractant. It would be easy to suggest that the sponsor would find that there is potential for attracting birds therefore a study demonstrates that any hazard of the use of the airport will be mitigated. This has not been provided by the sponsor. FAA finds that wastewater and stormwater ponds create wildlife hazards at airports.

G 4. Nothing indicates in the application that lighting will not cause airport hazards in the form of glare or imitations of airport lighting. The application fails to provide this information

G5 G5 states that the use shall not be a source of smoke dust or steam, data center water that will be added to the non-contact ponds will be at temperatures that may create steam Would be hazardous to airport functions. Data centers also test diesel generators routinely which will cause smoke which could also be a hazard to air traffic. The application fails to address this issue.

G6 States that the use shall not cause electrical interference with the airport operations or in the case of a proposed or expanded communications or transmission facilities the department of aviation and the FAA shall approve the facility. The map states that there will be substation and transmission lines to my knowledge the FAA has not approved them therefore G6 has not been satisfied.

G7 states that the use shall not create a new or expanded water impoundment within 5000 feet of the edge or end of the runway larger than 1/4 acre in size unless necessary for airport operations or approved in writing by the airport sponsor the department of aviation and the FAA, to my knowledge this application does not provide any of the above.

I also have grave concerns that urban scale uses that generate 10 to 15 thousand gallons of septic waste should not be in rural areas that are currently in a groundwater management area, (LUBGMA) for nitrate contamination. This single data center will generate 2 TIMES more septic waste than the whole community of West Glen.

Other concerns are where the contact water is going? What chemicals are in the non-contact water that will be evaporating into the air.

Kelly Doherty



U.S. Department
of Transportation
**Federal Aviation
Administration**

Advisory Circular

Subject: Hazardous Wildlife Attractants on or
near Airports

Date: 02/21/2020

AC No: 150/5200-33C

Initiated By: AAS-300

Change:

1 **Purpose.**

This Advisory Circular (AC) provides guidance on certain land uses that have the potential to attract hazardous wildlife on or near public-use airports. It also discusses airport development projects (including airport construction, expansion, and renovation) affecting aircraft movement near hazardous wildlife attractants. Appendix 1 provides definitions of terms used in this AC.

2 **Cancellation.**

This AC cancels AC 150/5200-33B, *Hazardous Wildlife Attractants on or near Airports*, dated August 28, 2007.

3 **Application.**

The Federal Aviation Administration recommends the guidance in this AC for land uses that have the potential to attract hazardous wildlife on or near public-use airports. This AC does not constitute a regulation, is not mandatory, and is not legally binding in its own right. It will not be relied upon as a separate basis by the FAA for affirmative enforcement action or other administrative penalty. Conformity with this AC is voluntary, and nonconformity will not affect rights and obligations under existing statutes and regulations, except as follows:

1. Airports that hold Airport Operating Certificates issued under Title 14, Code of Federal Regulations (CFR), Part 139, Certification of Airports, Subpart D, may use the standards, practices and recommendations contained in this AC as one, but not the only, acceptable means of compliance with the wildlife hazard management requirements of Part 139.
2. The FAA recommends the guidance in this AC for airports that receive funding under Federal grant assistance programs, including the Airport Improvement Program. See Grant Assurance #34.

2/21/2020

3. The FAA recommends the guidance in this AC for projects funded by the Passenger Facility Charge program. See PFC Assurance #9.
4. The FAA recommends the guidance in this AC for land-use planners and developers of projects, facilities, and activities on or near airports.

4 **Principal Changes.**

Changes are marked with vertical bars in the margin. Change in this AC include:

1. Clarification by the FAA that non-certificated airports are recommended to conduct a Wildlife Hazard Assessment (Assessment) or a Wildlife Hazard Site Visit (Site Visit);
2. Table 1, Ranking of Hazardous Species, has been moved to Advisory Circular 150/5200-32, *Reporting Wildlife Aircraft Strikes* (5/31/2013);
3. Consolidation and reorganization of discussion on land uses of concern; and updated procedures for evaluation and mitigation. Discussion addresses off-airport hazardous wildlife attractants, followed by discussion of on-airport attractants. It also clarifies language regarding the applicability of the AC.

5 **Background.**

1. Information about the risks posed to aircraft by certain wildlife species has increased a great deal in recent years. Improved reporting, studies, documentation, and statistics clearly show that aircraft collisions with birds and other wildlife are a serious economic and public safety problem. While many species of wildlife can pose a risk¹ to aircraft safety, they are not equally hazardous². These hazard rankings can help focus hazardous wildlife management efforts on those species or groups that represent the greatest risk to safe air and ground operations in the airport environment. Used in conjunction with a site-specific Assessment that will determine the relative abundance and use patterns of wildlife species, these rankings combined with a systematic risk analysis can help airport operators better understand the general threat level (and consequences) of certain wildlife species. Also, the rankings can assist with the creation of a “high risk” list of hazardous species that warrant immediate attention.
2. Most public-use airports have large tracts of open, undeveloped land that provide added margins of safety and noise mitigation. These areas can also present potential hazards to aviation if they encourage wildlife to enter an airport’s approach or departure airspace or aircraft operations area. Constructed or natural areas— such as

¹ Risk is the relationship between the severity and probability of a threat. It is the product of hazard level and abundance in the critical airspace, and is thus defined as the probability of a damaging strike with a given species.

² Hazardous wildlife are species of wildlife (birds, mammals, reptiles), including feral and domesticated animals, not under control that may pose a direct hazard to aviation (i.e., strike risk to aircraft) or an indirect hazard such as an attractant to other wildlife that pose a strike hazard or are causing structural damage to airport facilities (e.g., burrowing, nesting, perching).

poorly drained locations, detention/retention ponds, roosting habitats on buildings, landscaping, odor-causing rotting organic matter (putrescible waste) disposal operations, wastewater treatment plants, agricultural or aquaculture activities, surface mining, wetlands, or some conservation-based land uses — can provide wildlife with ideal locations for feeding, loafing, reproduction, and escape. Even small facilities, such as fast food restaurants, taxicab staging areas, rental car facilities, aircraft viewing areas, and public parks, can produce substantial attractions for hazardous wildlife.

3. During the past century, wildlife-aircraft strikes have resulted in the loss of hundreds of lives worldwide, as well as billions of dollars in aircraft damage. Hazardous wildlife attractants on and near airports can jeopardize future airport expansion, making proper community land-use planning essential. This AC provides airport operators and those parties with whom they cooperate with the guidance they need to assess and address potentially hazardous wildlife attractants when locating new facilities and implementing certain land-use practices on or near public-use airports.

6 **Memorandum of Agreement Between Federal Resource Agencies.**

The FAA, the U.S. Air Force, the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, and the U.S. Department of Agriculture - Wildlife Services signed a Memorandum of Agreement (MOA) to acknowledge their respective missions in protecting aviation from wildlife hazards. Through the MOA, the agencies established procedures necessary to coordinate their missions to address more effectively existing and future environmental conditions contributing to collisions between wildlife and aircraft (wildlife strikes) throughout the United States. These efforts are intended to minimize wildlife risks to aviation and human safety while protecting the Nation's valuable environmental resources.

7 **Feedback on this AC.**

If you have suggestions for improving this AC, you may use the Advisory Circular Feedback form at the end of this AC.



John R. Dermody
Director of Airport Safety and Standards

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CHAPTER 1. GENERAL SEPARATION CRITERIA FOR HAZARDOUS WILDLIFE ATTRACTANTS ON OR NEAR AIRPORTS

1.1 Introduction.

- 1.1.1 Airport operators should maintain an appropriate environment for the safe and efficient operation of aircraft, which entails mitigating wildlife strike hazards by fencing, modifying the landscape in order to deter wildlife or by hazing or removing wildlife hazardous to aircraft from congregating on airports. When considering proposed land uses, operators and sponsors of airports certificated under Part 139, local planners, and developers must take into account whether the proposed land uses, including new development projects, will increase wildlife hazards. Land-use practices that attract or sustain hazardous wildlife populations on or near airports, specifically those listed in Chapter 2, can significantly increase the potential for wildlife strikes.
- 1.1.2 The FAA urges regulatory agencies and planning and zoning agencies to evaluate proposed new land uses within the separation criteria and prevent the creation of land uses that attract or sustain hazardous wildlife within the separation distances.
- 1.1.3 The FAA recommends the use of minimum separation criteria outlined below for land-use practices that attract hazardous wildlife to the vicinity of airports. Please note that FAA criteria include land uses that cause movement of hazardous wildlife onto, into, or across the airport's approach or departure airspace or aircraft operations area. (See the discussion of the synergistic effects of surrounding land uses in Paragraph 2.8 of this AC.). For the purpose of evaluating distance criteria, the delineation of the aircraft operations area may also consider future airport development plans depicted on the Airport Layout Plan (e.g., planned runway extension).
- 1.1.4 The separation distances are based on (1) flight patterns and performance criteria of piston-powered aircraft and turbine-powered aircraft, (2) the altitude at which most strikes happen (78 percent occur under 1,000 feet and 90 percent occur under 3,000 feet above ground level), and (3) National Transportation Safety Board recommendations.

1.2 Airports Serving Piston-Powered Aircraft.

Airports that do not sell Jet-A fuel normally serve piston-powered aircraft. Notwithstanding more stringent requirements for specific land uses, the FAA recommends a separation distance of 5,000 feet from these airports for any of the hazardous wildlife attractants discussed in Chapter 2 or for new airport development projects meant to accommodate aircraft movement. This distance is to be maintained between the closest point of the airport's aircraft operations area and the hazardous wildlife attractant. Figure 1 depicts an example of the 5,000-foot separation distance measured from the nearest aircraft operations area.

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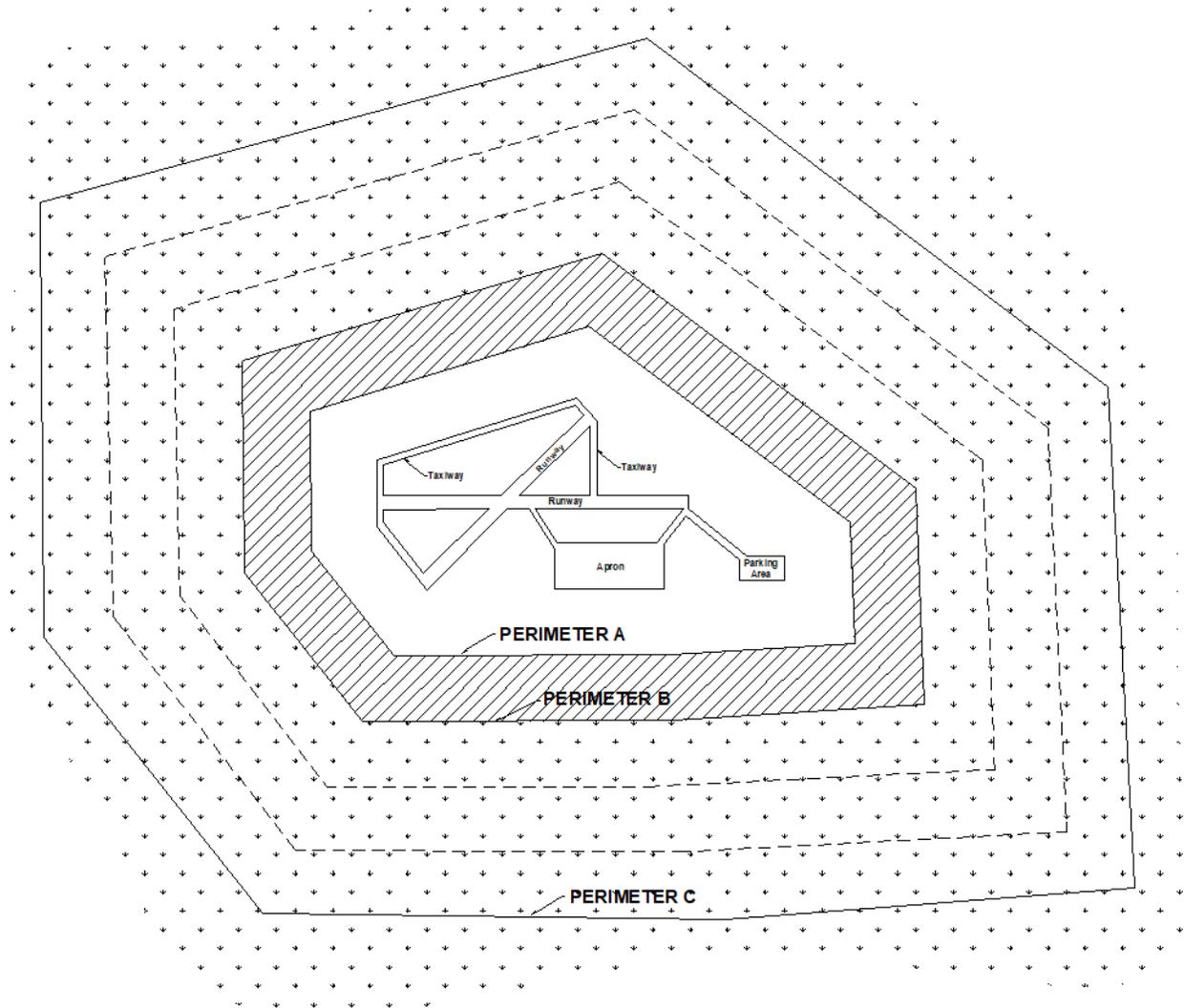
1.3 Airports Serving Turbine-Powered Aircraft.

