



ECONOMIC DEVELOPMENT AUTHORITY AGENDA

Special Meeting
City of Brainerd, Minnesota
City Hall, 501 Laurel Street, Council Chambers
Tuesday, September 17, 2024 @ 5:00 PM

The public is invited to attend these meetings in person

Meetings are broadcast on CTC ch 8, Charter ch 181, YouTube, AppleTV, Roku, and Amazon FireTV

1. **Call To Order**

2. **Roll Call**

___K. Bevans ___T. Bieser ___J. Grecula ___G. Johnson ___M. Kirsch ___M. O'Day ___P.
Sandy ___K. Yeager

3. **Approval Of Agenda - Voice Vote**

4. **New Business**

A. **Consider VCV/Blockmetrix Revised PDA and Construction Plans**

5. **Adjourn**

Visit the City's Website at www.ci.brainerd.mn.us

MISSION

"Provide high quality, cost effective public services and leadership in creating a sustainable city"

MEMO



TO: EDA Board of Commissioners

FROM: James Kramvik, Community Development Director

DATE: September 17th, 2024

RE: Consider Revised Purchase and Development Agreement with Blockmetrix

INTRODUCTION

On March 3, 2022, the EDA conducted a duly noticed public hearing regarding the sale of 1911 Thiesse Drive and 1918 Thiesse Drive to VCV Digital Infrastructure Minnesota LLC for the development of a cryptocurrency mining facility (the "Minimum Improvements"), pursuant to a Purchase and Development Contract, dated March 3, 2022.

The EDA found that the conveyance of the Development Property was in conformance to the City's comprehensive plan, as approved by the City, and would facilitate the construction of a job-producing facility within the industrial park and increase the tax base of the City. The execution of the Contract and performance of the Authority's obligations thereunder, including the conveyance of the Development Property to the Developer, were in the best interest of the City and its residents. Following the public hearing, on March 3, 2022, the Authority approved the form and the execution and delivery of the Contract. The Contract was recorded on January 10, 2024 in the Office of the County Recorder of Crow Wing County.

The original PDA required VCV to commence construction of the Minimum Improvements within one hundred twenty (120) days after Closing (the "Construction Commencement Deadline") and use commercially reasonable and diligent efforts to substantially complete construction of the Minimum Improvements within 180 days following the Construction Commencement Deadline. VCV has failed to meet this requirement and Blockmetrix is requesting an amendment to the PDA to extend the Construction Commencement deadline to April 1, 2025.

Blockmetrix is requesting an amendment to the PDA to extend the construction commencement deadline, revise the minimum improvements for 1911 Thiesse Drive, and noted the transfer of the outstanding membership interests of the Developer to Blockmetrix. Blockmetrix, as the Developer, will be bound by all of the terms and provisions of the Contract.

MINIMUM IMPROVEMENTS

On June 8, 2023, VCV proposed a redesign of the Northern Property to construct two buildings that would utilize containers with immersion technology to improve efficiency and reduce noise. The EDA approved the change to the Minimum Improvements for 1911 Thiesse Drive.

Blockmetrix is now proposing a change to the Minimum Improvements for 1911 Thiesse Drive which is more conducive to their plans with the property. Blockmetrix has worked with staff on a redesign for

1911 Thiesse Dr. which includes office space, off-street parking, and warehousing space. The proposed use is permitted in the GI District and the site design adheres to the requirements of the Zoning Code. Blockmetrix has not proposed an alternative design for 1918 Thiesse Dr. Staff included the revised Construction Plans for the EDA to review.

In addition to the construction documents the revised PDA proposes to add a provision to the Contract, as amended hereby, that no former employee or owner of VCV Digital Infrastructure Minnesota LLC, VCV Digital or any affiliate thereof, shall own an interest in the Assignee or Assignor the after execution of this Assignment, Assumption and Amendment.

Also, Pursuant to Section 4.2(b) of the Contract, any proposed change to the Construction Plans shall be deemed approved by the Authority unless rejected, in whole or in part, by written notice by the Authority to the Developer within ten (10) days after receipt of the notice of such change. The Authority proposes to extend the period in which to provide written notice of rejection to any change to the Construction Plans from ten (10) days to thirty (30) days.

- **Screening:** There is no screening requirement for the property as the proposed use is no longer outdoor storage. Ground mounted transformers, coolers, and similar equipment shall be screened on all sides except those facing a building. The mechanical coolers will be screened inside a building and the transformers are positioned between the two buildings.
- **Fencing:** There is no proposed fencing at this time.
- **Sound:** Staff has provided an appendix to this document that calculates sound related to the outdoor coolers. Proposed sound levels are well within MPCA guidelines. The miners will be in a building and the facility will be utilizing immersion technology which will not affect exterior noise. The building containing the coolers will have slats on the side of the building for airflow. The roof covering the mechanical cooling structure will help dissipate sound back into the ground which will further reduce the decibels produced by the facility.
- **Setbacks:** All structures, driveways, and off-street parking meet the setback requirements of the GI District.
- **Driveways and Parking:** The proposed plans indicate the driveways and parking lot will be covered with bituminous asphalt. The GI District is exempt from off street parking requirements.
- **Exterior Building Material:** Metal panels shall not encompass more than an average of fifty (50) percent of street side. Blockmetrix is proposing 50% eifs on the façade of the building and 50% Square Rib Metal.
- **Landscaping Requirements:** Tree planting and parking lot landscape requirements in the GI District are only required along major thoroughfares. This property is exempt from landscaping requirements.
- **Building Official Comments:** The Building Official has no issue with the proposed development at this time. A full set of construction, mechanical, electrical, and plumbing plans will be reviewed prior to issuance of the Building Permit.
- **Fire Department Comments:** The Fire Department worked with Blockmetrix on redesigning the turning radius for the proposed driveway. The Fire Department is satisfied with both the width and turning radius of the driveway. An additional fire hydrant will most likely be required on the North side of the property and a fire suppression system will be required in the building.

- **City Engineer Comments:** The City Engineer conducted an initial review of the plans and from a stormwater perspective, there should not be any issues with the plans as presented. They are disturbing more than one acre so a MPCA Construction Stormwater permit will be required for development of the site, but they should not need to provide any additional stormwater rate control or treatment.
- **BPU Comments:** BPU has been provided the plan and has expressed no concerns at this time with the proposed layout of the property.

Video link displaying the difference in open air mining verses immersion mining

<https://www.youtube.com/watch?v=Hd2FqANes0M>

STAFF RECOMMENDATION

1. Approve the Resolution Approving Amendment to the Purchase and Development Agreement Between the EDA and Blockmetrix.

APPENDIX: SOUND CALCULATIONS

Kelvion Coolers

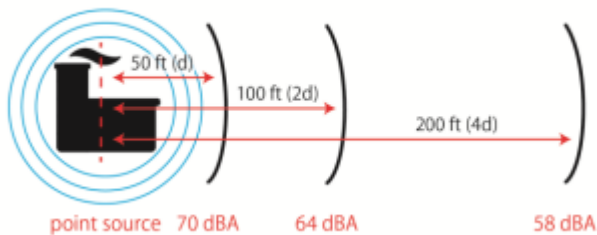
Blockmetrix proposes 8 cooling units for the facility consisting of 22 fans each.

Based on the specifications provided and email confirmation from the manufacturer, the cooling units have a sound pressure output of 68 dBA at 10 meters which is about 33 ft when running a full capacity.

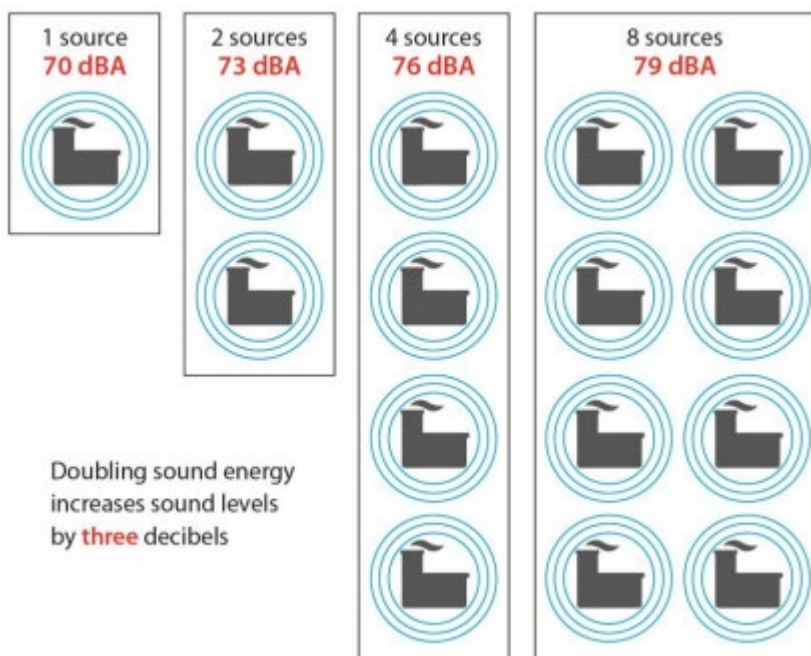
MPCA sound calculation formula

When the distance is doubled from a point source, the sound level decreases six decibels

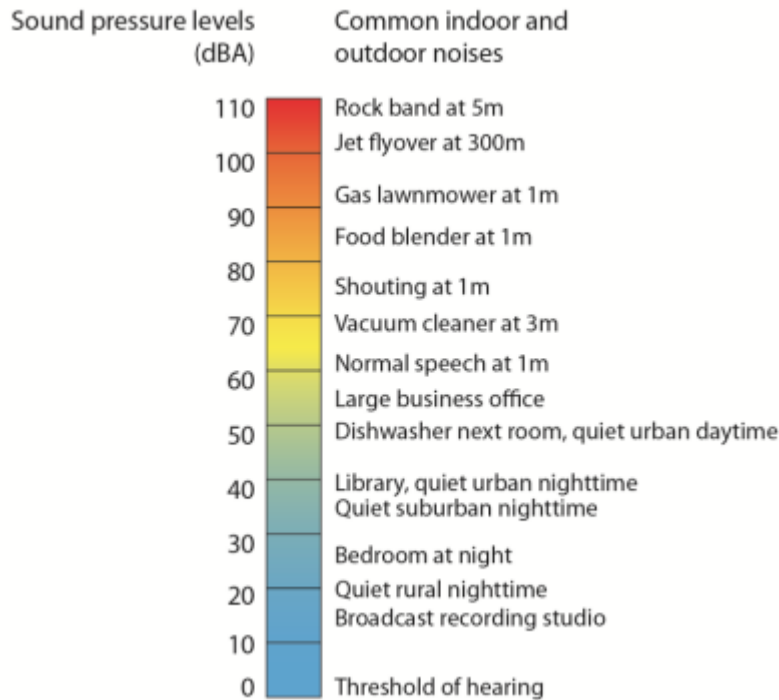
Example: If a sound level is: 70 decibels at 50 feet it will be 64 decibels at 100 feet, and 58 decibels at 200 feet



A doubling of sound energy yields an increase of three decibels. For example, each generator at a factory produces sound that is measured at 70 decibels, so running one generator would create sound measured at 70 dBA, turning on a second generator would increase sound by 3 dBA to 73 dBA, and doubling again to four generators would increase sound levels to 76.