For airports serving turbine-powered aircraft, the FAA recommends a separation distance of 10,000 feet from these airports for any of the hazardous wildlife attractants discussed in Chapter 2 or for new airport development projects meant to accommodate aircraft movement. This distance is to be maintained between the closest point of the airport's aircraft operations area and the hazardous wildlife attractant. Figure 1 depicts an example of the 10,000-foot separation distance from the nearest aircraft movement areas.

1.4 Protection of Approach, Departure, and Circling Airspace.

For all airports, the FAA recommends a distance of 5 miles between the closest point of the airport's aircraft operations area and the hazardous wildlife attractant. Special attention should be given to hazardous wildlife attractants that could cause hazardous wildlife movement into or across the approach or departure airspace. Figure 1 depicts an example of the 5-mile separation distance measured from the nearest aircraft operations area.

Figure 1. Example of recommended separation distances described in Chapter 1 within which hazardous wildlife attractants should be avoided, eliminated, or mitigated.



PERIMETER A: For airports serving piston-powered aircraft, it is recommended hazardous wildlife attractants be 5,000 feet from the nearest aircraft operations area.

PERIMETER B: For airports serving turbine-powered aircraft, it is recommended hazardous wildlife attractants be 10,000 feet from the nearest aircraft operations area.

PERIMETER C: Recommended for all airports, 5-mile range to protect approach, departure and circling airspace.

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CHAPTER 2. LAND-USE PRACTICES ON OR NEAR AIRPORTS THAT POTENTIALLY ATTRACT HAZARDOUS WILDLIFE

2.1 General.

- 2.1.1 Many types of vegetation, habitats and land use practices can provide an attractant to animals that pose a risk to aviation safety. Hazardous wildlife use the natural or artificial habitats on or near an airport for food, water or cover. The wildlife species and the size of the populations attracted to the airport environment vary considerably, depending on several factors, including land-use practices on or near the airport. In addition to the specific considerations outlined below, airport operators should refer to *Wildlife Hazard Management at Airports* manual, prepared by FAA and U.S. Department of Agriculture (USDA) staff. (This manual is available in English, Spanish, and French). This manual, as well as other helpful resources can be viewed and downloaded free of charge from the Wildlife Strike Resources section of the FAA's wildlife hazard mitigation web site:
http://www.FAA.gov/airports/airport_safety/wildlife).
- 2.1.1.1 The USDA / Animal and Plant Health Inspection Service (APHIS) / Wildlife Services developed a new publication series on wildlife damage management and is available online. The Wildlife Damage Management Technical Series highlights wildlife species or groups of wildlife species that cause damage to agriculture, property and natural resources, and/or impact aviation and human health and safety. The publications can be found at:
https://www.aphis.usda.gov/aphis/ourfocus/wildlifedamage/sa_reports/ct_wildlife+damage+management+technical+series.
- 2.1.1.2 Additional resources have been provided by the USDA / APHIS / Wildlife Services National Wildlife Research Center (NWRC) at:
https://www.aphis.usda.gov/aphis/ourfocus/wildlifedamage/programs/nwrc/sa_publications/ct_research_gateway. The NWRC Research Gateway contains research articles, reports, factsheets, technical notes, data and other materials on wildlife hazard mitigation, risk reduction, animal ecology, habitats, and advanced technologies and methodologies.
- 2.1.2 This section discusses land-use practices having the potential to attract hazardous wildlife and threaten aviation safety. The FAA has determined that the land uses listed below are generally not compatible with safe airport operations when they are located within the separation distances provided in Paragraphs 1.2 through 1.4.
- 2.1.3 As a reminder, these types of land uses or facilities often require permits from the appropriate permitting agency. The FAA may work with the permitting agency to include conditions for monitoring and mitigation measures, if necessary. Ultimately, the permittee is responsible for compliance to these conditions and the permitting agency is responsible for tracking compliance.

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2.2 Waste Disposal Operations.

Municipal solid waste landfills (municipal landfills) are known to attract large numbers of hazardous wildlife, particularly birds. Because of this, these operations, when located within the separations identified in the siting criteria in Paragraphs 1.2 through 1.4, are considered incompatible with safe airport operations.

2.2.1 Siting for New Municipal Solid Waste Landfills Subject to AIR 21.

2.2.1.1 Section 503 of the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (P. L. 106-181) (AIR 21), 49 U.S.C. § 44718(d), prohibits the construction or establishment of a new municipal landfill within 6 miles of certain public-use airports. Before these prohibitions apply, both the airport and the landfill must meet the very specific conditions described below. These restrictions do not apply to airports or landfills located within the state of Alaska.

2.2.1.2 The airport must (1) have received a Federal grant(s) under 49 U.S.C. § 47101, et. seq.; (2) be under control of a public agency; (3) serve some scheduled air carrier operations conducted in aircraft with less than 60 seats; and (4) have total annual enplanements consisting of at least 51 percent of scheduled air carrier enplanements conducted in aircraft with less than 60 passenger seats.

2.2.1.3 The proposed municipal landfill must (1) be within 6 miles of the airport, as measured from airport property line to the landfill property line, and (2) have started construction or establishment on or after April 5, 2001. Section 44718(d) only limits the construction or establishment of some new landfills. It does not limit the expansion, either vertical or horizontal, of existing landfills.

2.2.1.4 Regarding existing municipal landfills and lateral expansions of landfills, 40 CFR § 258.10 requires owners or operators of a landfill units located within the separation distances provided in Paragraphs 1.2 through 1.4 to demonstrate that the unit is designed and operated so that it does not pose a bird hazard to aircraft. To accomplish this, follow the instructions provided in Paragraphs 3.2 and 3.3, document the wildlife monitoring and mitigation procedures that are cooperatively developed, and place this documentation in the operating permit of the facility.

2.2.2 Siting for New Municipal Landfills Not Subject to AIR 21.

If an airport and a municipal landfill do not meet the criteria of § 44718(d), then FAA recommends against locating the landfill within the separation distances identified in Paragraphs 1.2 through 1.4. In determining this distance separation, measurements should be made from the closest point of the airport property boundary to the closest point of the landfill property boundary.

2.2.3 Considerations for Existing Waste Disposal Facilities Within the Limits of Separation Criteria.

The FAA recommends against airport development projects that would increase the number of aircraft operations or accommodate larger or faster aircraft near landfill operations located within the separations identified in Paragraphs 1.2 through 1.4. In addition, in accordance with 40 CFR § 258.10, owners or operators of existing landfill units that are located within the separations listed in Paragraphs 1.2 through 1.4 must demonstrate that the unit is designed and operated so it does not pose a bird hazard to aircraft. (See Paragraph 4.3.2 of this AC for a discussion of this demonstration requirement.)

2.2.4 Enclosed Trash Transfer Stations.

Enclosed waste-handling facilities that receive garbage behind closed doors; process it via compaction, incineration, or similar manner; and remove all residue by enclosed vehicles generally are compatible with safe airport operations, provided they are constructed and operated properly and are not located on airport property or within the Runway Protection Zone. These facilities should not handle or store putrescible waste outside or in a partially enclosed structure accessible to hazardous wildlife. Trash transfer facilities that are open on one or more sides; or store uncovered quantities of municipal solid waste outside, even if only for a short time; or use semi-trailers that leak or have trash clinging to the outside; or do not control odors by ventilation and filtration systems (odor masking is not acceptable) do not meet the FAA's definition of fully enclosed trash transfer stations. The FAA considers fully enclosed waste-handling facilities constructed or operated incorrectly incompatible with safe airport operations if they are located closer than the separation distances specified in Paragraphs 1.2 through 1.4.

2.2.5 Composting Operations on or near Airport Property.

Composting operations that accept only yard waste (e.g., leaves, lawn clippings, or branches) generally do not attract hazardous wildlife. Sewage sludge, woodchips, and similar material are not municipal solid wastes and may be used as compost bulking agents. The compost, however, must never include food or other municipal solid waste. Composting operations should not be located on airport property unless effective, risk-reducing mitigations are in place. Off-airport property composting operations should be located no closer than the greater of the following distances: 1,200 feet from any aircraft operations area or the distance called for by airport design requirements (see AC 150/5300-13, *Airport Design*). This spacing should prevent material, personnel, or equipment from penetrating any Object Free Area, Obstacle Free Zone, Threshold Siting Surface, or Clearway. Airport operators should monitor composting operations located in proximity to the airport to ensure that steam or thermal rise does not adversely affect air traffic.

2.2.6 Underwater Waste Discharges.

The FAA recommends against the underwater discharge of any food waste (e.g., fish processing offal) within the separations identified in Paragraphs 1.2 through 1.4 because it could attract scavenging hazardous wildlife.

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2.2.7 Recycling Centers.

Recycling centers that accept previously sorted non-food items, such as glass, newspaper, cardboard, aluminum, electronic, and household wastes such as paint, batteries, and oil, are, in most cases, not attractive to hazardous wildlife and are acceptable.

2.2.8 Construction and Demolition Debris Facilities.

2.2.8.1 Construction and demolition landfills generally do not attract hazardous wildlife and are acceptable if maintained in an orderly manner, admit no putrescible waste, and are not co-located with other waste disposal operations. However, construction and demolition landfills have similar visual and operational characteristics to putrescible waste disposal sites. When co-located with putrescible waste disposal operations, construction and demolition landfills are more likely to attract hazardous wildlife because of the similarities between these disposal facilities.

2.2.8.2 Therefore, a construction and demolition landfill co-located with another waste disposal operation should be located outside of the separations identified in Paragraphs 1.2 through 1.4.

2.2.8.3 Airport operators should be aware that on-site storage of construction and maintenance debris, as well as out-of-service aircraft or aircraft components, may provide an attractant for hazardous species (e.g., nesting or perching locations). The FAA recommends these on-site areas be monitored and/or mitigated, if necessary.

2.2.9 Fly Ash Disposal.

2.2.9.1 The incinerated residue from resource recovery power/heat-generating facilities that are fired by municipal solid waste, coal, or wood is generally not a wildlife attractant because it no longer contains putrescible matter. Landfills accepting only fly ash are generally not considered to be wildlife attractants and are acceptable as long as they admit no putrescible waste of any kind, and are not co-located with other disposal operations that attract hazardous wildlife.

2.2.9.2 Since varying degrees of waste consumption are associated with general incineration (not resource recovery power/heat-generating facilities), the FAA considers the ash from general incinerators a regular waste disposal by-product and, therefore, a hazardous wildlife attractant if disposed of within the separation criteria outlined in Paragraphs 1.2 through 1.4.

2.3 **Water Management Facilities.**

Drinking water intake and treatment facilities, storm water and wastewater treatment facilities, associated retention and settling ponds, ponds built for recreational use, ponds

and fountains for ornamental purposes, and ponds that result from mining activities often attract large numbers of potentially hazardous wildlife. Development of new open water facilities within the separation criteria identified in Paragraphs 1.2 through 1.4 should be avoided to prevent wildlife attractants. If necessary, land-use developers and airport operators may need to develop management plans, in compliance with local and state regulations, to support the operation of storm water management facilities on or near all public-use airports to ensure a safe airport environment. The FAA recommends these plans be developed in consultation with a Qualified Airport Wildlife Biologist³, to minimize hazardous wildlife attractants.

2.3.1 Existing Stormwater Management Facilities.

2.3.1.1 On-airport stormwater management facilities allow the quick removal of surface water, including discharges related to aircraft deicing, from impervious surfaces, such as pavement and terminal/hangar building roofs. Existing on-airport detention ponds collect stormwater, protect water quality, and control runoff. Because they slowly release water after storms, they may create standing bodies of water that can attract hazardous wildlife. Where the airport has developed a Wildlife Hazard Management Plan, Part 139 regulations require the immediate correction of any wildlife hazards arising from existing stormwater facilities located on or near airports using appropriate wildlife hazard mitigation techniques. Airport operators should develop measures to minimize hazardous wildlife attraction in consultation with a Qualified Airport Wildlife Biologist.

2.3.1.2 Where possible, airport operators should modify stormwater detention ponds to allow a maximum 48-hour detention period for the design storm. The combination of open water and vegetation is particularly attractive to waterfowl and other hazardous wildlife. Water management facilities holding water longer than 48 hours should be maintained in a manner that keeps them free of both emergent and submergent vegetation. The FAA recommends that airport operators avoid or remove retention ponds and detention ponds featuring dead storage to eliminate standing water. Detention basins should remain totally dry between rainfalls. Where constant flow of water is anticipated through the basin, or where any portion of the basin bottom may remain wet, the detention facility should include a concrete or paved pad and/or ditch/swale in the bottom to prevent vegetation that may provide nesting habitat. Drainage basins with a concrete or paved pad should be maintained to prevent or remove any sediment build-up to prevent vegetation growth.

2.3.1.3 When it is not possible to drain a large detention pond completely, airport operators may use physical barriers, such as bird balls, wire grids, pillows,

³ See Advisory Circular 150/5200-36, *Qualifications for Wildlife Biologist Conducting Wildlife Hazard Assessments and Training Curriculums for Airport Personnel Involved in Controlling Wildlife Hazards on Airports.*

or netting, to deter birds and other hazardous wildlife. When physical barriers are proposed, airport operators must evaluate their use, effectiveness and maintenance requirements. Airport operators must also ensure physical barriers will not adversely affect water rescue. Before installing any physical barriers over detention ponds on Part 139 airports, airport operators must get approval from the appropriate FAA Regional Airports Division Office.