Decibel levels of common noise sources



Blockmetrix facility sound calculation

- 1 Kelvion Cooler = 68 dBA
- 2 Kelvion Coolers = 71 dBA
- 4 Kelvion Coolers = 74 dBA
- 8 Kelvion Coolers = 77 dBA

Note: This does not take into account that the first cooler is approximately 150 ft from the eight cooler. Point source sound calculations assume that all coolers would be touching. Thus, the calculation presented above is slightly louder than what is to be expected.

This also does not account for the roof covering the coolers, which will significantly reduce sound to neighboring properties.

Distance Calculation

- 77 dBA at 33 ft
- 66 ft = 71 dBA
- 132 ft = 65 dBA
- 264 ft = 59 dBA
- 528 ft = 53 dBA
- 1,056 ft = 47 dBA
- 2,112 ft = 41 dBA

AERIAL MAP

The following calculations are depicted:

264 ft = 59 dBA (first ring)

528 ft = 53 dBA (second ring)

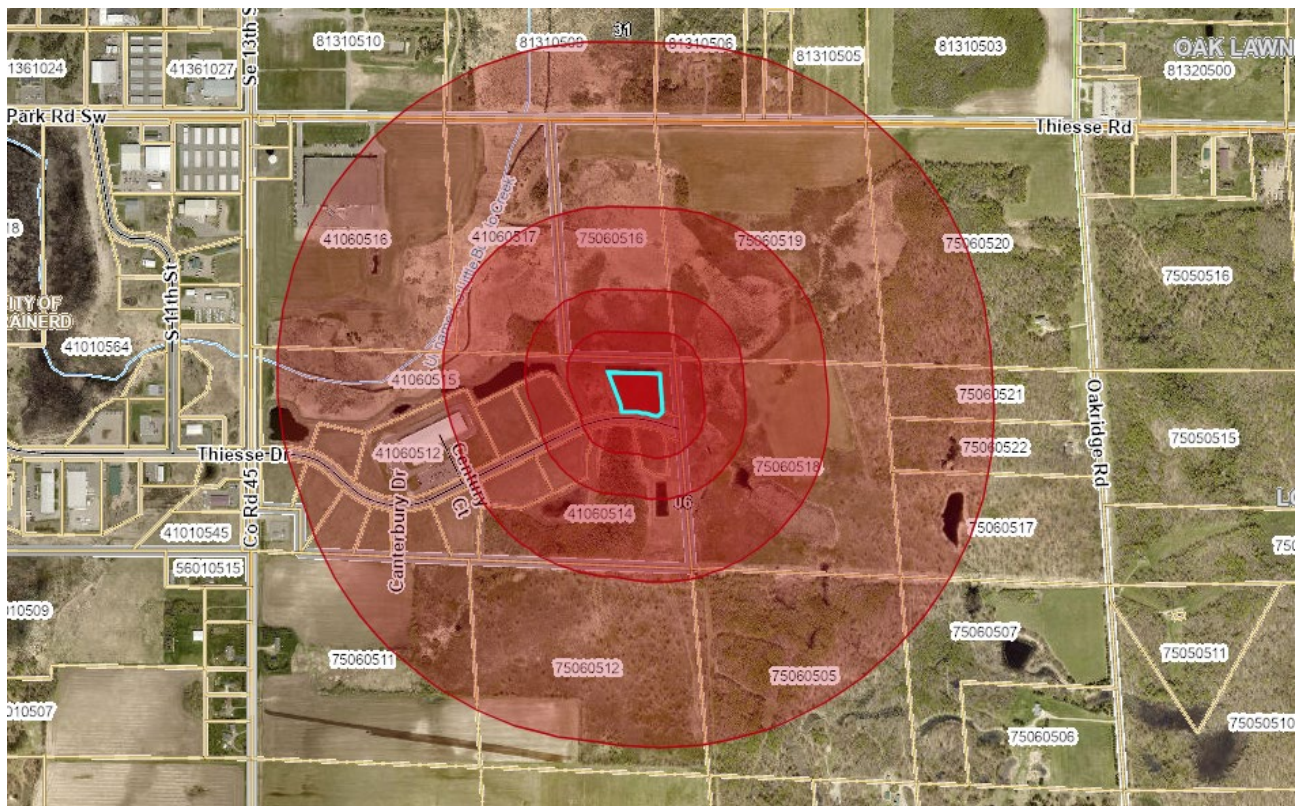
1,056 ft = 47 dBA (third ring)

2,112 ft = 41 dBA (fourth ring)

NAC 1: Residential housing, religious activities, camping and picnicking areas, health services, hotels, educational services

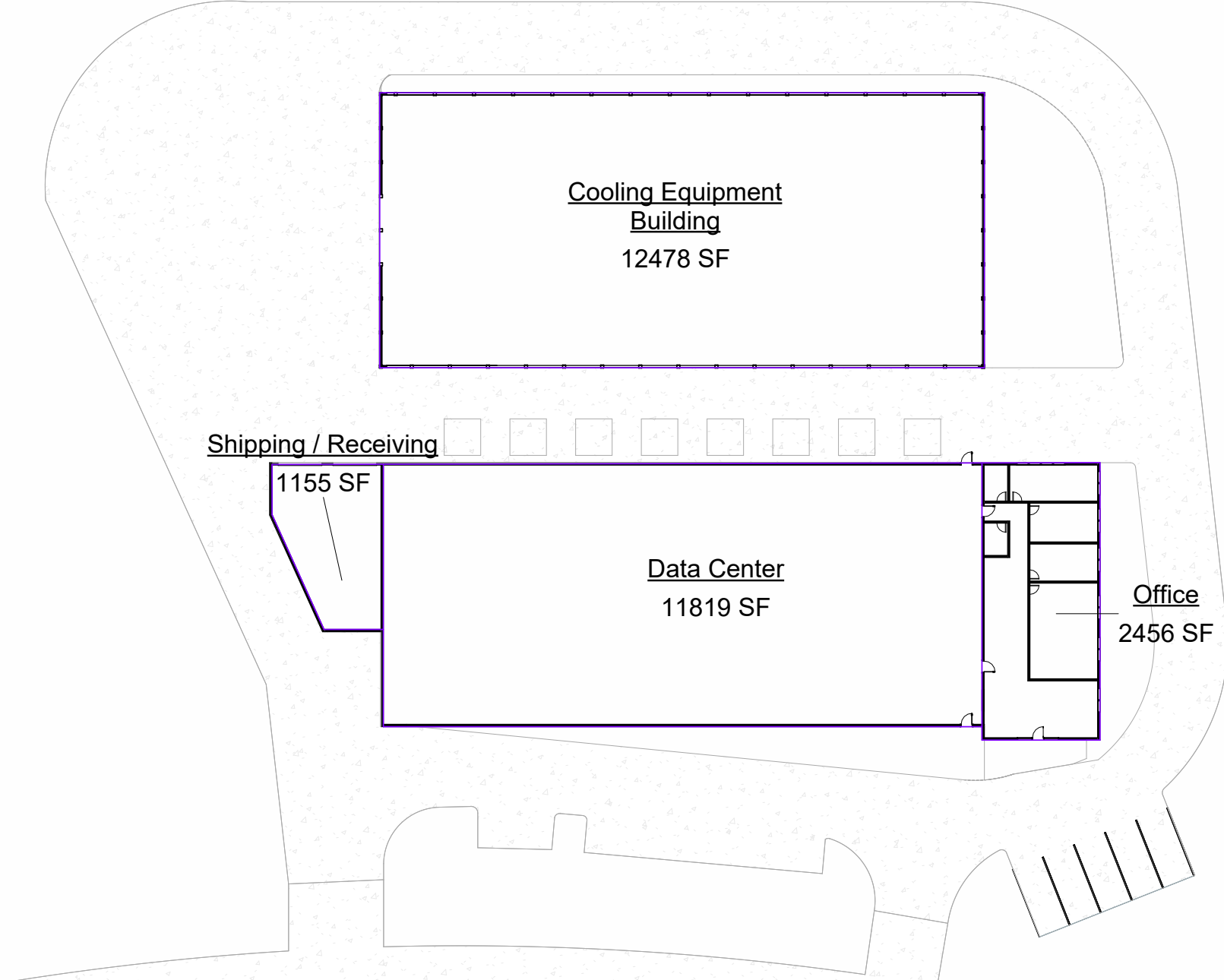
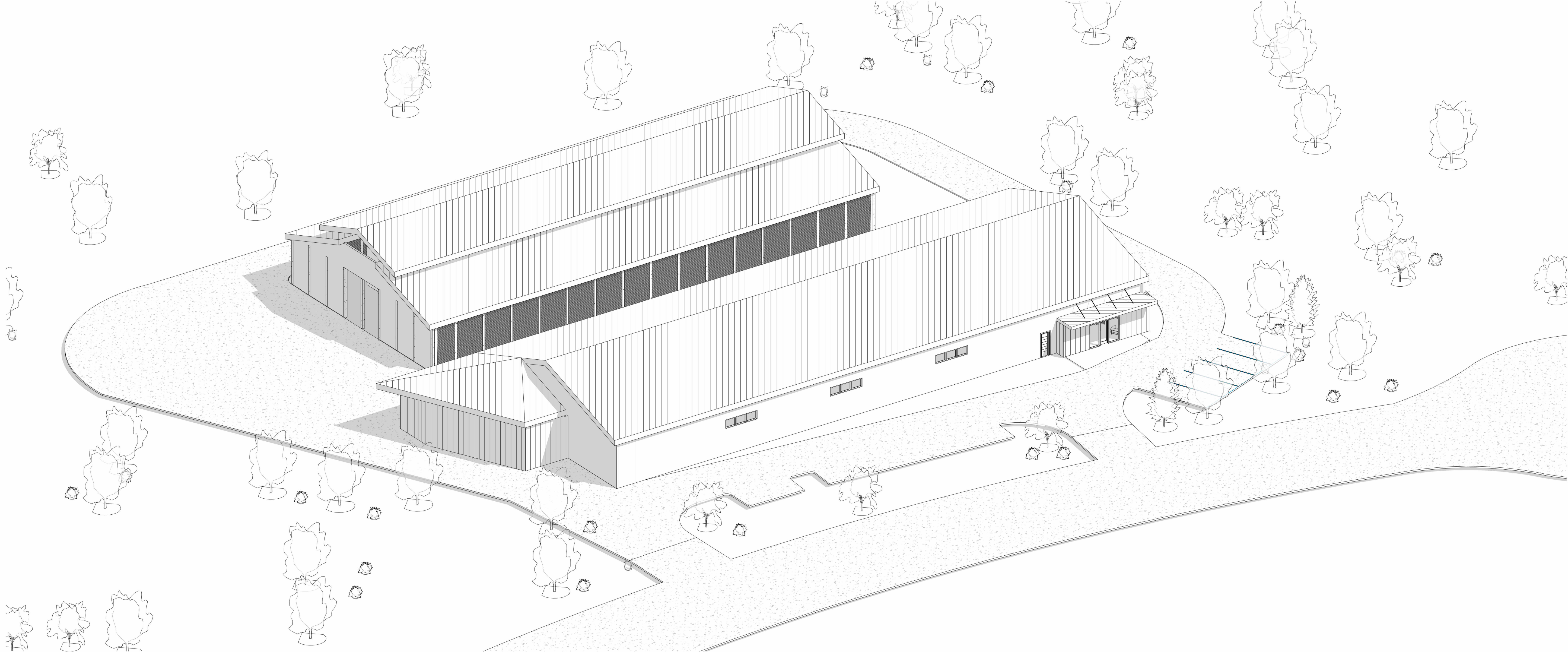
The statutory limits for a residential location are L10 = 65 dBA and L50 = 60 dBA during the daytime (7:00 a.m. – 10:00 p.m.) and L10 = 55 dBA and L50 = 50 dBA during the nighttime (10:00 p.m. – 7:00 a.m.)

The 47 dBA at 1,056 feet does not exceed NAC 1 standards as there are no residential houses with any of the parcels at 1,056 feet.



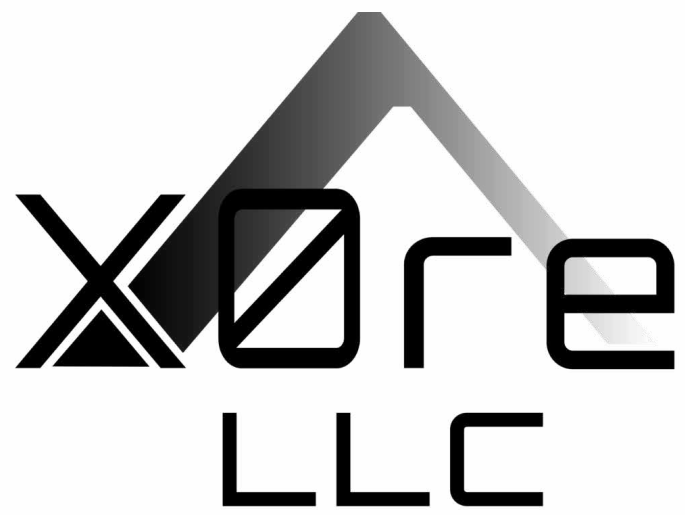
Note: Map assumes that the coolers are located at the property line which is not the case as depicted in the site plan.

Data Center, 1911 Thiesse Drive Brainerd MN



square footage	
location	square footage
Cooling Equipment Building	12478 SF
Office	2456 SF
Shipping / Receiving	1155 SF
Data Center	11819 SF
Total	27909 SF

NOTE:
THIS LAYOUT IS FOR CONCEPTUAL REVIEW
ONLY. NOT INTENDED AS FINAL DESIGN.



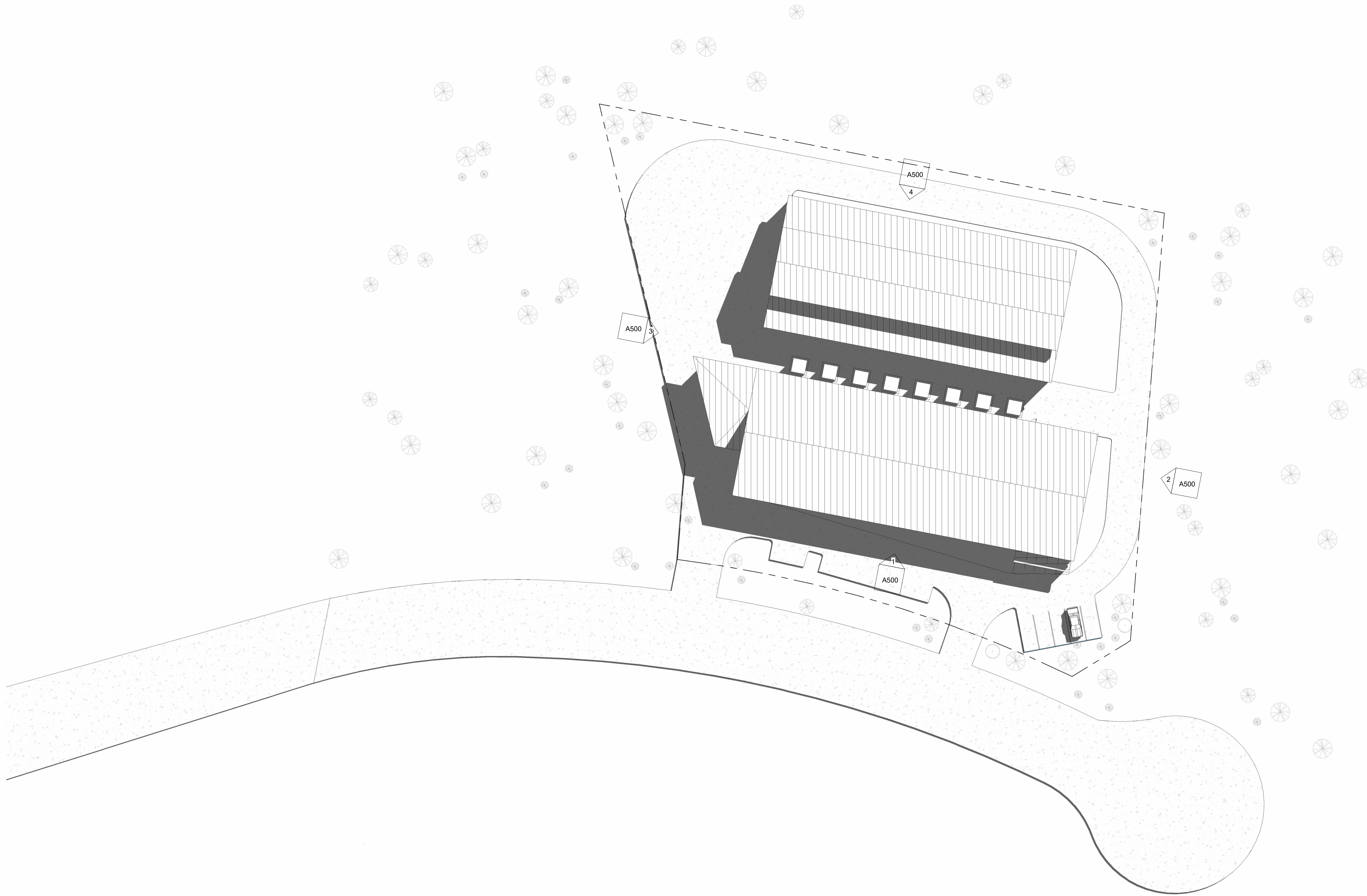
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Miami FL 33132
877-411-1337
www.x0re.com

Data Center

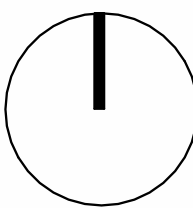
1911 Thiesse Drive Brainerd MN

INDEX SHEET

Project number	-
Date	09.06.2024
Drawn by	ma
Checked by	MILVERS
A000	
Scale	1" = 40'-0"



1 Site
1" = 30'-0"



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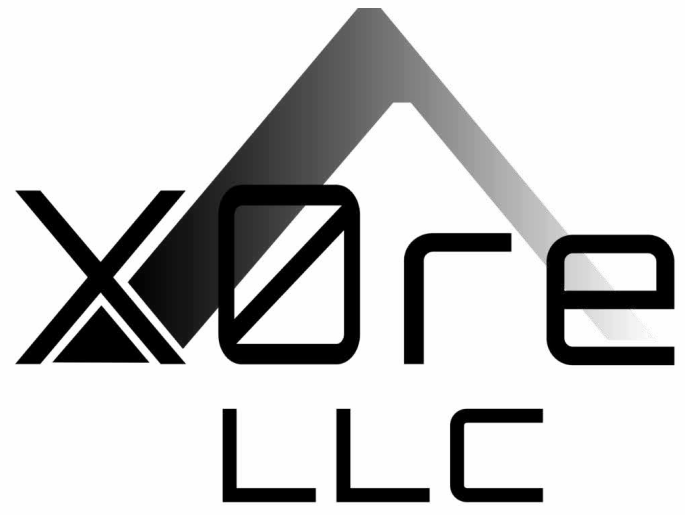
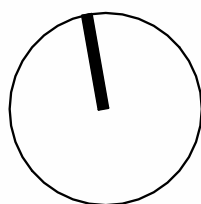
1911 Thiesse Drive Brainerd MN

SITE PLAN

Project number	-
Date	09.06.2024
Drawn by	ma
Checked by	Checker
A011	
Scale	1" = 30'-0"



1 Site plan -Google Earth
1" = 80'-0"



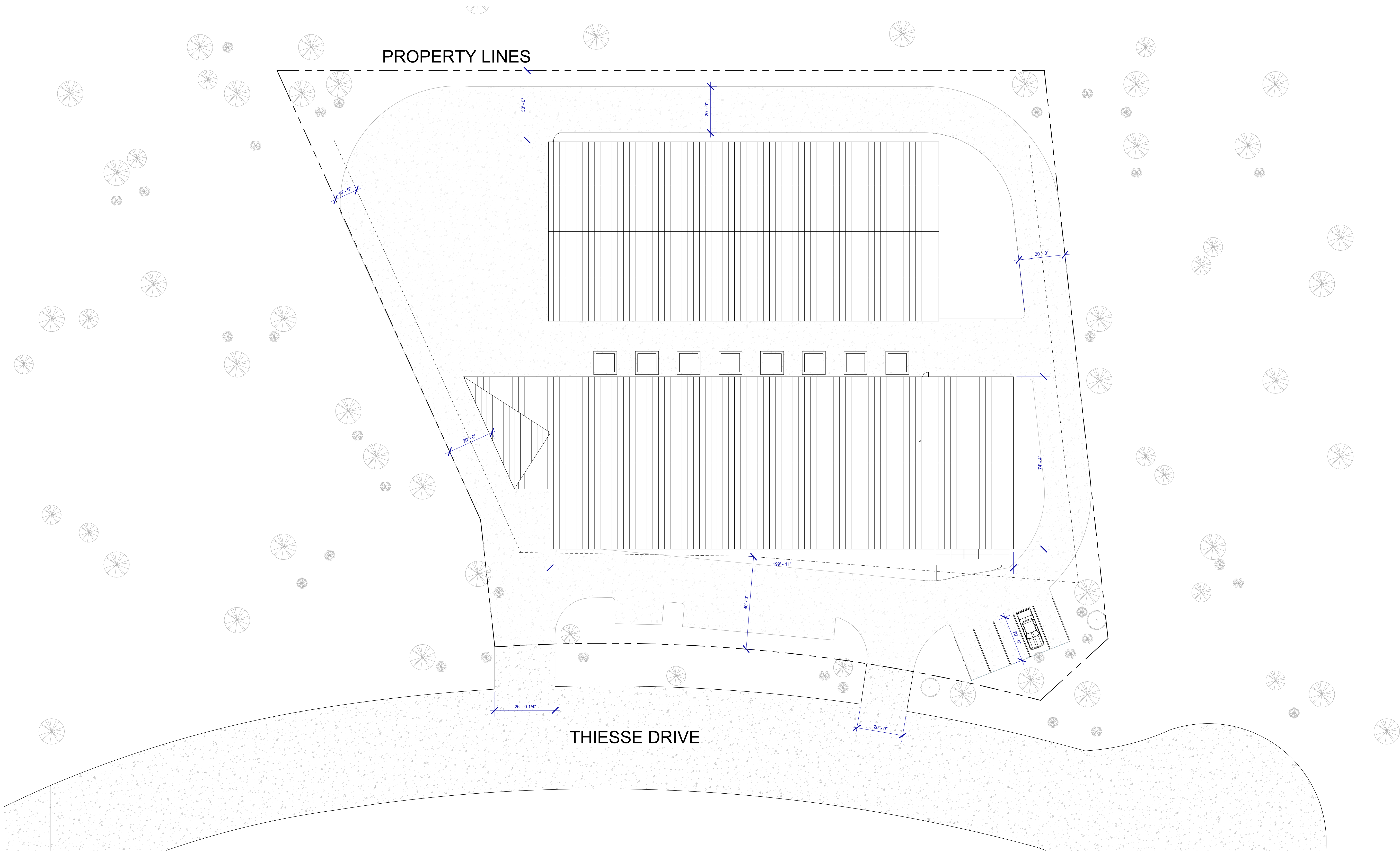
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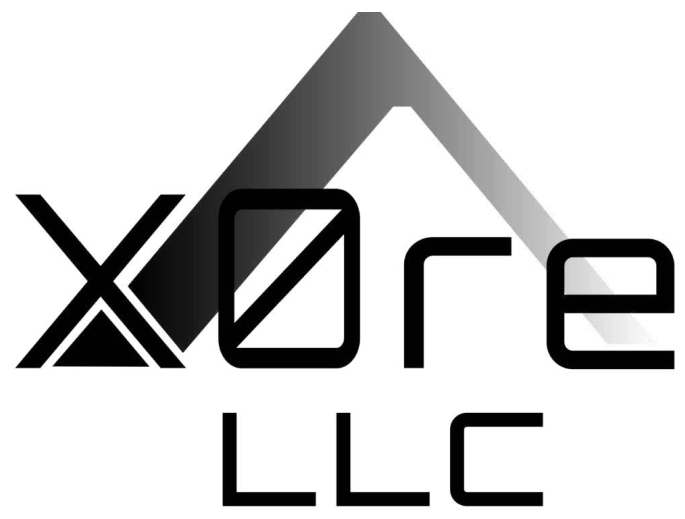
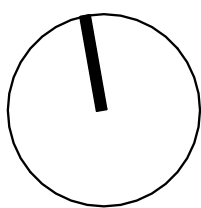
1911 Thiesse Drive Brainerd MN