- 2.3.1.4 The FAA recommends that airport operators encourage off-airport stormwater treatment facility operators to incorporate appropriate wildlife hazard mitigation techniques into stormwater treatment facility operating practices when their facility is located within the separation criteria specified in Paragraphs 1.2 through 1.4.

2.3.2 New Stormwater Management Facilities.

The FAA recommends that storm water management systems located within the separations identified in Paragraphs 1.2 through 1.4 be designed and operated so as not to create above-ground standing water. Stormwater detention ponds should be designed, engineered, constructed, and maintained for a maximum 48-hour detention period after the design storm and to remain completely dry between storms. To facilitate the control of hazardous wildlife, the FAA recommends the use of steep-sided, rip-rap or concrete lined, narrow, linear-shaped water detention basins. When it is not possible to place these ponds away from an airport's aircraft operations area (but still on airport property), airport operators may use physical barriers, such as bird balls, wire grids, floating covers, vegetation barriers (bottom liners), or netting, to prevent access of hazardous wildlife to open water and minimize aircraft-wildlife interactions. Caution is advised when nets or wire grids are used for deterring birds from attractants. Mesh size should be < 5 cm (2") to avoid entangling and killing birds and should not be made of a monofilament material. Grids installed above and across water to deter hazardous birds (e.g., waterfowl, cormorants, etc.) are different than using a small mesh covering but also provides an effective deterrent. Grid material, size, pattern and height above water may differ on a case-by-case basis. When physical barriers are used, airport operators must evaluate their use and ensure they will not adversely affect water rescue. Before installing any physical barriers over detention ponds on Part 139 airports, a review by a Qualified Airport Wildlife Biologist should be conducted, prior to approval from the appropriate FAA Regional Airports Division Office. All vegetation in or around detention basins that provide food or cover for hazardous wildlife should be eliminated. If soil conditions and other requirements allow, the FAA encourages the use of underground storm water infiltration systems because they are less attractive to wildlife.

2.3.3 Existing Wastewater Treatment Facilities.

- 2.3.3.1 The FAA recommends that airport operators immediately correct any wildlife hazards arising from existing wastewater treatment facilities located on or near the airport.

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2.3.3.2 Where required, a wildlife management plan will outline appropriate wildlife hazard mitigation techniques. Accordingly, airport operators should encourage wastewater treatment facility operators to incorporate measures, developed in consultation with a Qualified Airport Wildlife Biologist, to minimize hazardous wildlife attractants. Airport operators should also encourage those wastewater treatment facility operators to incorporate these mitigation techniques into their standard operating practices. In addition, airport operators should consider the existence of wastewater treatment facilities when evaluating proposed sites for new airport development projects and avoid such sites when practicable.

2.3.4 New Wastewater Treatment Facilities.

The FAA recommends against the construction of new wastewater treatment facilities or associated settling ponds within the separations identified in Paragraphs 1.2 through 1.4. Appendix 1 defines wastewater treatment facility as “any devices and/or systems used to store, treat, recycle, or reclaim municipal sewage or liquid industrial wastes.” The definition includes any pretreatment involving the reduction or elimination of pollutants prior to introducing such pollutants into a treatment facility. When a wastewater treatment facility is proposed within the separation criteria, the airport operator, project proponent, and local jurisdiction should discuss the proposed project location with regard to its location near the airport and the separation distances identified in Paragraphs 1.2 through 1.4. If possible, a more suitable location for the proposed facility should be identified. If no other suitable location exists, FAA recommends that the proposed facility plans be reviewed by a Qualified Airport Wildlife Biologist to identify measures to avoid or reduce the facility’s potential to attract hazardous wildlife. If appropriate measures cannot be incorporated to reduce potential wildlife hazards, airport operators should document their opposition in a letter to the local jurisdiction.

2.3.5 Artificial Marshes.

In warmer climates, wastewater treatment facilities sometimes employ artificial marshes and use submergent and emergent aquatic vegetation as natural filters. These artificial marshes may be used by some species of flocking birds, such as blackbirds and waterfowl, for breeding or roosting activities. The FAA recommends against establishing artificial marshes within the separations identified in Paragraphs 1.2 through 1.4.

2.3.6 Wastewater Discharge and Sludge Disposal.

The FAA recommends careful consideration regarding the discharge of wastewater or biosolids (i.e., secondarily treated sewage sludge) on airport property. Such discharges might improve soil moisture and quality on unpaved areas and lead to improved turf growth. Depending on the airfield plant communities and habitats present, this can be an attractive food source for many species of animals or, conversely, could result in limited attractiveness to hazardous wildlife. Also, improved turf requires more frequent mowing and could attract geese. Airports should improve their turf with the goal of a monoculture of turf that is least attractive to wildlife. Wastewater or biosolids

applications might assist in achieving this goal. Caution should be exercised when discharges saturate airfield areas adjacent to paved surfaces. The resultant soft, muddy conditions could restrict or prevent emergency vehicles from reaching accident sites in a timely manner.

2.4 Wetlands.

Wetlands provide a variety of functions and can be regulated by local, state, and Federal laws. Wetlands can be attractive to many types of wildlife, including many which rank high on the list of hazardous wildlife species (Table 1 - AC 150/5200-32). Some types of wetlands are not as attractive to wildlife as others and they should be reviewed on a case-by-case basis to determine the likelihood of proposed wetlands increasing the numbers of hazardous wildlife at the airport. Factors such as size, shape, location, canopy cover and vegetative composition among other things should be considered when determining compatibility.

Note: If questions exist as to whether an area qualifies as a wetland, contact the District Office of the U.S. Army Corps of Engineers, the Natural Resources Conservation Service, or a wetland consultant qualified to delineate wetlands.

2.4.1 Existing Wetlands on or near Airport Property.

If wetlands are located on or near airport property, airport operators should be alert to any wildlife use or habitat changes in these areas that could affect safe aircraft operations. At public-use airports, the FAA recommends immediately correcting, in cooperation with local, state, and Federal regulatory agencies, any wildlife hazards arising from existing wetlands located on or near airports within 5 miles of the aircraft operations area. Where required, a wildlife management plan will outline appropriate wildlife hazard mitigation techniques. Accordingly, airport operators should develop measures to minimize hazardous wildlife attraction in consultation with a FAA Qualified Airport Wildlife Biologist.

2.4.2 New Airport Development.

Whenever possible, the FAA recommends locating new airports using the separations from wetlands identified in Paragraphs 1.2 through 1.4. Where alternative sites are not practicable, or when airport operators are expanding an existing airport into or near wetlands, a Qualified Airport Wildlife Biologist, in coordination with the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, and the state wildlife management agency should evaluate the wildlife hazards and prepare a wildlife management plan that indicates methods of minimizing the hazards.

2.4.3 Mitigation for Wetland Impacts from Airport Projects.

Wetland mitigation may be necessary when unavoidable wetland disturbances result from new airport development projects or projects required to correct wildlife hazards from wetlands. Wetland mitigation must be designed so it does not create a wildlife hazard. The FAA recommends that wetland mitigation projects that may attract hazardous wildlife be sited outside of the separations identified in Paragraphs 1.2 through 1.4.

2.4.3.1 Onsite Mitigation of Wetland Functions.

Wetland mitigation/conservation easements must not inhibit the airport operator's ability to effectively control hazardous wildlife on or near the mitigation site or effectively maintain other aspects of safe airport operations. Enhancing such mitigation areas to attract hazardous wildlife must be avoided. The FAA will review any onsite mitigation proposals to determine compatibility with safe airport operations and grant assurance compliance. Early coordination with the FAA is encouraged for any proposal to use airport land for wetland mitigation. A Qualified Airport Wildlife Biologist should evaluate any wetland mitigation projects that are needed to protect unique wetland functions and that must be located in the separation criteria in Paragraphs 1.2 through 1.4 before the mitigation is implemented. A wildlife management plan should be developed to reduce the wildlife hazards.

2.4.3.2 Offsite Mitigation of Wetland Functions.

- 2.4.3.2.1 The FAA recommends that wetland mitigation projects that may attract hazardous wildlife be sited outside of the separations identified in Paragraphs 1.2 through 1.4 unless they provide unique functions that must remain onsite (see 2.4.3.1). Agencies that regulate impacts to or around wetlands recognize that it may be necessary to split wetland functions in mitigation schemes. Therefore, regulatory agencies may, under certain circumstances, allow portions of mitigation to take place in different locations.
- 2.4.3.2.2 The FAA encourages landowners or communities supporting the restoration or enhancement of wetlands to do so only after critically analyzing how those activities would affect aviation safety. To do so, landowners or communities should contact the affected airport sponsor, FAA, and/or a Qualified Airport Wildlife Biologist.
- 2.4.3.2.3 Those parties should work cooperatively to develop restoration or enhancement plans that would not worsen existing wildlife hazards or create such hazards. See Paragraphs 4.1.1 – 4.1.3 for land-use modifications evaluation criteria.
- 2.4.3.2.4 If parties develop a mutually acceptable restoration or enhancement plan, the landowner or community proposing the restoration or enhancement must monitor the restored or enhanced site. This monitoring must verify that efforts have not worsened or created hazardous wildlife attraction or activity. If such attraction or activity occurs, the landowner or community should work with the airport sponsor, or a Qualified Airport Wildlife Biologist to reduce the hazard to aviation.

2.4.3.3 **Mitigation Banking.**

Wetland mitigation banking is the creation or restoration of wetlands in order to provide mitigation credits that can be used to offset permitted wetland losses. Mitigation banking benefits wetland resources by providing advance replacement for permitted wetland losses; consolidating small projects into larger, better-designed and managed units; and encouraging integration of wetland mitigation projects with watershed planning. This last benefit is most helpful for airport projects, as wetland impacts mitigated outside of the separations identified in Paragraphs 1.2 through 1.4 can still be located within the same watershed. Wetland mitigation banks meeting the separation criteria offer an ecologically sound approach to mitigation in these situations. Airport operators should work with local watershed management agencies or organizations to develop mitigation banking for wetland impacts on airport property.

2.5 **Dredge Spoil Containment Areas.**

The FAA recommends against locating dredge spoil containment areas (also known as Confined Disposal Facilities) within the separations identified in Paragraphs 1.2 through 1.4 if the containment area or the spoils contain material that would attract hazardous wildlife. Proposals for new dredge spoil containment areas located within the separation distances should be reviewed on a case-by-case basis to determine the likelihood of resulting in an increase in hazardous wildlife. The FAA recommends that airport sponsors work with a Qualified Airport Wildlife Biologist and/or the FAA to review proposals for dredge spoil containment areas located within separation criteria.

2.6 **Agricultural Activities.**

Many agricultural crops can attract hazardous wildlife and should not be planted within the separations identified in Paragraphs 1.2 through 1.4. Corn, wheat, and other small grains in particular should be avoided. If the airport has no financial alternative to agricultural crops to produce the income necessary to maintain the viability of the airport, then the airport should consider growing crops that hold little food value for hazardous wildlife, such as grass hay. Attractiveness to hazardous wildlife species during all phases of production, from planting through harvest and fallow periods, should be considered when contemplating the use of airport property for agricultural production. Where agriculture is present, crop residue (e.g., waste grain) should not be left in the field following harvest. Also, airports should consult AC 150/5300-13, *Airport Design*, to ensure that agricultural crops do not create airfield obstructions or other safety hazards. Before planning or initiating any agricultural practices on airport property, operators should get approval from the appropriate FAA regional Airports Division Office and demonstrate that the additional cost of wildlife control and potential accidents is offset by revenue generated by agricultural leases. Annual review of the Airport Certification Manual by the Certification Inspector does not constitute approval and is insufficient to meet this requirement.

2.6.1 Livestock Production.

Confined livestock operations (i.e., feedlots, dairy operations, hog or chicken production facilities, or egg laying operations) often attract flocking birds, such as blackbirds, starlings, or pigeons that pose a hazard to aviation. Therefore, the FAA recommends against such facilities within the separations identified in Paragraphs 1.2 through 1.4. The airport operator should be aware of any wildlife hazards that appear to be attracted to off-site livestock operations and consider working with a Qualified Airport Wildlife Biologist to identify reasonable and feasible measures that may be proposed to landowners to reduce the attractiveness of the site to the potentially hazardous wildlife species.

2.6.1.1 In exceptional circumstances, and following FAA review and approval, livestock may be grazed on airport property as long as they are off the airfield and separated behind fencing where they cannot pose a hazard to aircraft. The livestock should be fed and watered as far away from the airfield and approach/departure space as possible because the feed and water may attract birds. The wildlife management plan should include monitoring and wildlife mitigation for any areas where the livestock and their feed/water is located in case a wildlife hazard is detected. Airports without wildlife management plans should equally consider monitoring and mitigation protocols to identify and address any wildlife hazards associated with livestock and their feeding operations.

2.6.2 Alternative Uses of Agricultural Land.

2.6.2.1 Habitat modification both on and surrounding an airfield is one of the best and most economical long term mitigation strategies to decrease risk that wildlife pose to flight safety. Alternative land uses (e.g., solar and biofuel) at airports could help mitigate many of the challenges for the airport operator, developers, and conservationists. However, careful planning must first determine that proposed alternative energy production at airports does not create wildlife attractants or other hazards.