SITE PLAN

Project number	-
Date	09.06.2024
Drawn by	ma
Checked by	Checker
A012	
Scale	1" = 80'-0"



1 SITE
3/64" = 1'-0"



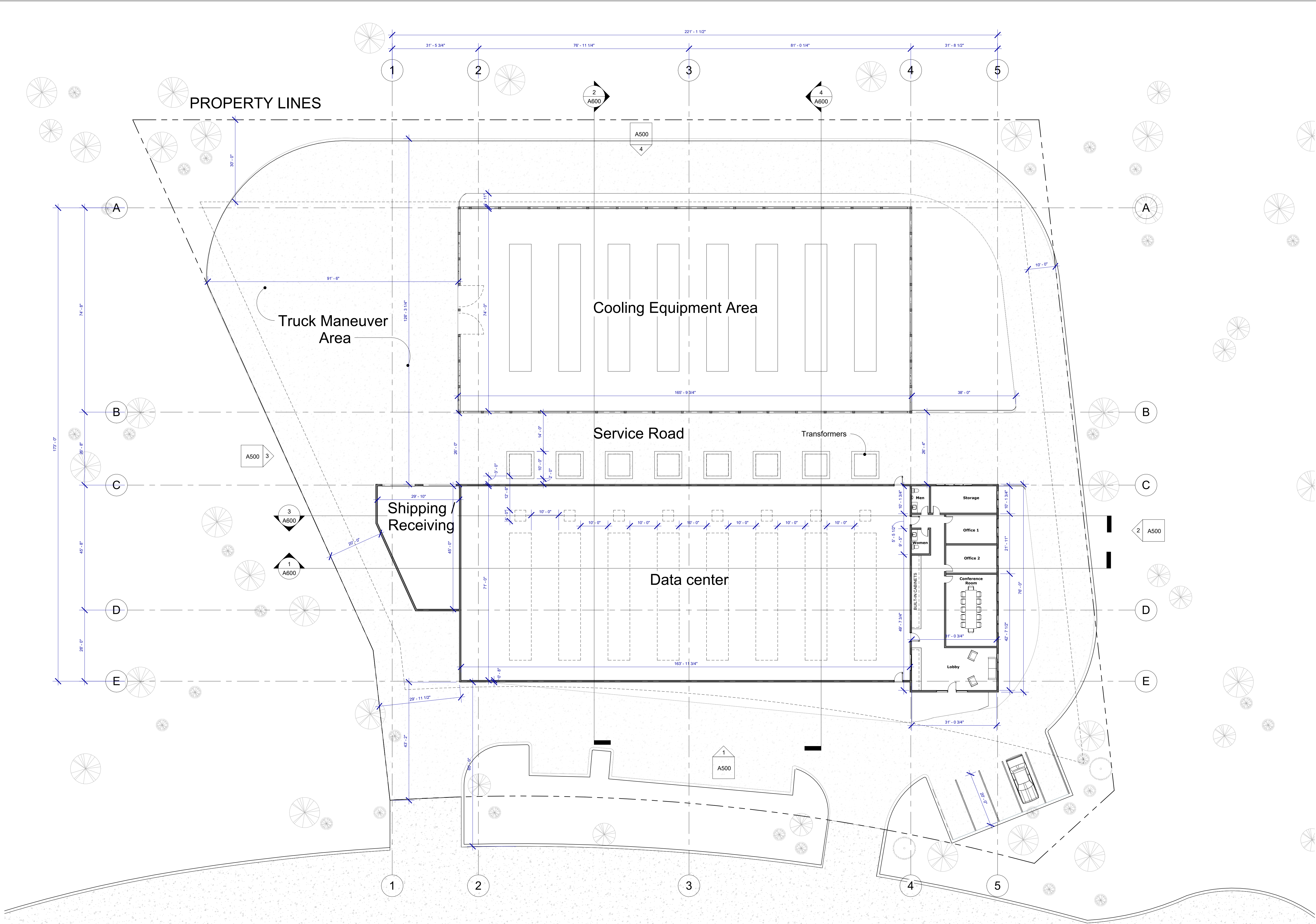
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Data Center

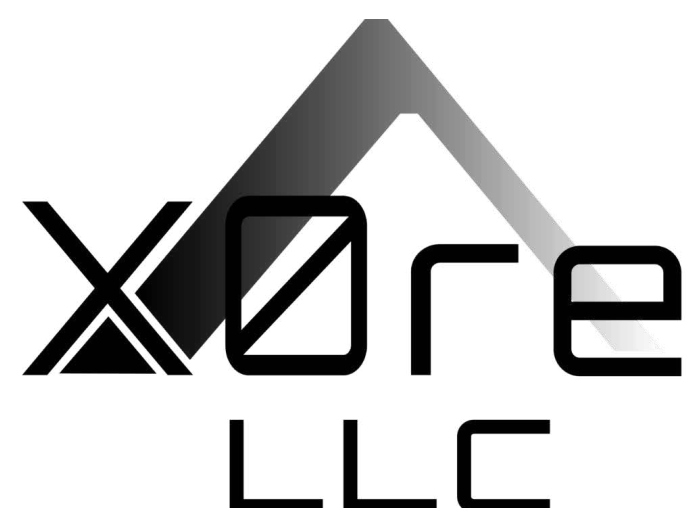
1911 Thiesse Drive Brainerd MN

SITE PLAN

Project number	-
Date	09.06.2024
Drawn by	ma
Checked by	Checker
A013	
Scale	3/64" = 1'-0"



① Main Level
1/16" = 1'-0"



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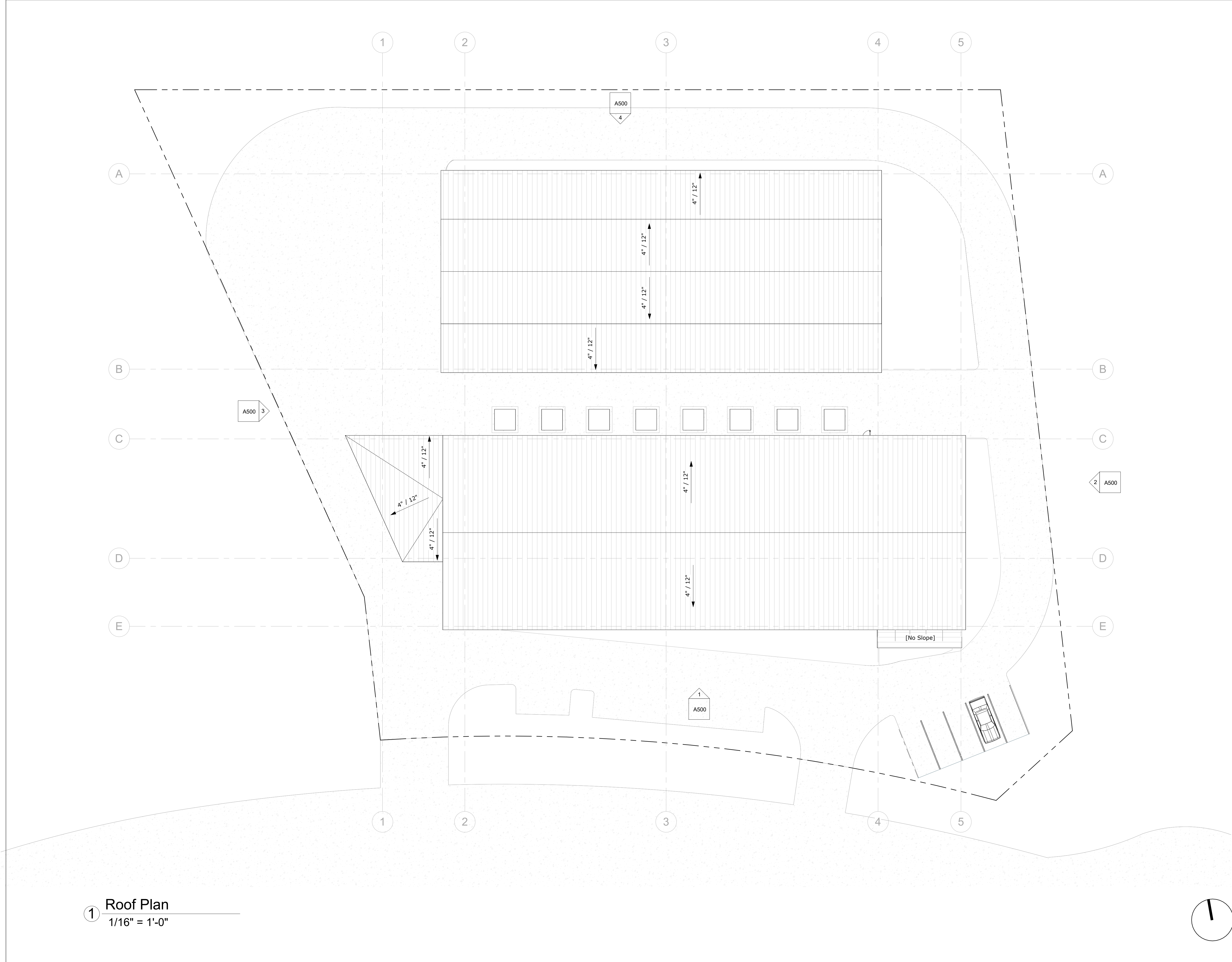
Data Center

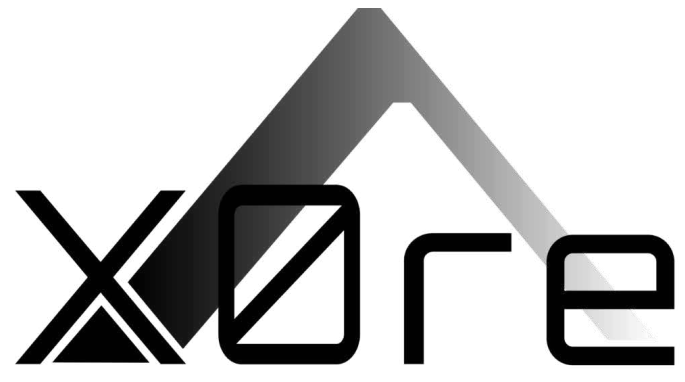
1911 Thiesse Drive Brainerd MN

MAIN LEVEL

Project number	-
Date	09.06.2024
Drawn by	ma
Checked by	Checker
Scale	1/16" = 1'-0"

A200

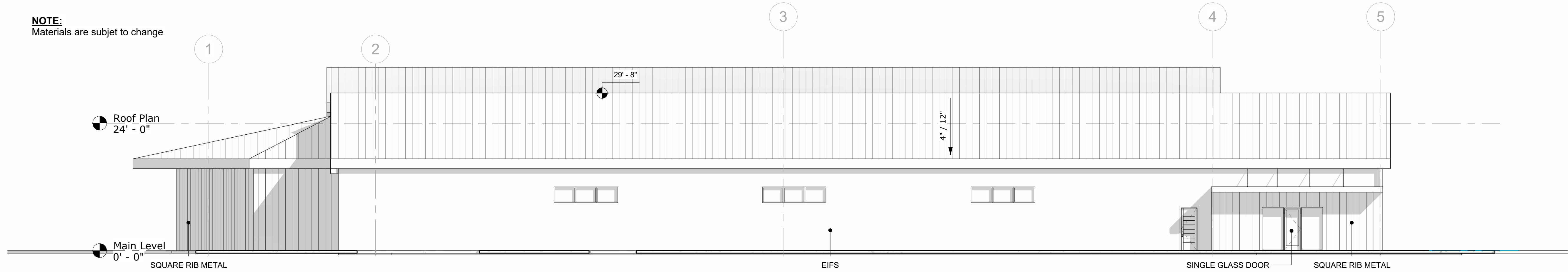




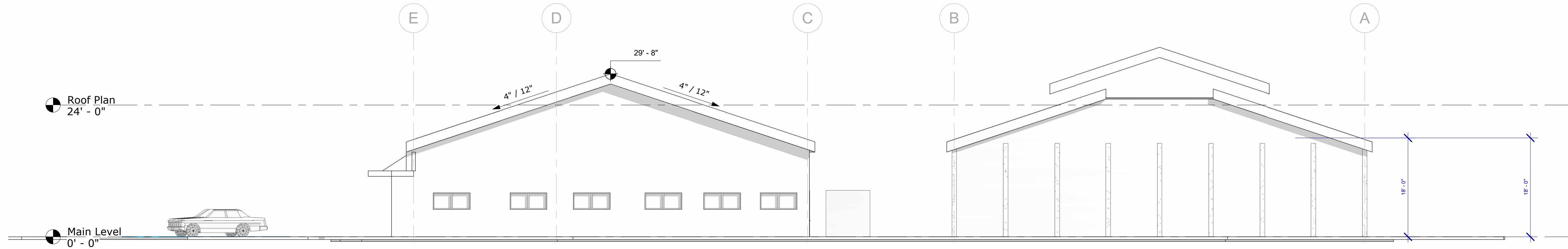
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Data Center	
1911 Thiesse Drive Brainerd MN	
ROOF LEVEL	
Project number	-
Date	09.06.2024
Drawn by	ma
Checked by	Checker
A400	
Scale	1/16" = 1'-0"

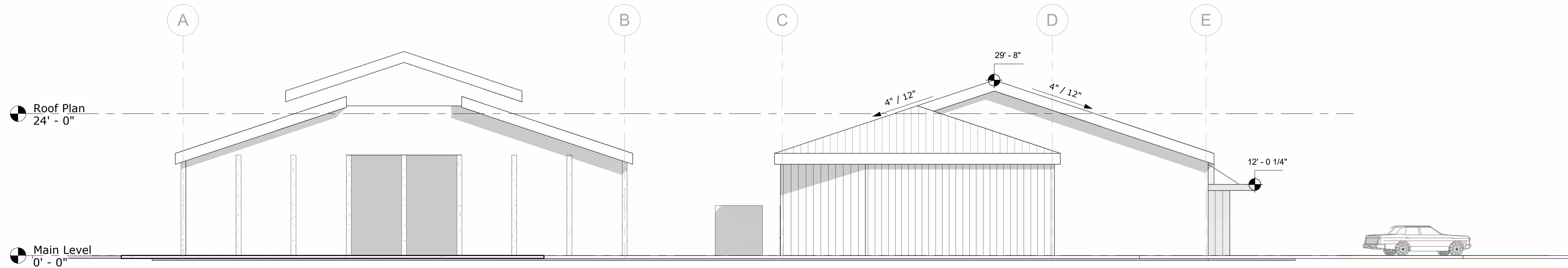
NOTE:
Materials are subject to change



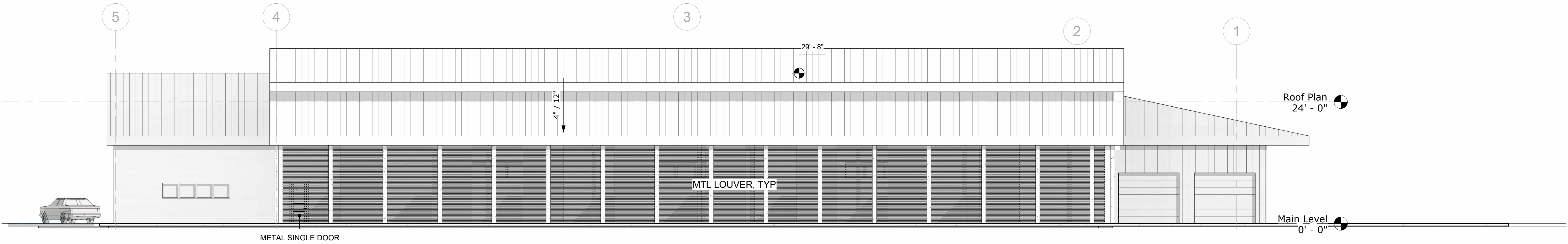
① Elevation South
3/32" = 1'-0"



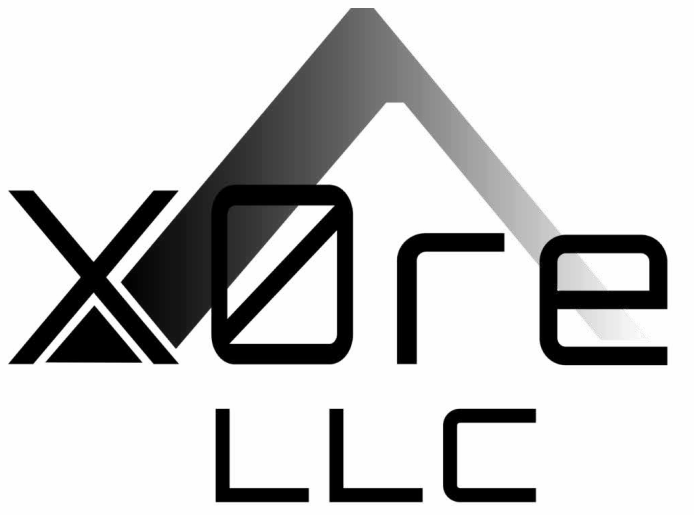
② Elevation East
3/32" = 1'-0"



③ Elevation West
3/32" = 1'-0"



④ Elevation North
3/32" = 1'-0"



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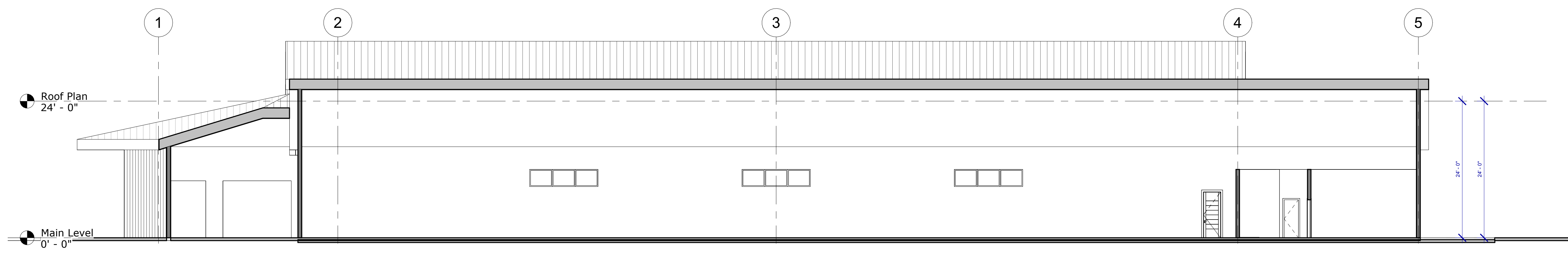
Data Center

1911 Thiesse Drive Brainerd MN

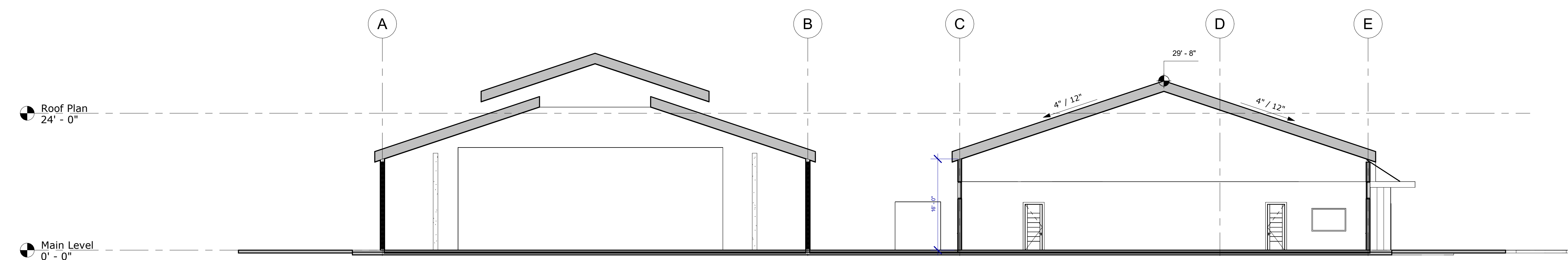
ELEVATIONS

Project number	-
Date	09.06.2024
Drawn by	ma
Checked by	Checker
Scale	3/32" = 1'-0"