2.6.2.2 Some airports are surrounded by vast areas of farmed land within the distances specified in Paragraphs 1.2 through 1.4. Seasonal uses of agricultural land for activities such as hunting can create a hazardous wildlife situation. In some areas, farmers will rent their land for hunting purposes. Rice farmers, among others, flood their land to attract waterfowl or for conservation efforts. This is often done during waterfowl hunting season to obtain additional revenue by renting out duck blinds.

2.6.2.3 The waterfowl hunters then use decoys and call in hundreds, if not thousands, of birds, creating a threat to aircraft safety. It is recommended that a Qualified Airport Wildlife Biologist review, in coordination with local farmers and producers, these types of seasonal land uses and incorporate mitigating measures into the wildlife management plan, when possible.

2.7 Aquaculture.

Aquaculture is the breeding, rearing, and harvesting of fish, shellfish, and plants in all types of water environments including ponds, rivers, lakes, and the ocean. Aquaculture is used to produce food fish, sport fish, bait fish, ornamental fish, and to support restoration activities. Aquacultured species are grown in a range of facilities including tanks, cages, ponds, and raceways. When an aquaculture facility is proposed within the separation criteria, the airport operator, project proponent, and local jurisdiction should discuss the proposed project location with regard to its attraction to hazardous species, location near the airport and the separation distances identified in Paragraphs 1.2 through 1.4. If a facility is identified as a possible significant attraction, a more suitable location for the proposed facility should be identified. If no other suitable location exists, it is recommended that the proposed facility plans be reviewed by a Qualified Airport Wildlife Biologist to identify measures to avoid or reduce the facility's potential to attract hazardous wildlife.

2.7.1 Freshwater Aquaculture.

2.7.1.1 Freshwater aquaculture activities (e.g., catfish, tilapia, trout or bass production) are typically conducted outside of fully enclosed buildings in constructed ponds or tanks and are inherently attractive to a wide variety of birds and therefore pose a significant risk to airport safety when within the separation distances specified in Paragraphs 1.2 through 1.4. Freshwater aquaculture should only be considered if extensive mitigation measures have been incorporated to eliminate attraction to hazardous birds. Examples of such mitigation include:

1. Netting or other material to exclude hazardous birds (e.g., eagles, osprey, gulls, cormorants);
2. Acoustic hazing including pyrotechnics, propane cannons, directional sonic/hailing devices and other similar technologies;
3. Feeding procedure cleanliness, exclusion techniques prohibiting birds from perching or accessing food; efficiency of feeding operation procedures that reduce fish food attraction to hazardous birds;
4. Operation procedure efficiency transferring live fish to and from enclosures or removal of dead fish; maintenance and upkeep of facility;
5. Monitoring, mitigation and communication protocols with nearby airports as a proactive safety feature in response to specific hazardous species in the event they are identified at the facility in unacceptable numbers.

2.7.2 Marine Aquaculture.

Marine aquaculture (Mariculture) refers to the culturing of species that live in the ocean. When appropriately managed and mitigated as necessary, mariculture facilities do not pose a significant risk to airport safety.

2.7.2.1 **Finfish Mariculture.**

2.7.2.1.1 U.S. finfish mariculture primarily produces salmon and steelhead trout as well as lesser amounts of cod, moi, yellowtail, barramundi, seabass, and seabream. Maricultures use rigid and non-rigid enclosures (e.g., cages) at the surface or submerged in the water column. These enclosures may be fully enclosed, or be open at the top or covered with netted material to negate losses from depredation by birds or other predators. Different facilities employ different designs and operational protocols.

2.7.2.1.2 While mariculture operations typically do not pose a significant attractant to hazardous birds, design and operational features can be incorporated as permit conditions to mitigate attraction and effectively reduce this risk. Examples of such mitigation include:

1. Fully enclosed cages using netting or other material to exclude hazardous birds (e.g., gulls, cormorants, pelicans) and to insure retention of fish;
2. Submerged enclosures to reduce attraction to hazardous birds;
3. Feed barge cleanliness, exclusion techniques prohibiting birds from perching or accessing food; efficiency of feeding operation procedures that reduce fish food attraction to hazardous birds;
4. Operation procedure efficiency transferring live fish to and from enclosures or removal of dead fish; maintenance and upkeep of facility;
5. Monitoring, mitigation and communication protocols with nearby airports as a proactive safety feature in response to specific hazardous species in the event they are identified at the facility in unacceptable numbers.

2.7.2.2 **Shellfish Mariculture.**

U.S. shellfish mariculture primarily produces oysters, clams, mussels, lobster and shrimp. Shellfish may be grown directly on the bottom, in submerged cages or bags, or on suspended lines. These types of mariculture operations do not typically present a significant attractant to hazardous birds. For those operations that are found to pose a significant risk, design and operation features that diminish possible attraction to hazardous bird species (e.g., reducing areas for perching or feeding) can effectively reduce this risk.

2.7.2.3 **Plant Mariculture.**

2.7.2.3.1 Microalgae, also referred to as phytoplankton, microphytes, or planktonic algae constitute the majority of cultivated algae. Macroalgae, commonly known as seaweed, also have many commercial and industrial uses.

- 2.7.2.3.2 While few commercial seaweed farms exist, the sector is growing. These types of mariculture operations do not typically present an attractant to hazardous birds.

2.8 **Golf Courses, Landscaping, Structures and Other Land-Use Considerations.**

2.8.1 Golf Courses.

The large grassy areas and open water found on most golf courses are attractive to hazardous wildlife, particularly Canada geese and some species of gulls. These species can pose a threat to aviation safety. If golf courses are located on or near airport property, airport operators should be alert to any wildlife use or habitat changes in these areas that could affect safe aircraft operations. Accordingly, airport operators should develop, at a minimum, onsite measures to minimize hazardous wildlife attraction in consultation with a Qualified Airport Wildlife Biologist. Existing golf courses located within these separations that have been documented to attract hazardous wildlife are encouraged to develop a program to reduce the attractiveness of the sites to species that are hazardous to aviation safety. The FAA recommends against construction of new golf courses within the separations identified in Paragraphs 1.2 through 1.4 if determined that the new facility would create a significant wildlife hazard attractant by a Qualified Airport Wildlife Biologist. Airport operators should ensure these golf courses are monitored on a continuing basis for the presence of hazardous wildlife. If hazardous wildlife is detected, corrective actions should be immediately implemented.

2.8.2 Landscaping and Landscape Maintenance.

2.8.2.1 Depending on its geographic location, landscaping can attract hazardous wildlife. The FAA recommends that airport operators approach landscaping with caution and confine it to airport areas not associated with aircraft movements. Vegetation that produces seeds, fruits, or berries, or that provides dense roosting or nesting cover should not be used. Airports should develop a landscape plan to include approved and prohibited plants. The landscape plan should consider the watering needs of mature plants. A Qualified Airport Wildlife Biologist should review all landscaping plans. Airport operators should also monitor all landscaped areas on a continuing basis for the presence of hazardous wildlife. If hazardous wildlife is detected, corrective actions should be immediately implemented.

2.8.2.2 Turf grass areas on airports have the potential to be highly attractive to a variety of hazardous wildlife species. Research conducted by the USDA Wildlife Services' National Wildlife Research Center has shown that no one airfield vegetation management regimen will deter all species of hazardous wildlife in all situations. The composition and height of airfield grasslands should be properly managed to reduce their attractiveness to hazardous wildlife. In many situations, an intermediate height, monoculture turf grass might be most favorable. In cooperation with a

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Qualified Airport Wildlife Biologist, airport operators should develop airport turf grass management plans on a prescription basis, including cultivar selection during reseeding efforts, that is specific to the airport's geographic location, climatic conditions, and the type of hazardous wildlife likely to frequent the airport.

- 2.8.2.3 Airport operators should ensure that plant varieties attractive to hazardous wildlife are not used on the airport. Disturbed areas or areas in need of re-vegetating should not be planted with seed mixtures containing millet or any other large-seed producing grass. For airport property already planted with seed mixtures containing millet, rye grass, or other large-seed producing grasses, the FAA recommends disking, plowing, or another suitable agricultural practice to prevent plant maturation and seed head production. Plantings should follow the specific recommendations for grass management and seed and plant selection made by the State University Cooperative Extension Service, the local office of Wildlife Services, or a Qualified Airport Wildlife Biologist. Airport operators should also consider developing and implementing a preferred/prohibited plant species list, reviewed by a Qualified Airport Wildlife Biologist, which has been designed for the geographic location to reduce the attractiveness to hazardous wildlife for landscaping airport property.

2.8.3 Structures.

- 2.8.3.1 Certain structures attract birds for loafing and nesting. Flat rooftops can be attractive to many species of gulls for nesting, hangars provide roosting / nesting opportunities for rock doves, towers, light posts and navigation aids can provide loafing / hunting perches for raptors and aircraft can provide loafing / nesting sites for European starlings, blackbirds and other species. These structures should be monitored and mitigated, if located on-site. Off-site structural attractions may require additional coordination to effectively mitigate their use by hazardous species.

- 2.8.3.2 Cellular communications towers are becoming increasingly more attractive to large birds (e.g., osprey, eagles, herons, vultures) for nesting and rearing their young. This problem is a growing concern because once the young fledge from nests built on manmade structures they are more likely to return to these kinds of sites to reproduce in future years.

2.8.4 Other Hazardous Wildlife Attractants.

Other land uses (e.g., conservation easements, parks, wildlife management areas) or activities not addressed in this AC may have the potential to attract hazardous wildlife. Regardless of the source of the attraction, when hazardous wildlife is noted on a public-use airport, each certificate holder must take prompt remedial action(s) to protect aviation safety and all non-certificated airports should take prompt remedial action(s) to protect aviation safety.

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2.9 **Habitat for State and Federally Listed Species on Airports.**

An airport's air operations area is an artificial environment that has been created and maintained for aircraft operations. Because an aircraft operations area can be markedly different from the surrounding native landscapes, it may attract wildlife species that do not normally occur, or that occur only in low numbers in the area. Some of the grassland species attracted to an airport's aircraft operations area are at the edge of their natural ranges, but are attracted to habitat features found in the airport environment. Also, some wildlife species may occur on the airport in higher numbers than occur naturally in the region because the airport offers habitat features the species prefer. Some of these wildlife species are Federal or state-listed threatened and endangered species or have been designated by state resource agencies as species of special concern.

2.9.1 State-Listed Species Habitat Concerns.

2.9.1.1 Many state wildlife agencies have requested that airport operators facilitate and encourage habitat on airports for state-listed threatened and endangered species or species of special concern. Airport operators should exercise caution in adopting new management techniques because they may increase wildlife hazards and be inconsistent with safe airport operations. Managing the on-airport environment to facilitate or encourage the presence of hazardous wildlife species can create conditions that are incompatible with, or pose a threat to, aviation safety.

2.9.1.2 Not all state-listed threatened and endangered species or species of concern pose a direct threat to aviation safety. However, these species may pose an indirect threat and be hazardous because they attract other wildlife species or support prey species attractive to other species that are directly hazardous. Also, the habitat management practices that benefit these state-listed threatened and endangered species and species of special concern may attract other hazardous wildlife species. On-airport habitat and wildlife management practices designed to benefit wildlife that directly or indirectly create safety hazard where none existed before are incompatible with safe airport operations.

2.9.2 Federally Listed Species Habitat Concerns.

2.9.2.1 The FAA supports efforts to protect threatened and endangered species, as a matter of principle and consistent with the Endangered Species Act of 1973. The FAA must balance these requirements with our requirements and mission to maintain a safe and efficient airport system. Requests to enhance or create habitat for threatened and endangered species often conflict with the safety of the traveling public and may place the protected species at risk of mortality by aircraft collisions. The FAA does not support the creation, conservation or enhancement of habitat or refuges to attract endangered species on airports. If endangered species are present on an airport, specific obligations may apply under the Endangered

Species Act, 16 U.S.C. § 1531 et seq. and the airport operator should contact the Airports District Office Environmental Protection Specialist.

- 2.9.2.2 The designation of critical habitat for listed species under the Endangered Species Act on airport lands may be an incompatible land use in conflict with the intended and dedicated purpose of airport lands and may limit or preclude the ability of the airport to develop new infrastructure and growth capacity to meet future air carrier service demand. In addition, depending on the listed species (primarily but not limited to avian species), the designation of critical habitat within the separation distances provided in paragraphs 1.2 - 1.4 can represent a hazardous wildlife attractant in conflict with 14 CFR Part 139.337.

2.10 Synergistic Effects of Surrounding Land Uses.

There may be circumstances where two or more different land uses would not, by themselves, be considered hazardous wildlife attractants or are located outside of the separations identified in Paragraphs 1.2 through 1.4 but collectively may create a wildlife corridor directly through the airport and/or surrounding airspace. An example involves a lake located outside of the separation criteria on the east side of an airport and a large hayfield on the west side of an airport. These two land uses, taken together, could create a flyway for Canada geese directly across the airspace of the airport. Airport operators must consider the entire surrounding landscape and community when developing the wildlife management plan.