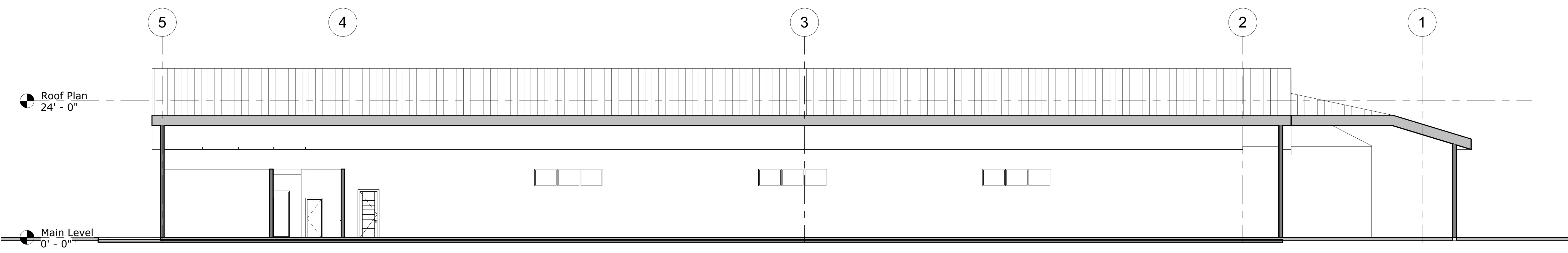
A500



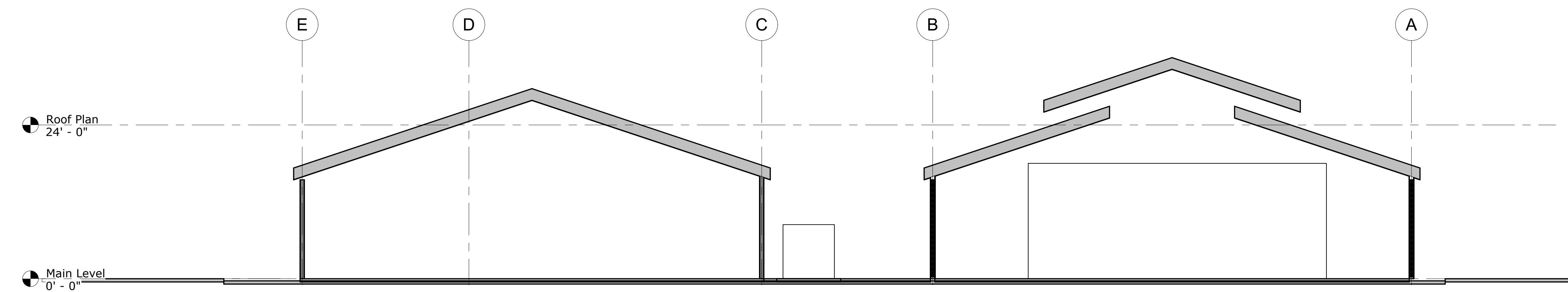
1 Section A
1" = 10'-0"



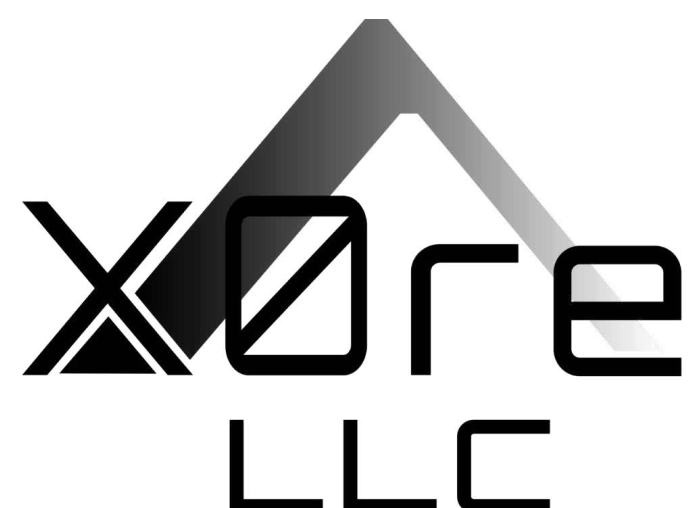
2 Section B
1" = 10'-0"



3 Section C
1" = 10'-0"

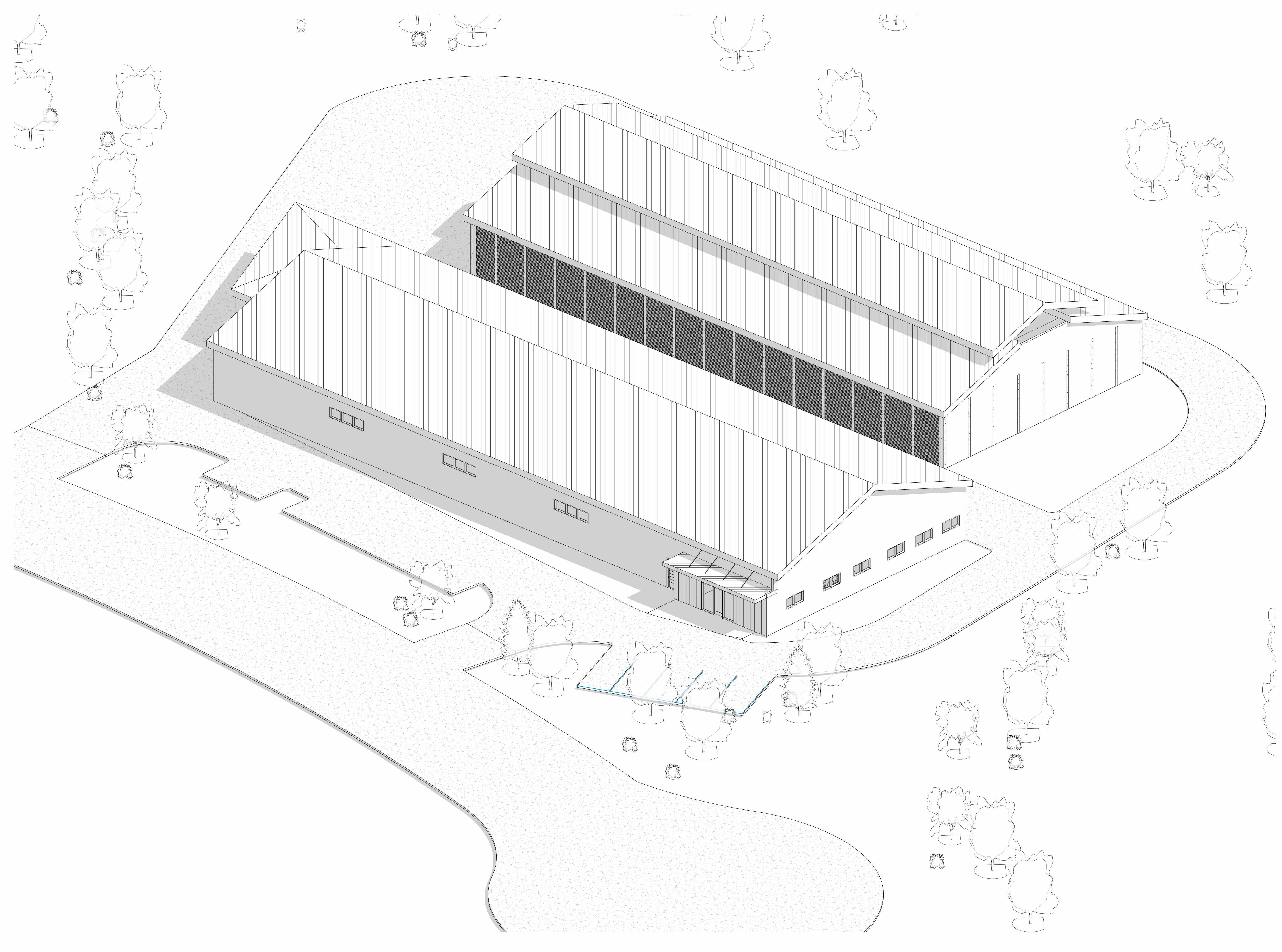


4 Section D
1" = 10'-0"



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SECTIONS	
Project number	-
Date	09.06.2024
Drawn by	ma
Checked by	Checker
A600	
Scale	1" = 10'-0"





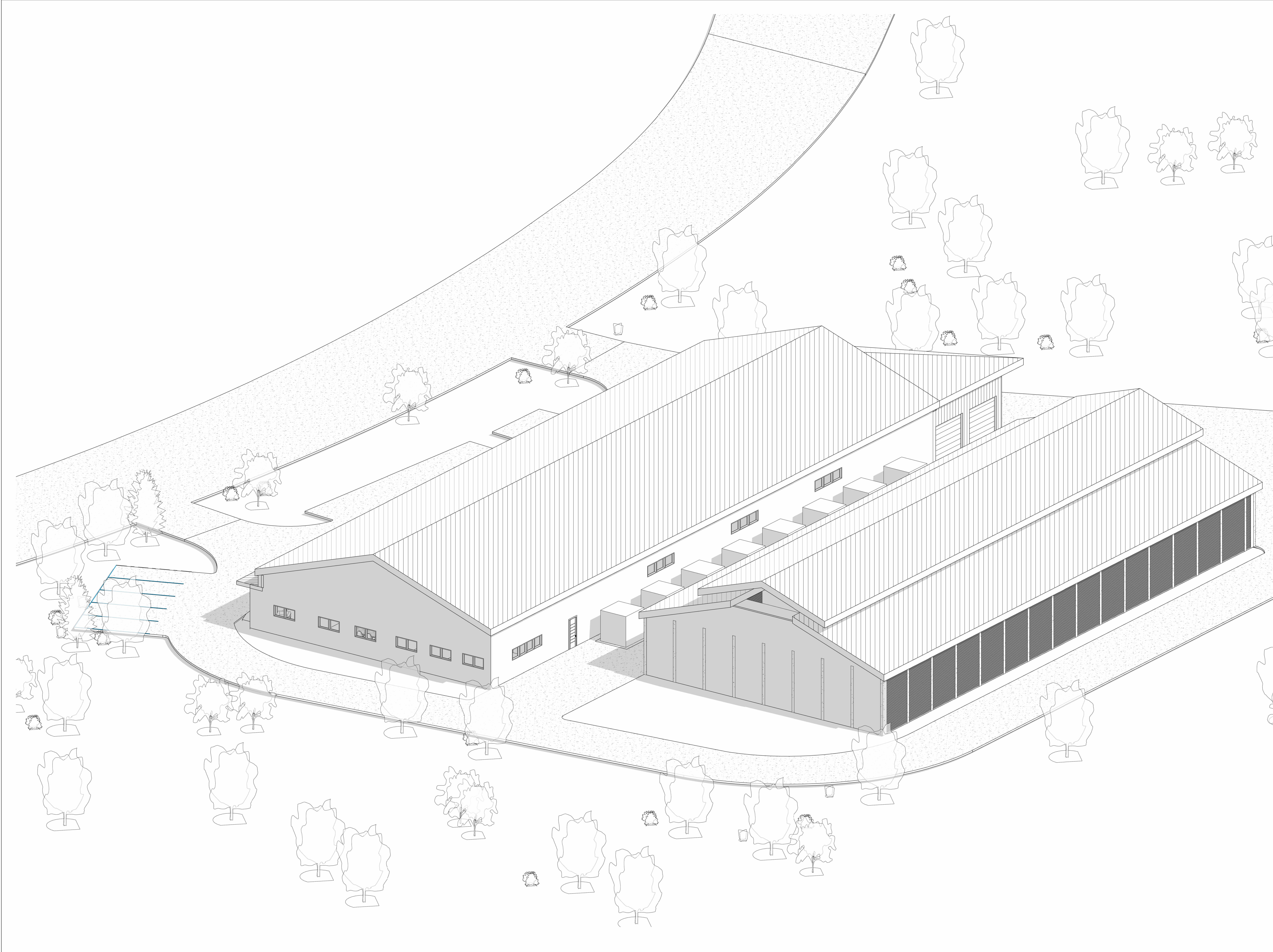
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3D VIEW

Project number	-
Date	09.06.2024
Drawn by	milvers
Checked by	Checker
A900	
Scale	



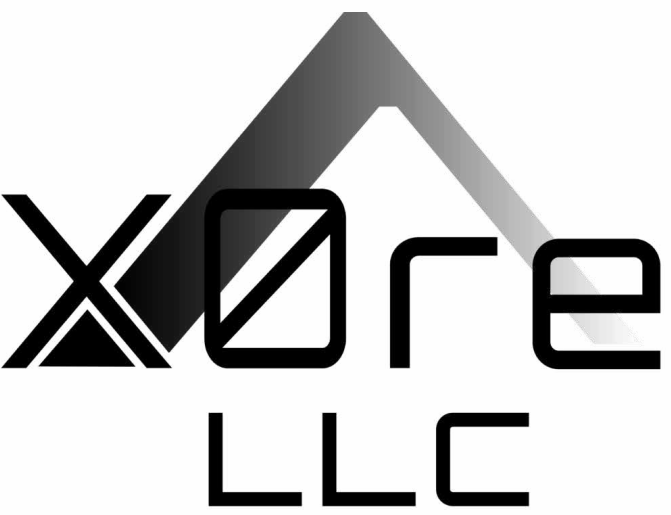
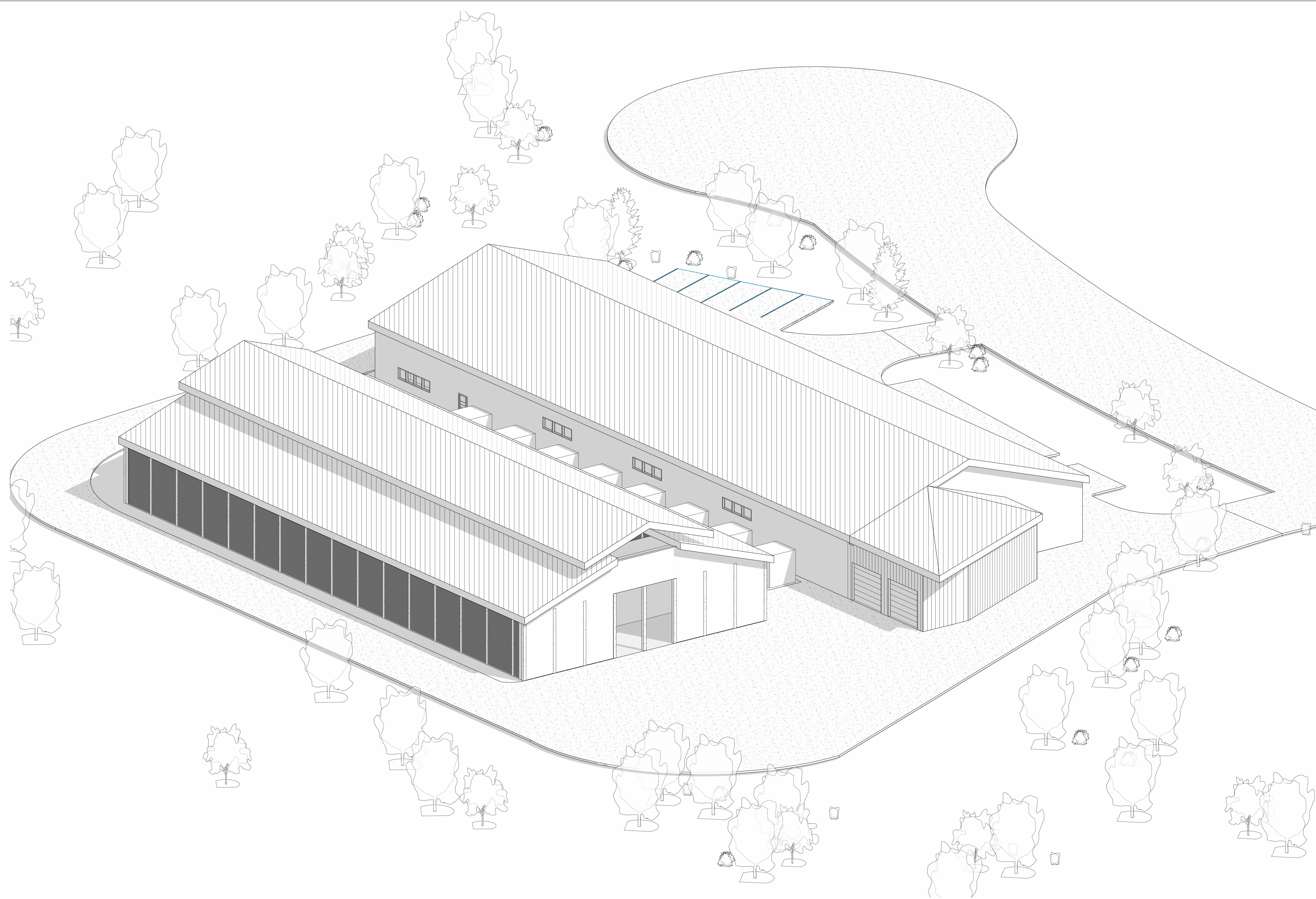
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3D VIEW

Project number	-
Date	09.06.2024
Drawn by	ma
Checked by	Checker
A901	
Scale	



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3D VIEW

Project number	-
Date	09.06.2024
Drawn by	ma
Checked by	Checker
A902	
Scale	

**ASSIGNMENT, ASSUMPTION AND AMENDMENT
TO PURCHASE AND DEVELOPMENT CONTRACT**

THIS ASSIGNMENT, ASSUMPTION AND AMENDMENT TO PURCHASE AND DEVELOPMENT CONTRACT (this “Assignment, Assumption and Amendment”), made as of this ____ day of _____, 2024, by and between **VCV DIGITAL INFRASTRUCTURE MINNESOTA LLC**, a Delaware limited liability company (the “Assignor”), **BLOCKMETRIX, LLC**, a limited liability company established under the laws of the State of Texas (the “Assignee”), and **BRAINERD ECONOMIC DEVELOPMENT AUTHORITY**, a public body corporate and politic under the laws of the State of Minnesota (the “Authority”).

RECITALS:

A. The Assignor and the Authority entered into that certain Purchase and Development contract, dated March 3, 2022, recorded on January 10, 2024 in the Office of the County Recorder of Crow Wing County as document number 992685 (the “Contract”), for the purchase, sale and development of certain real property located at 1911 Thiesse Drive and 1918 Thiesse Drive in the City of Brainerd, Crow Wing County, State of Minnesota, as legally described in the Contract (collectively, the “Development Property”), on which the Assignor agreed to construct a cryptocurrency mining facility, as more fully described in Schedule D attached to the Contract (the “Minimum Improvements”);

B. The Assignor and the Assignee have represented to the Authority that the Assignor proposes to purchase all of the membership interests in the Assignor in an arm’s-length transaction, and following such purchase the Assignee shall become the successor of the Assignor. In connection such transfer, the Assignor desires to assign all of its rights, interests, and obligations in the Contract to Assignee, and the Assignee has agreed to be bound by all of the terms and provisions of the Contract.

C. The Assignee proposes to further revise the Construction Plans for the Minimum Improvements and acknowledges that before commencement of construction of the Minimum Improvements, the Assignee shall submit to the Authority revised Construction Plans for approval.

D. Pursuant to Section 4.2(b) of the Contract, any proposed change to the Construction Plans shall be deemed approved by the Authority unless rejected, in whole or in part, by written notice by the Authority to the Developer within ten (10) days after receipt of the notice of such change. The Authority proposes to extend the period in which to provide written notice of rejection to any change to the Construction Plans from ten (10) days to thirty (30) days.

E. Pursuant to Section 4.3 of the Contract, construction of the Minimum Improvements must be commenced within the “Construction Commencement Deadline,” as defined therein. The Assignee proposes to extend the Construction Commencement Deadline to April 1, 2025.

F. The Assignee proposes to add a provision to the Contract, as amended hereby, that no former employee or owner of VCV Digital Infrastructure Minnesota LLC, VCV Digital or any affiliate thereof, shall own an interest in the Assignee or Assignor the after execution of this Assignment, Assumption and Amendment.

NOW, THEREFORE, IN CONSIDERATION OF One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

1. Any capitalized term used herein and not otherwise defined herein shall have the meaning ascribed to such term in the Contract.

2. The Assignor does hereby grant, transfer and assign to the Assignee, all of its rights, interests, and obligations under the Contract, and the Authority hereby consents to such grant, transfer, and assignment to the Assignee.

3. The Assignee hereby accepts this Assignment, Assumption and Amendment and assumes and agrees to faithfully abide by, perform and discharge each and every term, covenant, condition and obligation of the Assignor under the Contract, as amended hereby (the “Assumed Obligations”), and to defend and hold the Assignor harmless from any lawsuits, claims, damages, costs and expenses, including actual attorney fees and disbursements arising in connection with the Contract, except those arising from events occurring or arising prior to the date hereof.

4. Section 4.2(b) of the Contract is hereby amended to provide that any proposed change to the Construction Plans shall be deemed approved by the Authority unless rejected, in whole or in part, by written notice by the Authority to the Developer within thirty (30) days after receipt of the notice of such change.

5. The “Construction Commencement Deadline,” as defined in Section 4.3 of the Contract, is hereby amended and extended to April 1, 2025, and upon approval by the Authority of further revised Construction Plans for the Minimum Improvements to be proposed by the Assignee, the Assignee shall commence construction of the Minimum Improvements within such date.

6. The Contract is hereby further amended to add a new Section 10.15, as follows:

Section 10.15. Restriction on Sale or Transfer of Ownership Interest in Blockmetrix, LLC and VCV Digital Infrastructure Minnesota LLC. No former employee or owner of VCV Digital Infrastructure Minnesota LLC, VCV Digital or any affiliate thereof, shall own an interest in Blockmetrix, LLC or VCV Digital Infrastructure Minnesota LLC after execution of this Agreement, as assigned, assumed and amended pursuant to an Assignment, Assumption and Amendment to Purchase and Development Contract, by and between VCV Digital Infrastructure Minnesota LLC, as assignor, Blockmetrix, LLC, as assignee, and the Authority.

7. The Assignee expressly represents, for the benefit of the Authority, that it is a limited liability company duly organized and in good standing under the laws of the State of Texas, is duly authorized to transact business within the State of Minnesota, is not in violation of any provisions of its organizational documents or the applicable laws of any state, has power to enter into this Assignment, Assumption and Amendment and the capability to perform the obligations of the Assignor under the Contract and has duly authorized the execution, delivery and performance of this Assignment, Assumption and Amendment by proper action of its governing body.

8. If the Authority delivers any notice, demand or other communication to the Developer under the Contract that relates to or may affect the rights and interest of the Assignee under the Contract or the Assumed Obligations, the Authority will deliver a copy of such notice, demand or communication to the Assignee in the manner set forth in the Contract addressed or delivered personally to the Assignee as follows:

Blockmetrix, LLC
2651 North Harwood Street
Suite 400
Dallas, TX 75201

or at such other address as the Assignee may, from time to time, designate by written notice to the Authority given or delivered in the manner set forth in the Contract.

9. This Assignment, Assumption and Amendment shall be binding upon and inure to the benefit of the successors and assigns of the parties hereto and shall further be for the benefit and reliance of the Authority.

10. This Assignment, Assumption and Amendment shall be governed by and construed in accordance with the laws of the State of Minnesota.

11. This Assignment, Assumption and Amendment may be executed in counterparts, which counterparts when considered together shall constitute a single, binding, valid and enforceable agreement.

IN WITNESS WHEREOF, the parties have executed this Assignment, Assumption and Amendment to Purchase and Development Contract as of the date first indicated above.