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CHAPTER 3. PROCEDURES FOR WILDLIFE HAZARD MANAGEMENT BY OPERATORS OF PUBLIC-USE AIRPORTS AND CONDITIONS FOR NON-CERTIFICATED AIRPORTS TO CONDUCT WILDLIFE HAZARD ASSESSMENTS AND WILDLIFE HAZARD SITE VISITS

3.1 Introduction.

In recognition of the increased risk of serious aircraft damage or the loss of human life that can result from a wildlife strike, the FAA recommends all airports conduct a Wildlife Hazard Site Visit or Wildlife Hazard Assessment unless otherwise mandated after an initial triggering events defined in Part 139 Section 139.337. After the airport has completed the site visit or assessment and implemented a wildlife management plan, investigations should be conducted following subsequent triggering events to determine if the original assessment and plan adequately address the situation or if conditions have changed that would warrant an update to the plan. In this section, airports that are certificated under 14 C.F.R. § 139.337 are referred to as “certificated airports” and all others are referred to as “non-certificated airports.” When a statement refers to both certificated and non-certificated airports, “airport” or “all airports” is used.

3.2 Coordination with Qualified Airport Wildlife Biologists.

Hazardous wildlife management is a complex discipline and conditions vary widely across the United States. Therefore, only airport wildlife biologists meeting the qualification requirements in Advisory Circular 150/5200-36, *Qualifications for Wildlife Biologist Conducting Wildlife Hazard Assessments and Training Curriculums for Airport Personnel Involved in Controlling Wildlife Hazards on Airports*, can conduct Site Visits and Assessments. Airports must maintain documentation that the Qualified Airport Wildlife Biologist meets the qualification requirements in Advisory Circular 150/5200-36.

3.3 Wildlife Hazard Management at Airports: A Manual For Airport Personnel.

- 3.3.1 The Wildlife Hazard Management at Airports manual, prepared by FAA and USDA Wildlife Services staff, contains a compilation of information to assist airport personnel in the development, implementation, and evaluation of wildlife management plans at airports. The manual includes specific information on the nature of wildlife strikes, legal authority, regulations, wildlife management techniques, Assessments, Plans, and sources of help and information. The manual is available in three languages: English, Spanish, and French. It can be viewed and downloaded free of charge from the FAA’s wildlife hazard mitigation web site: https://www.faa.gov/airports/airport_safety/wildlife. This manual only provides a starting point for addressing wildlife hazard issues at airports. FAA recommends that airports consult with a Qualified Airport Wildlife Biologists to assist with development of a wildlife management plan and the implementation of management actions by airport personnel.

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- 3.3.2 There are many other resources complementary to this manual for use in developing and implementing wildlife management plans. Several are listed in the manual's bibliography or on the FAA Wildlife Mitigation website:

https://www.faa.gov/airports/airport_safety/wildlife

3.4 Wildlife Hazard Site Visits and Wildlife Hazard Assessments.

- 3.4.1 Operators of certificated airports are encouraged to conduct an initial assessment regardless of whether the airport has experienced one of the triggering events. Doing so would allow the airport to take proactive action and mitigate the wildlife risk before experiencing an incident. All other airports are encouraged to conduct an assessment or site visit (as defined in FAA Advisory Circular 150/5200-38) conducted by a Qualified Airport Wildlife Biologist (as defined in FAA Advisory Circular 150/5200-36). Part 139 certificated airports are currently required to ensure that an assessment is conducted consistent with 14 C.F.R. § 139.337.
- 3.4.2 The intent of a site visit is to provide an abbreviated analysis of an airport's wildlife hazards and to provide timely information that allows the airport to expedite the mitigation of these hazards. The FAA also recommends that airports conduct an assessment or site visit as soon as practicable in order to identify any immediate wildlife hazards and/or mitigation measures.
- 3.4.3 Non-certificated airports should submit the results of the site visit or assessment to the FAA for review. The FAA will review the submitted site visit or assessment and make a recommendation regarding the development of a wildlife management plan. A wildlife management plan can be developed based on a site visit and will be required if the non-certificated airport is going to request federal grants for the purpose of mitigating wildlife hazards.

3.5 Wildlife Hazard Management Plan.

- 3.5.1 The FAA will consider the results of the assessment, along with the aeronautical activity at the airport and the views of the airport operator and airport users, in determining whether a wildlife management plan is needed for certificated airports, or recommended for non-certificated airports.
- 3.5.2 If the FAA determines that a wildlife management plan is needed for a certificated airport, the airport operator must formulate a plan, using the assessment as its basis and submit to the FAA for approval. If the FAA recommends that a non-certificated airport develop a plan, either an assessment or a site visit can be used as the basis for the wildlife management plan. Airports should consult AC 150/5200-38, *Protocol for the Conduct and Review of Wildlife Hazard Site Visits, Wildlife Hazard Assessments, and Wildlife Hazard Management Plans*, for further information on preparation and implementation requirements for their wildlife management plan.

- 3.5.3 The goal of an airport's wildlife management plan is to minimize the risk to aviation safety, airport structures or equipment, or human health posed by populations of hazardous wildlife on and around the airport. For wildlife management plans to effectively reduce wildlife hazards on and near airports, accurate and consistent wildlife strike reporting is essential. Airports should consult AC 150/5200-32, *Reporting Wildlife Aircraft Strikes*, for further information on responsibilities and recommendations concerning wildlife strikes.
- 3.5.4 The wildlife management plan must identify hazardous wildlife attractants on or near the airport and the appropriate wildlife management techniques to minimize the wildlife hazard. It must also prioritize the management measures.

3.6 Local Coordination.

The FAA recommends establishing a Wildlife Hazards Working Group to facilitate the communication, cooperation, and coordination of the airport and its surrounding community necessary to ensure the effectiveness of the wildlife management plan. The cooperation of the airport community is essential to prevent incompatible development in the airport vicinity. Whether on or off the airport, input from all involved parties must be considered when a potentially hazardous wildlife attractant is being proposed. Based on available resources, airport operators should undertake public education activities with the local planning agencies because some activities in the vicinity of an airport, while harmless under normal conditions, can attract wildlife and present a danger to aircraft (see Paragraphs 4.5 to 4.8). For example, if public trails are planned near wetlands or in parks adjoining airport property, the public should know that feeding birds and other wildlife in the area may pose a risk to aircraft.

3.7 Operational Notifications of Wildlife Hazards.

- 3.7.1 Operational notifications include active correspondence addressing wildlife issues on or near an airport, notifications and alerts. If an existing land-use practice creates a wildlife hazard and the land-use practice or wildlife hazard cannot be immediately eliminated, airport operators must issue a Notice to Airmen (NOTAM) and encourage the land owner or manager to take steps to control the wildlife hazard and minimize further attraction. Permanent attractions that cannot be eliminated or mitigated may be noted in the Airport/Facility Directory. NOTAMS and Airport/Facility Directory notifications are not appropriate for short-term or immediate advisories that can be relayed via Pilot Reports, direct air traffic control voice communications, or temporary Automated Terminal Advisory System alerts. Care should be given to avoid the continual broadcast of general warnings for extended periods of time. General warnings such as "birds in the vicinity of the aerodrome" offer little timely information to aid pilots and eventually may be ignored if not updated.
- 3.7.2 The Automated Terminal Advisory System (ATIS) is a continuous broadcast of recorded aeronautical information for aerodromes and their immediate surroundings. ATIS broadcasts contain essential information, such as current weather information,

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active runways, available approaches, wildlife hazards and any other information required by the pilots. They indicate significant (moderate or severe) wildlife activity, as reported by an approved agency that presents temporary hazards on the ATIS broadcast. Pilots take notice of available ATIS broadcasts before contacting the local control unit, which reduces the controllers' workload and relieves frequency congestion. The recording is updated in fixed intervals or when there is a significant change in the information. Although ATIS broadcasts involving wildlife should be timely and specific, pilots do not need to know species-specific information. General descriptive information detailing size and number of animals, locations and timing of occurrence provides useful, actionable information for pilots.

- 3.7.3 A pilot report (PIREP) is reported by a pilot to indicate encounters of hazardous weather (e.g., icing or turbulence) and hazardous wildlife. Pilot reports are short-lived warnings providing immediate information on pilot observations that are transmitted in real-time to air traffic control. Large animals near active surfaces, soaring vultures and raptors within approach/ departure corridors and waterfowl such as geese feeding in grassy areas next to runways are all examples of pilot reports generated by pilots.

3.8 Federal and State Depredation Permits.

The FAA recommends that airports maintain federal and state depredation permits to allow mitigation and/ or removal of hazardous species. All protected species require special permits for lethal mitigation or capture and relocation procedures. Similarly, endangered or threatened species mitigation also requires special permits. The FAA recommends that airports work closely with a Qualified Airport Wildlife Biologist during the U.S. Fish and Wildlife Service consultation and permitting process. The following Orders can help airports reduce risks from hazardous species by allowing private citizens to control hazardous species off airport properties without the need for a Federal depredation permit.

3.8.1 Standing Depredation Orders.

- 3.8.1.1 Federal law allows people to protect themselves and their property from damage caused by migratory birds. Provided no effort is made to kill or capture the birds, a depredation permit is not required to merely scare or herd depredating migratory birds other than endangered or threatened species or bald or golden eagles (50 CFR 21.41).
- 3.8.1.2 In addition, certain species of migratory birds may be mitigated without a federal permit under specific circumstances, many of which relate to agricultural situations. The following Standing Depredation Orders have applicability near airports:
- 50 CFR § 21.49- Control Order for Resident Canada Geese at Airports and Military Airfields.
 - 50 CFR § 21.50- Depredation Order for Resident Canada Geese Nests and Eggs.

- 50 CFR § 21.43 - Depredation Order for Blackbirds, Cowbirds, Crows, Grackles, and Magpies.
- 50 CFR § 21.54 - Control Order for Muscovy Ducks in the United States.
- 50 CFR § 21.55 - Control Order for Invasive Migratory Birds in Hawaii.

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CHAPTER 4. RECOMMENDED PROCEDURES FOR THE FAA, AIRPORT OPERATORS AND OTHER GOVERNMENT ENTITIES REGARDING OFF-AIRPORT ATTRACTANTS

4.1 FAA Notification and Review of Proposed Land-Use Practice Changes in the Vicinity of Public-Use Airports.

4.1.1 For projects that are located within 5 miles of the airport's aircraft operations area, the FAA may review development plans, proposed land-use changes, operational changes, major federal actions or wetland mitigation plans to determine if such changes increase risk to airport safety by attracting hazardous wildlife on and around airports. The FAA is not a permitting agency for land use modifications that occur off airport properties, therefore, such reviews are typically initiated by state or federal permitting agencies seeking FAA input on new or revised permits. Each of the land uses listed in Chapter 2 of this AC has the potential to pose a risk to airport operations when they are located within the separation distances provided in Paragraphs 1.2 through 1.4.

4.1.2 Off-site land use modifications near airports may include an assessment of risk for facilities and land-use changes and, if necessary, mitigation strategies that may reduce risk to an acceptable level. However, the FAA recognizes that individual facilities or land-use modifications may present a range of attractants to different species, resulting in varying levels of risk. Therefore, the FAA considers each proposal on a case-by-case basis.

4.1.3 The FAA analyzes each land-use modification or new facility proposal prior to its establishment or any significant planned changes to design or operations that may increase the risk level. As part of a review, the FAA considers several factors that include, but are not limited to:

1. Type of attractant;
2. Size of attractant;
3. Location/distance of attractant from airport;
4. Design (e.g., construction, material, mitigation techniques employed into design);
5. Operation (e.g., cleanliness, constancy/ volume of use, seasonality, time of day);
6. Monitoring protocols (e.g., frequency, documentation, evaluation, species identification and number thresholds that trigger actions of communication or mitigation, baseline wildlife data);
7. Mitigation protocols (e.g., responsibilities, methods, intensity, pre-determined objectives, documentation, evaluation); and
8. Communication protocols to airport and/ or air traffic control tower;

4.1.4 The review of these factors may result in FAA recommended additions or modifications to a conditional use permit that allows the permitting agency to track compliance with the permittee obligations. Such conditions placed within a permit

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may involve a comprehensive outline and recognition of individuals responsible for monitoring, communication, and mitigation measures if certain action thresholds are met. Action thresholds are defined in this instance as those pre-determined parameters (e.g., number, location, behavior, time of day) of specific hazardous species that would trigger a mitigation response. Additionally, baseline data should be used to determine the effect, if any, on wildlife populations at the proposed off-site location and/or at the airport.

- 4.1.5 Baseline data may need to be collected, depending on the existence of useful data and timeline for site modification. If, after taking into account the factors above, FAA determines that a facility poses a significant risk to airport safety, FAA will object to its establishment or renewal.
- 4.1.6 For projects that are located within 5 miles of the airport's aircraft operations area, the FAA Airport District Office may review development plans, proposed land-use changes, operational changes, major federal actions or wetland mitigation plans to determine if such changes present potential wildlife hazards to aircraft operations. The FAA considers sensitive airport areas as those that lie under or next to approach or departure airspace. This brief examination should indicate if further investigation is warranted.
- 4.1.7 Where a Qualified Airport Wildlife Biologist has conducted a further study to evaluate a site's compatibility with airport operations, the FAA may use the study results to make a determination.

4.2 Waste Management Facilities.

4.2.1 Notification of New/Expanded Project Proposal.

- 4.2.1.1 49 U.S.C. § 44718(d), prohibits the construction or establishment of new municipal landfills within 6 miles of certain public-use airports, when both the airport and the landfill meet specific conditions. See Paragraph 2.2 of this guidance for a more detailed discussion of these restrictions.
- 4.2.1.2 The Environmental Protection Agency (EPA) requires any landfill operator proposing a new or expanded waste disposal operation within 5 miles of a runway end to notify the appropriate FAA Regional Airports Division Office and the airport operator of the proposal. See 40 CFR § 258, *Criteria for Municipal Solid Waste Landfills*, Section 258.10, *Airport Safety*. The EPA also requires owners or operators of new landfill units, or lateral expansions of existing MSWLF landfill units, that are located within 10,000 feet of any airport runway end used by turbine-powered aircraft, or within 5,000 feet of any airport runway end used only by piston-type aircraft, to demonstrate successfully that such units are not hazards to aircraft. (See 4.3.2 below.)

- 4.2.1.3 When new or expanded municipal landfills are being proposed near airports, landfill operators must notify the airport operator and the FAA of the proposal as early as possible pursuant to 40 CFR § 258.
- 4.2.1.4 The FAA discourages the development of waste disposal and other facilities, discussed in Chapter 2, located within the separation criteria specified in Paragraphs 1.2 through 1.4. To show that a waste-handling facility sited within the separations identified in Paragraphs 1.2 through 1.4 does not attract hazardous wildlife and does not threaten aviation, the developer must establish the facility will not handle putrescible material other than that as outlined in 2.2.4. The FAA recommends against any facility other than those outlined in 2.2.4 (enclosed transfer stations). The FAA will use this information to determine if the facility will be a hazard to aviation.

4.3 Other Land-Use Practice Changes.

- 4.3.1 The FAA encourages operators of public-use airports who become aware of proposed land use practice changes that may attract hazardous wildlife within 5 miles of their airports to notify their assigned Airport Certification Safety Inspector or Airports District Office Program Manager. The FAA also encourages proponents of such land use changes to notify the FAA as early in the planning process as possible. Advanced notice affords the FAA an opportunity (1) to evaluate the effect of a particular land-use change on aviation safety and (2) to support efforts by the airport sponsor to restrict the use of land next to or near the airport to uses that are compatible with the airport.
- 4.3.2 The airport operator, project proponent, or land-use operator may use FAA Form 7460-1, Notice of Proposed Construction or Alteration, or other suitable documents similar to FAA Form 7460-1 to notify the appropriate FAA Regional Airports Division Office. Project proponents can contact the appropriate FAA Regional Airports Division Office for assistance with the notification process prior to submitting Form 7460-1.
- 4.3.3 It is helpful if the notification includes a 15-minute quadrangle map of the area identifying the location of the proposed activity. The land-use operator or project proponent should also forward specific details of the proposed land-use change or operational change or expansion. In the case of solid waste landfills, the information should include the type of waste to be handled, how the waste will be processed, and final disposal methods.
- 4.3.4 Airports that have Received Federal Assistance.
Airports that have received Federal assistance are required under their grant assurances to take appropriate actions to restrict the use of land next to or near the airport to uses that are compatible with normal airport operations. See Grant Assurance 21. The FAA recommends that airport operators oppose off-airport land-use changes or practices, to

the extent practicable, within the separations identified in Paragraphs 1.2 through 1.4, which may attract hazardous wildlife. Failure to do so may lead to noncompliance with applicable grant assurances. The FAA will not approve the placement of airport development projects pertaining to aircraft movement in the vicinity of hazardous wildlife attractants without appropriate mitigating measures. Increasing the intensity of wildlife control efforts is not a substitute for preventing, eliminating or reducing a proposed wildlife hazard. Airport operators should identify hazardous wildlife attractants and any associated wildlife hazards during any planning process for airport development projects.

4.4 Coordination to Prevent Creation of New Off-Airport Hazardous Wildlife Attractants.

Airport operators should work with local and regional planning and zoning boards to be aware of proposed land-use changes, or modification of existing land uses, that could create hazardous wildlife attractants within the separations identified in Paragraphs 1.2 through 1.4. Pay particular attention to proposed land uses involving creation or expansion of wastewater treatment facilities, development of wetland mitigation sites, or development or expansion of dredge spoil containment areas. At the very least, it is recommended that airport operators are on the notification list of the local planning board or equivalent review entity for all communities located within 5 miles of the airport, so they will receive notification of any proposed project and have the opportunity to review it for attractiveness to hazardous wildlife. This may be accomplished through one or more of the following:

4.4.1 Site-specific Criteria.

The airport should establish site-specific criteria for assessment of land uses attractive to hazardous wildlife and locations that would be of concern based on wildlife strikes and on wildlife abundance and activity at the airport and in the local area. These criteria may be more selective, but should not be less restrictive than this guidance.

4.4.2 Outreach.

Airports should actively seek to provide educational information and/ or provide input regarding local development, natural resource modification or wildlife-related concerns that affect wildlife hazards and safe air travel.

4.4.2.1 External Outreach.

Airport operators and a Qualified Airport Wildlife Biologist should consider outreach to local planning and zoning organizations on land uses of concern or to local organizations responsible for natural resource management (including wildlife, wetlands, and parks.) Airports should also consider developing and distributing position letters and educational materials on airport-specific concerns regarding wildlife hazards, wildlife activity and attraction. Finally, airports should provide formal comments on local procedures, laws, ordinances, plans, and regulatory actions such as permits related to land uses of concern.

4.4.2.2 **Internal Outreach.**

Airports should consider developing and distributing position letters and educational materials on airport-specific concerns regarding species identification and mitigation procedures, wildlife hazards, wildlife activity and attraction to employees and personnel with access to the aircraft operations area.

4.5 **Coordination on Existing Off-Airport Hazardous Wildlife Attractants.**

Airports are encouraged to work with landowners and managers to cooperatively develop procedures to monitor and manage hazardous wildlife attraction. If applicable, these procedures may include:

1. Conducting a wildlife hazard site visit by a wildlife biologist meeting the qualification requirements of Advisory Circular 150/5200-36, *Qualifications for Wildlife Biologist Conducting Wildlife Hazard Assessments and Training Curriculums for Airport Personnel Involved in Controlling Wildlife Hazards on Airports*
2. Conducting regular, standardized, wildlife monitoring surveys;⁴
3. Establishing threshold numbers of wildlife which would trigger certain actions and/or communications;
4. Establishment of procedures to deter or remove hazardous wildlife.

4.6 **Prompt Remedial Action.**

For attractants found on and off airport property, and with landowner or manager cooperation, Part 139 certificated airports must take immediate action in accordance with their Airport Certification Manual and the requirements of Part 139.337, to alleviate wildlife hazards whenever they are detected. It is also recommended that non-certificated airports take immediate action to alleviate wildlife hazards whenever they are detected. In addition, airports should take prompt action to identify the source of attraction and cooperatively develop procedures to mitigate and monitor the attractant. **For Part 139 Certificated airports, immediate actions are required in accordance with 139.337(a).**

4.7 **FAA Assistance.**

If there is a question on the implementation of any of the guidance in this section, contact the FAA Regional Airports Division for assistance.

⁴ Recommended survey protocols can be found in AC 150/5200-38, *Protocol for the Conduct and Review of Wildlife Hazard Site Visits, Wildlife Hazard Assessments, and Wildlife Hazard Management Plans*, and DeVault, T.L., B.F. Blackwell, and J.L. Belant, eds. 2013. *Wildlife in Airport Environments: Preventing Animal–Aircraft Collisions through Science-Based Management*. Johns Hopkins University Press, Baltimore, MD, USA. 181 pp.

4.7.1 Airport Documentation Procedures.

Airports should document on-site and off-site wildlife attractants as part of their “Wildlife Hazard Management Plan Annual Review,” “Wildlife Hazard Management Plan Review Following a Triggering Event,” and the airport’s Continual Monitoring Annual Report (as outlined in FAA Advisory Circular 150/5200-38). As a best management practice, airports may choose to keep a log to track contacts from landowners or managers, permitting agencies, or other entities concerning land uses near the airport.

APPENDIX A. DEFINITIONS OF TERMS USED IN THIS ADVISORY CIRCULAR**A.1 General.**

This appendix provides definitions of terms used throughout this AC.

1. **Air operations area.** Any area of an airport used or intended to be used for landing, takeoff, or surface maneuvering of aircraft. An air operations area includes such paved areas or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiways, or apron.
2. **Airport operator.** The operator (private or public) or sponsor of a public-use airport.
3. **Approach or departure airspace.** The airspace, within 5 statute miles of an airport, through which aircraft move during landing or takeoff.
4. **Bird balls.** High-density plastic floating balls that can be used to cover ponds and prevent birds from using the sites.
5. **Certificate holder.** The holder of an Airport Operating Certificate issued under 14 C.F.R. Part 139.
6. **Construct a new municipal landfill.** To begin to excavate, grade land, or raise structures to prepare a municipal solid waste landfill as permitted by the appropriate regulatory or permitting agency.
7. **Detention ponds.** Storm water management ponds that hold storm water for short periods of time, a few hours to a few days.
8. **Establish a new municipal landfill.** When the first load of putrescible waste is received on-site for placement in a prepared municipal solid waste landfill.
9. **Fly ash.** The fine, sand-like residue resulting from the complete incineration of an organic fuel source. Fly ash typically results from the combustion of coal or waste used to operate a power generating plant.
10. **General aviation aircraft.** Any civil aviation aircraft operating under 14 CFR Part 91.
11. **Hazardous wildlife.** Species of wildlife (birds, mammals, reptiles), including feral and domesticated animals, not under control that may pose a direct hazard to aviation (i.e., strike risk to aircraft) or an indirect hazard such as an attractant to other wildlife that pose a strike hazard or are causing structural damage to airport facilities (e.g., burrowing, nesting, perching).
12. **Municipal Landfill.** A publicly or privately owned discrete area of land or an excavation that receives household waste and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined under 40 CFR § 257.2. A municipal landfill may receive other types wastes, such as commercial solid waste, non-hazardous sludge, small-quantity generator waste, and

industrial solid waste, as defined under 40 CFR § 258.2. A municipal landfill can consist of either a stand-alone unit or several cells that receive household waste.

13. **New municipal landfill.** A municipal solid waste landfill that was established or constructed after April 5, 2001.
14. **Piston-powered aircraft.** Fixed-wing aircraft powered by piston engines.
15. **Piston-use airport.** Any airport that does not sell Jet-A fuel for fixed-wing turbine-powered aircraft, and primarily serves fixed-wing, piston-powered aircraft. Incidental use of the airport by turbine-powered, fixed-wing aircraft would not affect this designation. However, such aircraft should not be based at the airport.
16. **Public agency.** A state or political subdivision of a state, a tax-supported organization, or an Indian tribe or pueblo (49 U.S.C. § 47102(19)).
17. **Public airport.** An airport used or intended to be used for public purposes that is under the control of a public agency; and of which the area used or intended to be used for landing, taking off, or surface maneuvering of aircraft is publicly owned (49 U.S.C. § 47102(20)).
18. **Public-use airport.** An airport used or intended to be used for public purposes where the area used or intended to be used for landing, taking off, or surface maneuvering of aircraft may be under the control of a public agency or privately owned and used for public purposes (49 U.S.C. § 47102(21)).
19. **Putrescible waste.** Solid waste that contains organic matter capable of being decomposed by micro-organisms and of such a character and proportion as to be capable of attracting or providing food for birds (40 CFR §257.3-8).
20. **Putrescible-waste disposal operation.** Landfills, garbage dumps, underwater waste discharges, or similar facilities where activities include processing, burying, storing, or otherwise disposing of putrescible material, trash, and refuse.
21. **Retention ponds.** Storm water management ponds that hold water for more than 48 hours.
22. **Risk.** Risk is the relationship between the severity and probability of a threat. It is the product of hazard level and abundance in the critical airspace, and is thus defined as the probability of a damaging strike with a given species.
23. **Runway protection zone.** An area off the runway end to enhance the protection of people and property on the ground (see AC 150/5300-13). The dimensions of this zone vary with the airport design, aircraft, type of operation, and visibility minimum.
24. **Scheduled air carrier operation.** Any common carriage passenger-carrying operation for compensation or hire conducted by an air carrier or commercial operator for which the air carrier, commercial operator, or their representative offers in advance the departure location, departure time, and arrival location. It does not include any operation that is conducted as a supplemental operation under 14 CFR Part 119 or as a public charter operation under 14 CFR Part 380 (14 CFR § 119.3).

25. **Sewage sludge.** Any solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works. (40 CFR § 257.2)
26. **Sludge.** Any solid, semi-solid, or liquid waste generated from a municipal, commercial or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effect. (40 CFR § 257.2).
27. **Solid waste.** Any garbage, refuse, sludge, from a waste treatment plant, water supply treatment plant or air pollution control facility and other discarded material, including, solid liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved materials in domestic sewage, or solid or dissolved material in irrigation return flows or industrial discharges which are point sources subject to permits under section 402 of the Clean Water Act, or source, special nuclear, or by product material as defined by the Atomic Energy Act of 1954.(40 CFR § 257.2).
28. **Turbine-powered aircraft.** Aircraft powered by turbine engines including turbojets and turboprops but excluding turbo-shaft rotary-wing aircraft.
29. **Turbine-use airport.** Any airport that sells fuel for fixed-wing turbine-powered aircraft.
30. **Wastewater treatment facility.** Any devices and/or systems used to store, treat, recycle, or reclaim municipal sewage or liquid industrial wastes, including publicly owned treatment works, as defined by Section 212 of the Clean Water Act. This definition includes any pretreatment involving the reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a publicly owned treatment system. (See 40 CFR § 403.3 (q), (r), & (s)).
31. **Wildlife.** Any wild animal, including without limitation any wild mammal, bird, reptile, fish, amphibian, mollusk, crustacean, arthropod, coelenterate, or other invertebrate, including any part, product, egg, or offspring thereof. 50 CFR § 10.12. As used in this AC, wildlife includes feral animals and domestic animals out of the control of their owners (14 CFR Part 139, Certification of Airports).
32. **Wildlife attractants.** Any human-made structure, land-use practice, or human-made or natural geographic feature that can attract or sustain hazardous wildlife within the landing or departure airspace or the airport's aircraft operations area. These attractants can include architectural features, landscaping, waste disposal sites, wastewater treatment facilities, agricultural or aquaculture activities, surface mining, or wetlands.

33. **Wildlife hazard.** A potential for a damaging aircraft collision with wildlife on or near an airport.
34. **Wildlife strike.** A wildlife strike is deemed to have occurred when:
- a. A strike between wildlife and aircraft has been witnessed;
 - b. Evidence or damage from a strike has been identified on an aircraft;
 - c. Bird or other wildlife remains, whether in whole or in part, are found:
 - i. Within 250 feet of a runway centerline or within 1,000 feet of a runway end unless another reason for the animal's death is identified or suspected, unless another reason for the animal's death is identified or;
 - ii. On a taxiway or anywhere else on or off airport that there is reason to believe was the result of a strike with an aircraft.
 - d. The presence of birds or other wildlife on or off the airport had a significant negative effect on a flight (i.e., aborted takeoff, aborted landing, high-speed emergency stop, aircraft left pavement area to avoid collision with animal).

APPENDIX B. ADDITIONAL RESOURCES**B.1 Regulations**

- 14 CFR § 139.337, *Wildlife Hazard Management*
- 40 CFR § 258, *Criteria for Municipal Solid Waste Landfills*

B.2 Advisory Circulars

- AC 150/5200-32, *Reporting Wildlife Aircraft Strikes*
- AC 150/5200-33, *Hazard Wildlife Attractants on or Near Airports*
- AC 150/5200-34, *Construction or Establishment of New Landfills Near Public Airports*
- AC 150/5200-36, *Qualifications for Wildlife Biologist Conducting Wildlife Hazard Assessments and Training Curriculum for Airport Personnel Involved in Controlling Wildlife Hazards on Airports*
- AC 150/5200-38, *Protocol for the Conduct and Review of Wildlife Hazard Site Visits, Wildlife Hazard Assessments, and Wildlife Hazard Management Plans*
- AC 150/5220-25, *Airport Avian Radar Systems*
- AC 150/5210-24, *Airport Foreign Object Debris (FOD) Management*

B.3 Certification Alerts

- Certalert No. 97-09, *Wildlife Hazard Management Plan Outline* (11/17/1997)
- Certalert No. 98-05, *Grasses Attractive To Hazardous Wildlife* (9/21/1998)
- Certalert No. 06-07, *Requests by State Wildlife Agencies to Facilitate and Encourage Habitat for State Listed Threatened and Endangered Species and Species of Special Concern on Airports* (11/21/2006)
- Certalert No. 13-01, *Federal and State Depredation Permit Assistance* (1/30/2013)
- Certalert No.14-01, *Seasonal Mitigation of Hazardous Species at Airports: Attention to Snowy Owls* (2/26/2014)
- Certalert No. 16-03, *Recommended Wildlife Exclusion Fencing* (8/2016)

2/21/2020

B.4 Airport Cooperative Research Program Reports

These, and other wildlife / aviation reports, are available from the Transportation Research Board of the National Academies (TRB) at <http://www.trb.org/Publications/Publications.aspx>.

- ACRP Research Report 198: Wetland Mitigation, Volume 2, A Guidebook for Airports (2019)
- ACRP Synthesis 92: Airport Waste Management and Recycling Practices (2018)
- ACRP Research Report 174: Guidebook and Primer (2018)
- ACRP Report 122: Innovative Airport Responses to Threatened / Endangered Species (2015)
- ACRP Report 125: Balancing Airport Stormwater and Bird Hazard Management (2015)
- ACRP Report 145: Applying an SMS Approach to Wildlife Hazard Management (2015)
- ACRP Synthesis 39 Report: Airport Wildlife Population Management (2013)
- ACRP Synthesis 52 Report: Habitat Management to Deter Wildlife at Airports (2014)
- ACRP Synthesis 23 Report: Bird Harassment, Repellent, and Deterrent Techniques for Use on and Near Airports (2011)
- ACRP Report 32: Guidebook for Addressing Aircraft/Wildlife Hazards at General Aviation Airports (2010)

B.5 Manuals

- Wildlife Hazard Management at Airports - A Manual for Airport Personnel (2005)

B.6 Orders

- 50 CFR § 21.49, Control Order for Resident Canada Geese at Airports and Military Airfields
- 50 CFR § 21.50, Depredation Order for Resident Canada Geese Nests and Eggs
- 50 CFR § 21.43, Depredation Order for Blackbirds, Cowbirds, Crows, Grackles, and Magpies
- 50 CFR § 21.54, Control Order for Muscovy Ducks in the United States
- 50 CFR § 21.55, Control Order for Invasive Migratory Birds in Hawaii

Advisory Circular Feedback

If you find an error in this AC, have recommendations for improving it, or have suggestions for new items/subjects to be added, you may let us know by (1) mailing this form to Manager, Airport Safety and Operations Division, Federal Aviation Administration ATTN: AAS-300, 800 Independence Avenue SW, Washington DC 20591 or (2) faxing it to the attention of AAS-300 at (202) 267-5257.

Subject: AC 150/5200-33C

Date: _____

Please check all appropriate line items:

- An error (procedural or typographical) has been noted in paragraph _____ on page _____.
- Recommend paragraph _____ on page _____ be changed as follows:

- In a future change to this AC, please cover the following subject:
(Briefly describe what you want added.)

- Other comments:

- I would like to discuss the above. Please contact me at (phone number, email address).

Submitted by: _____

Date: _____

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To: Morrow County Board of Commissioners
 From: Tamra Mabbott, Planning Director
 CC: Planning Commission
 BOC Date: January 17, 2026
 RE: Monthly Planning Update

Mission Statement

Morrow County Planning Department provides guidance and support to citizens for short-term and long-range planning in land use, to sustain and improve the county's lands for future generations. Our goal is to foster development where people can live, work & play.

2025 Planning Department Applications

Planning Department received a total of 304 applications in 2025, nearly identical to the 307 applications received in 2024. However, both years' totals were more than 50% higher than 2023, and more than double 10 years ago. Zoning Permits increased 11% from 152 to 169, which was the most in any recorded year dating back to 2005, with Land Use Compatibility Statements (LUCS) being the second-most frequent application received. Medical Hardship Permits jumped 600% from 1 to 6, thanks to code compliance efforts identifying temporary RV use. Conditional Use Permits dropped from 22 to 10, due to some uses that changed classification from a Conditional Use to Administrative Review, as well as a decrease in CUPs for home occupations for trucking from 2024. Regardless, this was still the second-most CUPs received since 2012. Graphs are attached summarizing all the applications received in 2025.

Energy

Staff are reviewing several projects that are in various stages of permitting with the State of Oregon Energy Facility Siting Council (EFSC). A large solar project approved by the State of Oregon has filed for Chapter 11 bankruptcy, with as recent as today it was announced that project has been purchased by AWS which means the project will likely move forward to development phase.

Staff met on January 13th with EFSC Senior Siting Officer and staff from Hailey Aldrich, to discuss compliance with existing and future projects. Corey Sweeney, Weed Supervisor, also joined and shared success and ongoing challenges with weed abatement and energy projects. Questions from the public have arisen about the construction and operation of the Boardman to Hemingway project, namely safety of transmission lines. A report from the project compliance officer is forthcoming.

Transmission Lines

A related energy development facility requiring land use review is transmission lines and electrical power substations. Numerous new lines are proposed to serve solar and wind energy development projects and data centers. Land use standards that apply to transmission lines are different than the process for permitting renewable energy projects. Transmission lines are permitted locally, at the county and city level, unless a line crosses multiple municipal jurisdictions and, is 10 miles or more in length. The larger projects are permitted by EFSC, with county involvement at various stages of the state process, which culminates in a local land use permit.

County Planning staff worked with staff and counsel of the Umatilla Electric Cooperative (UEC) on permitting the transmission line Umatilla-Morrow Project, which is under review by EFSC. The line will cross two zones within the Umatilla Army Depot, as well as on land zoned Exclusive Farm Use. Currently, that project is in the stage where EFSC staff have issued a preliminary Application for Site Certificate (pASC). Siting Council (EFSC) as follow up to the county comments to EFSC dated September 3rd. The UEC project is a bi-county transmission line that will connect substations and switchyards in Umatilla and Morrow Counties. For more information about the project, here is a link to the Oregon Department of Energy website <https://www.oregon.gov/energy/facilities-safety/facilities/Pages/UMCC.aspx>

Here is a link to the Planning Department's online interactive energy map:

<https://www.arcgis.com/apps/dashboards/8508dc9076e84317a9fac30475a37bb0>

A summary of energy projects in Morrow County is available on the Planning Department's web page here:

https://www.morrowcountyor.gov/sites/default/files/fileattachments/planning/page/16138/morrow_county_energy_project_list.pdf

New Eastern Oregon Solar Siting Rules

After several months in the process, the new eastern Oregon Solar Siting Rules are officially part of the Morrow County Zoning Ordinance. The new rules became effective January 8, 2026. To review the language or background information about the new solar rules, a link to the packet is here: <https://morrowcoor.portal.civicclerk.com/event/1320/files/agenda/3005>

In Morrow County, a solar facility may be permitted as a Conditional Use Permit using one of two standards or criteria. A link to the MCZO is here:

https://www.morrowcountyor.gov/sites/default/files/fileattachments/planning/page/8881/3.010_efu_01-08-26.pdf

Columbia River Heritage Trail Concept Plan Update

Planning staff and J-U-B Engineering are finalizing the 2024-2025 Heritage Trail Concept Plan update. The Plan is scheduled for formal adoption as an Appendix to the Recreation Element of the Comprehensive Plan. Planning Commission hearing is scheduled for January 27, 2026, in Irrigon at the Don Adams Room in the North Morrow Government Building. The Board of Commissioners hearing is scheduled for February 21, 2026, also in Irrigon.

Once the plan is adopted, county staff from Planning and Parks Departments will begin to implement numerous recommendations in the Concept Plan. Anyone interested in being involved in the trail planning and implementation activities is encouraged to contact Clint Shoemake, Planning Technician at (541) 922-4624 X 5517 or cshoemake@morrowcountyor.gov.

New Goal 3 Farmland and Goal 4 Forestland Administrative Rules

Planners completed a code update to implement the new Land Conservation & Development Commission (LCDC) farm (Exclusive Farm Use) and forest (Forest Use) Administrative Rules. The statewide rules became effective January 1, 2025, and have been applied directly; however, the code update incorporated the language into the Morrow County Zoning Ordinance (MCZO). The code update process began with informal work sessions with the Planning Commission at their June 24, 2025, meeting and with the Board of Commissioners on July 2, 2025. Staff incorporated some additional code amendments recommended by the Board. The amendments were unanimously recommended for approval by the Planning Commission during the first hearing at their September 30, 2025, meeting. The Board of Commissioners followed the Planning Commission recommendation and adopted the code amendments on December 3, 2025, with a final hearing on December 17, 2025. This update to the MCZO was published and became effective January 8, 2026.

GIS Mapping and Drone:

At the request of, and in coordination with, the Public Works Department, the draft Plow Route Map organizes routes into priorities 1–4, with 1 being the highest. The interactive map will provide daily updates on road closures, helping crews and the public stay informed and plan travel safely during winter storms. To date, the aggregate miles plowed across all routes is approximately 3,500. The map is currently in draft form and is scheduled for official release by the end of January. The map will be made available to the public through a link on the Morrow County Website.



CODE COMPLIANCE

The Morrow County Code Compliance Planner continues to field code complaints throughout the county. Code enforcement focuses heavily on maintaining community standards and public safety through education, inspections, and enforcement actions. In addition to routine enforcement activities, the Compliance Planner has been working closely with legal counsel regarding a conditional use permit that was appealed to the Land Use Board



Monthly Activity Summary	
New Complaints	6
Follow-Up Inspections/Site Visits	8
Citations Issued	1
Medical Hardship Application	1
Violations Closed	2
Active/Open Violations	44

of Appeals (LUBA). This appeal has been a lengthy process and recently included oral arguments before the LUBA Referees on January 6, 2026. A final decision is expected in a few weeks. The matter will most likely be remanded back to code enforcement for further handling and coordination with the property owner.

WATER AND PLANNING ACTIVITIES

Water Advisory Committee

A summary of work on the implementation of the four water initiatives adopted by the Board of Commissioners in December 2024, as recommended by the Water Advisory Committee (WAC), is below.

Initiative 1: Update the comprehensive plan Goals 5 and 6. Assembling materials and soliciting volunteers to serve on a working group. The recent data and mapping analysis will be useful for this task.

Initiative 2: Develop a Morrow County Drinking Water Program. Underway at the Public Health Department.

Initiative 3: Support Regional Water Planning; staff have included budget for this work. Staff continue to provide support for county efforts working with neighbors.

Initiative 4: Partner in a Clean Water Consortium. This effort is underway with the formation and initial meetings of the Clean Water Consortium, led by Board Chair David Sykes. Planning Director Mabbott is a Board member and is continuing with various efforts to secure funding.

EPA Grant - Morrow Umatilla County Drinking Water-ROADMAP

GSI Water Solutions Inc. is now working on the Stage 3 Scope of Work. The Steering Committee met December 18th at the Stafford Hansell Government Center in Hermiston. GSI gave an overview of non-connection concepts for rural, domestic well owners and described areas to consider for one or two case studies. The meetings are open to the public.

Here is a link to the webpage for this project: <https://drinkingwaterroadmap.org/>

Clean Drinking Water Consortium (CWC)

There was not a CWC meeting in December.

Planning Director was appointed to the Boardman Source Water Protection Plan and agreed to participate given the importance of clean drinking water for residents living in and around Boardman. The topic complements work underway for the Morrow Umatilla County Drinking Water Roadmap project. An update will be shared later.

The LUBGWMA Committee met virtually on December 12th. State agencies gave a report on their respective work to implement the Nitrate Reduction Plan. Commissioner Peterson is the voting member. Planning Director Mabbott attended as alternate.

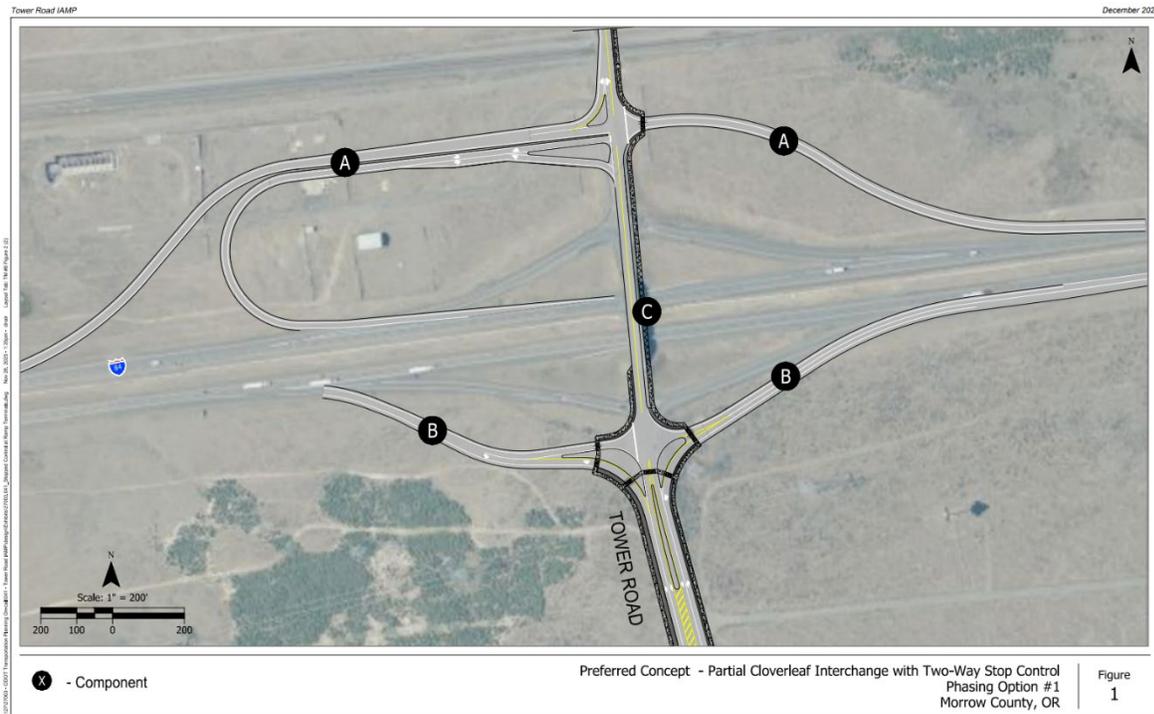
Public Health and Planning Directors met with the Benton Franklin County Water Quality Outreach person to discuss projects and programs related to nitrate contamination.

Transportation Planning

Tower Road Interchange Area Management Plan (IAMP)

The Planning Department remains committed to supporting public comments about the interchange design concepts and continues to work with the consultant team and ODOT in defining the county's role and financial contribution for this project. Team discussions are ongoing through bi-weekly check-ins. Currently, the engineer, Kittelson & Associates is reviewing finalize design concepts, evaluating phasing options, and anticipating Draft Technical Memoranda 6 and 7 for review in February 2026.

Below is an example of a preferred phasing option listed in technical memorandum 6. Materials available on website.



After the consulting team, ODOT and the County agree on final designs, Morrow County will adopt the IAMP as a Comprehensive Plan amendment. Adoption by the Oregon Transportation Commission (OTC) will follow county adoption. These plans and designs and other materials can be found on the county's website under Transportation Planning. [Tower Road 2025 IAMP | Morrow County Oregon](#)

Transportation System Plan (TSP) Update

A Scope of Work for the Morrow County Transportation System Plan (TSP) has been completed. Procurement for the project consultant was posted by the State of Oregon. The bid closed Monday, October 27th, 2025. Planning Staff participated in a pre-evaluation kickoff meeting on Thursday, October 30th, 2025, together with ODOT planners. The State of Oregon has issued an initial Notice of Intent to Award (NOITA) to one of the consultant proposers. The Planning work is anticipated to begin in early 2026, after the contract has been officially awarded and negotiations on the final scope of work has been finalized. Anyone interested in participating in serving on the

transportation planning committee please contact Kaitlin Kennedy in the Planning Department at (541) 922-4624 or kkennedy@morrowcountyor.gov

City of Boardman Transportation System Plan (TSP)

The City of Boardman recently adopted a new Transportation System Plan (TSP) and asked the county to co-adopt the plan for application within the urban growth area. The co-adoption hearing is scheduled for Planning Commission review during their January 27, 2026, meeting. The Planning Commission will make a recommendation on the legislative action to the Board of Commissioners, who are scheduled for a hearing at 1:30, February 18, 2026, in Irrigon.

Other

Planning Department is recruiting for a Principal Planner or Senior Planner. The position is posted on the county webpage. Please contact Tamra Mabbott, Planning Director, if you have an interest or would like to learn more about this exciting career opportunity.

<https://www2.appone.com/Search/Search.aspx?ServerVar=morrowcounty.appone.com>

Planning Director is working with a team of other County Planning Directors and staff at Department of Land Conservation and Development on a project to provide a better understanding of Statewide Planning Goals. This will continue throughout the next year.

Compliance Planner Kaitlin Kennedy, attended the annual Legal Issues Workshop on Friday, December 5th. This is a valuable training for planners.

Planning Director attended the annual meeting of the H2OEO in Hermiston. County Administrator gave an update on work of the county and Clean Water Consortium.

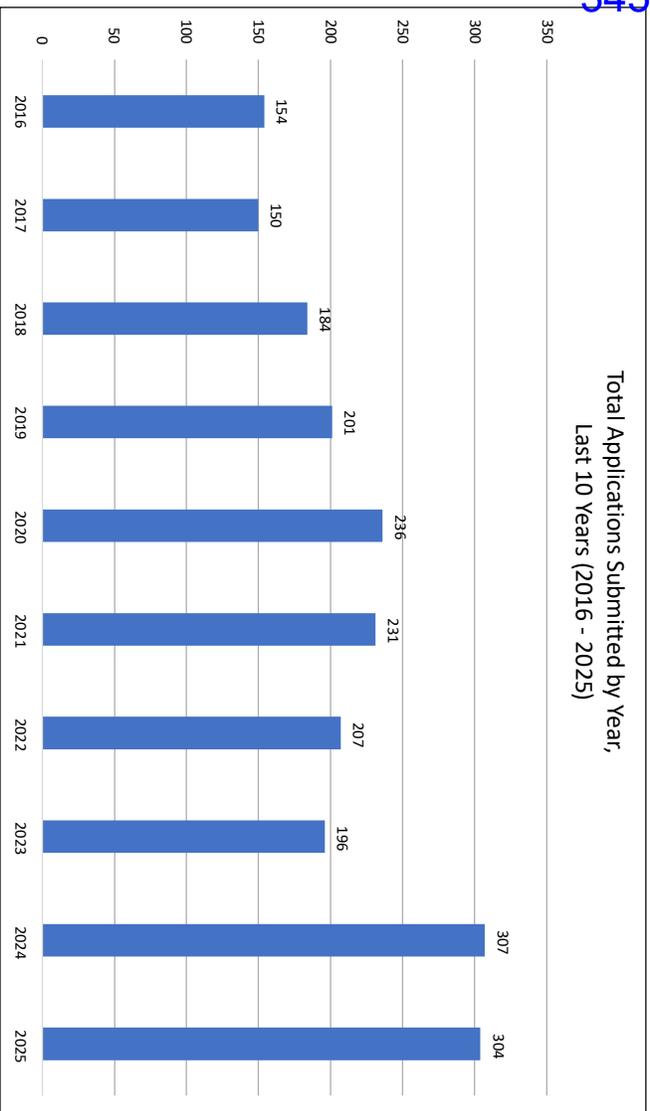
Staff have participated in two meetings with the City of Boardman regarding a urban growth boundary expansion. A formal application has not yet been submitted. After city processes the application, county will begin the process to co-adopt the new urban growth boundary.

Staff hosted meetings with developers to discuss multiple data center projects, including one pre-application for a new campus and changes to existing campuses. The discussion also identified communication challenges and opportunities during the permitting processes, and included a review of a Transportation Impact Analysis.

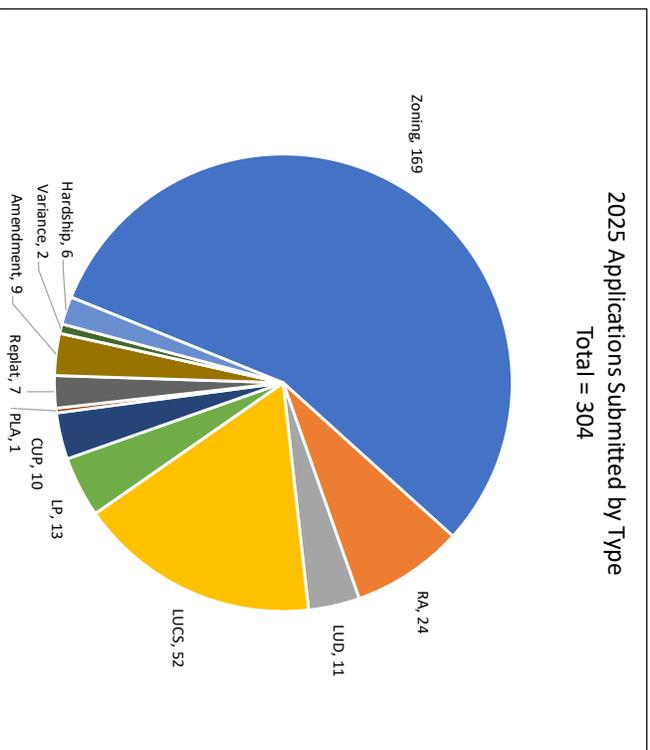
Morrow County Planning Department

Applications submitted CY 2025

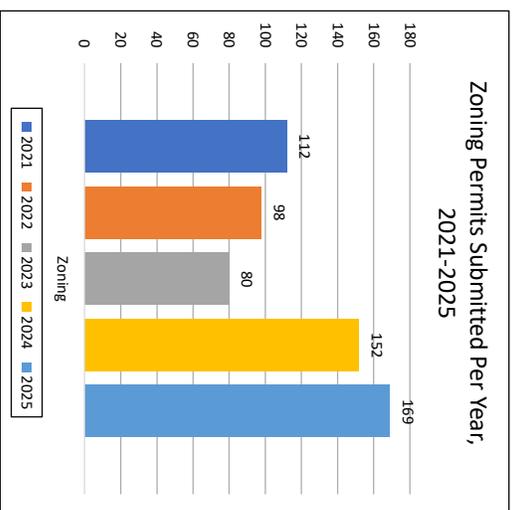
Total Applications Submitted by Year,
Last 10 Years (2016 - 2025)



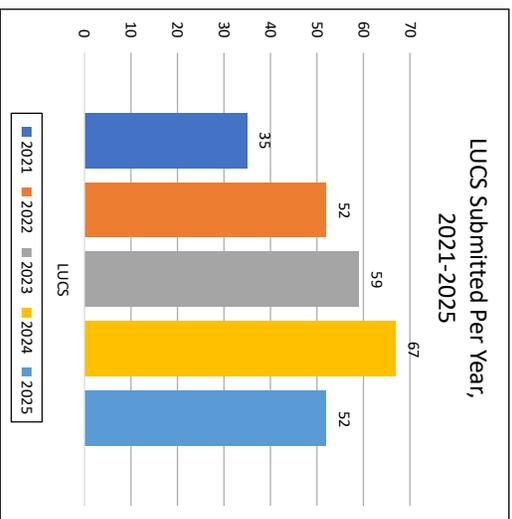
2025 Applications Submitted by Type
Total = 304



Zoning Permits Submitted Per Year,
2021-2025



LUCS Submitted Per Year,
2021-2025



Other Applications Submitted Per Year, 2021-2025