**VCV DIGITAL INFRASTRUCTURE
MINNESOTA LLC, as Assignor**

By: _____
Name: _____
Its: _____

STATE OF _____)
) ss.
COUNTY OF _____)

This instrument was acknowledged before me this _____ day of _____, 2024, by _____, the _____ of VCV Digital Infrastructure Minnesota LLC, a Delaware limited liability company on behalf of the company.

Notary Public

BLOCKMETRIX, LLC, as Assignee

By: _____

Its: _____

STATE OF _____)
) ss.
COUNTY OF _____)

This instrument was acknowledged before me this _____ day of _____, 2024, by _____, the _____ of Blockmetrix, LLC, a Texas limited liability company, on behalf of said company.

Notary Public

**BRAINERD ECONOMIC DEVELOPMENT
AUTHORITY**

By _____
Its President

By _____
Its Executive Director

STATE OF MINNESOTA)
) ss.
COUNTY OF CROW WING COUNTY)

The foregoing instrument was acknowledged before me this ____ day of _____, 2024,
by Kevin Yeager, the President of the Brainerd Economic Development Authority, a public body
politic and corporate, on behalf of the Authority.

Notary Public

STATE OF MINNESOTA)
) ss.
COUNTY OF CROW WING COUNTY)

The foregoing instrument was acknowledged before me this ____ day of _____, 2024,
by _____, the Executive Director of the Brainerd Economic Development Authority,
a public body politic and corporate, on behalf of the Authority.

Notary Public

THIS INSTRUMENT WAS DRAFTED BY:
Kennedy & Graven, Chartered
150 South Fifth Street, Suite 700
Minneapolis, MN 55402-1299
(612) 337-9300

EDA RESOLUTION NO. _____

**RESOLUTION APPROVING ASSIGNMENT, ASSUMPTION, AND
AMENDMENT TO PURCHASE AND DEVELOPMENT AGREEMENT
BETWEEN EDA AND VCV DIGITAL INFRASTRUCTURE MINNESOTA
LLC**

BE IT RESOLVED BY the Board of Commissioners (“Board”) of the Brainerd Economic Development Authority (the “Authority”) as follows:

Section 1. Recitals.

1.01. The City of Brainerd (the “City”) previously created its Development District No. 2, comprising industrial park property within the City, and transferred the control and administration of said Development District No. 2 to the Authority by resolution adopted on December 6, 2021, subject to acceptance of such control and administration by the Authority. The Authority accepted control and administration of Development District No. 2.

1.02. On March 3, 2022, the Board of the Authority conducted a duly noticed public hearing regarding the sale of certain real property located at 1911 and 1918 Thiesse Drive in the City of Brainerd, Crow Wing County, State of Minnesota (collectively, the “Development Property”) to VCV Digital Infrastructure Minnesota LLC (the “Developer”) and development thereon of a cryptocurrency mining facility (the “Minimum Improvements”), pursuant to a Purchase and Development Contract, dated March 3, 2022 (the “Contract”), between the Authority and the Developer, at which all interested persons were given an opportunity to be heard.

1.03. The Authority found that the conveyance of the Development Property was in conformance to the City’s comprehensive plan, as approved by the City, and would facilitate the construction of a job-producing facility within the industrial park and increase the tax base of the City, and that the execution of the Contract and performance of the Authority’s obligations thereunder, including the conveyance of the Development Property to the Developer, were in the best interest of the City and its residents.

1.04. Following the public hearing, on March 3, 2022 the Authority approved the form and the execution and delivery of the Contract. The Contract was recorded on January 10, 2024 in the Office of the County Recorder of Crow Wing County as document number 992685.

1.05. Pursuant to the Contract, the Developer agreed to construct the Minimum Improvements on the Development Property in accordance with approved Construction Plans, as defined in the Contract, and to commence construction of the Minimum Improvements within the Construction Commencement Date, as defined in the Contract.

1.06. The Developer (hereinafter, the “Assignor”) and Blockmetrix, LLC, a Texas limited liability company (the “Assignee”), propose to amend and assign the Contract, as set forth in an Assignment, Assumption, and Amendment to Purchase and Development Contract (the

“Assignment, Assumption and Amendment”), by and between the Assignor, the Assignee, and the Authority.

1.07. The Assignor and the Assignee have represented to the Authority that the Assignor proposes to purchase all of the membership interests in the Assignor in an arm’s-length transaction, and following such purchase the Assignee shall become the successor of the Assignee. In connection with such transfer, the Assignor desires to assign all of its rights, interests, and obligations in the Contract to Assignee, and the Assignee has agreed to be bound by all of the terms and provisions of the Contract.

1.08. Pursuant to the Assignment, Assumption and Amendment, the Assignor proposes to assign all of its rights, interests, and obligations in the Contract to Assignee, and the Assignee agrees to be bound by all of the terms and provisions of the Contract.

1.09. The Assignee proposes to further revise the Construction Plans for the Minimum Improvements and pursuant to the Assignment, Assumption and Amendment, the Assignee acknowledges that before commencement of construction of the Minimum Improvements, the Assignee shall submit to the Authority revised Construction Plans for approval.

1.10. Pursuant to the Assignment, Assumption and Amendment, the Assignee also proposes to extend the Construction Commencement Deadline to April 1, 2025.

1.11. Pursuant to the Assignment, Assumption and Amendment, the Authority proposes to extend the period in which the Authority must provide written notice of rejection to any change to the Construction Plans from ten (10) days to thirty (30) days

1.12. Pursuant to the Assignment, Assumption and Amendment, the Assignee proposes to add a provision to the Contract, as amended by the Assignment, Assumption and Amendment, that no former employee or owner of VCV Digital Infrastructure Minnesota LLC, VCV Digital or any affiliate thereof, shall own an interest in the Assignee or Assignor the after execution of the Assignment, Assumption and Amendment.

Section 2. Assignment, Assumption and Amendment Approved.

2.01. The Authority hereby approves the Assignment, Assumption and Amendment in substantially the form presented to the Authority, subject to modifications that do not alter the substance of the transaction and that are approved by the President and Executive Director, provided that execution of the Assignment, Assumption and Amendment by those officials shall be conclusive evidence of their approval.

2.02. Authority staff and officials are authorized to take all actions necessary to perform the Authority’s obligations under the Assignment, Assumption and Amendment, including without limitation execution of any documents to which the Authority is a party referenced in or attached to the Assignment, Assumption and Amendment, and any other documents necessary to construct the Minimum Improvements pursuant to approved Construction Plans on the Development Property, all as described in the Assignment, Assumption and Amendment.

Approved this 17th day of September, 2024, by the Board of Commissioners of the Brainerd Economic Development Authority.

President

ATTEST:

Executive Director

September 6, 2024

Brainerd Economic Development Authority
Attn: Executive Director
501 Laurel Street
Brainerd, MN 56401

Re: Purchase and Development Contract dated March 3, 2022
Our File: 34243

Dear Sir/Madam:

Blockmetrix, LLC ("Blockmetrix") is in its pending purchase of all of the outstanding membership interest in VCV Digital Infrastructure Minnesota LLC ("VCV"). Tiger Cloud LLC, the present owner of all such interests, is joining with Blockmetrix to make the following request:

1. Please confirm that the Brainerd Economic Development Authority (the "Authority") has no objection to the proposed transfer of all outstanding membership interest of VCV to Blockmetrix; and
2. Please grant to VCV an extension of time within which to commence construction as contemplated by the Purchase and Development Contract dated March 3, 2022 ("Contract").

All of the parties understand and acknowledge that subsequent to any transfer of such membership interest, Blockmetrix will continue to be bound by all of the terms and provisions of the Contract. However, in the course of the due diligence necessary prior to closing, it has become apparent that additional time will be required to meet all of the obligations under the Contract. Further, it appears that alterations will need to be made to the building specifications. With that, we request that the Authority consent to the extension of the Construction Commencement Deadline (as defined in the Contract) to April 1, 2025.

Because the Authority's support is pivotal to VCV's business undertakings, we would be grateful if the Authority could confirm that it has no objections to the proposed change of control of VCV and that it grants the aforementioned extension, simply by countersigning below.

Sincerely,

Blockmetrix, LLC



Clark Swanson
Chief Executive Officer
M. 323 899-2518
E. clark@blockmetrix.com

Blockmetrix, LLC
2651 North Harwood Street
Suite 400
Dallas, TX 75201

Acknowledged and agreed:

Signature

Brainerd Economic Development Authority

Name

Title

Date

Blockmetrix, LLC
2651 North Harwood Street
Suite 400
Dallas, TX 75201



ROSSEAU[®]

World-class mining operations delivered

Introducing the Rosseau One immersion cooling solution

Prepared for BlockMetrix, LLC
July 18th, 2024

This document is provided "as is" without warranty of any kind, for informational purposes only. While every effort has been made to ensure the accuracy and completeness of the information provided, we make no guarantee and accept no responsibility or liability regarding its use.

Rosseau's Mission:

To advance the world of energy-dense computation into the next paradigm by providing the industry's greatest liquid cooling solutions as measured by power density, scalability, and operational efficiency.

A distinguished team from the world of data centers, bitcoin, technology and finance:



Leading the Way.

Get world-class mining operations by running Rosseau.

Rosseau's CTO, Rick Margerison, is the leader of Immersion Cooling Requirements for the Open Compute Project (OCP).

OCP defines the standards for cutting-edge data centers operated by Microsoft, Meta, Google, Nvidia, & more.

ROSSEAU[®]



OPEN
Compute Project[®]



Why the Bitcoin Mining Industry is All-In on Immersion



“When immersion-cooled, ASICs operate in a more stable environment, allowing them to run at higher productivity rates...with an estimated **potential to increase ASIC performance by as much as 50%.**”



“Immersion cooling technology is expected to **increase bitcoin mining efficiency by 20% or more...** significantly increase the hashrate of bitcoin mining machines... and extend the life of the machines—thereby maximizing financial gains.”

BRAINS

“**Total CapEx is actually far lower than an equivalently sized air cooled operation** because, even though the immersion infrastructure costs more, (overclocking) enables us to reduce the more significant \$/MW cost, our (ASIC) hardware.”

ROSSEAU

Rosseau Immersion is the Choice of Industry Leaders.

Kelvion:

Global leader in manufacturing of heat exchangers announces a strategic partnership with Rosseau to revolutionize the bitcoin mining & data centers.

“Rosseau’s cutting-edge immersion cooling technology to set **new standards in power density, efficiency, and performance** for the HPC Market” [Press Release](#)

- Steffen Thierfelder, Kelvion’s EVP of Sales & Service, 2024

SunnySide Digital:

The bitcoin industry’s largest distributor selects Rosseau as its exclusive immersion cooling provider for bitcoin mining & HPC.

“The accelerating power-density of ASICs is driving infrastructure towards high performance at-scale liquid-cooling... Rosseau’s **visionary approach to immersion cooling and the future of data centers** aligns seamlessly with meeting our enterprise clients’ needs”

- Taras Kulyk, CEO, SunnySide Digital in Bitcoin Magazine, 2023

Luxor:

An industry leader in bitcoin mining software joins forces with Rosseau to deliver world-class solutions for mining clients.

“Whether for Bitcoin, HPC or AI, the benefits of Rosseau’s high power density, temperature consistency and flexible operating environment mean that compute providers have more control than ever before. **Rosseau has gathered world-class talent to build immersion systems that have perfected the solution to a highly complex problem** and I couldn’t be happier to be in their corner.”

- Nick Hansen, CEO, Luxor Technology, 2024

Kelvion



BITCOIN  MAGAZINE

Refrigeration
Industry online magazine and directory



ROSSEAU

Forbes

yahoo!
finance

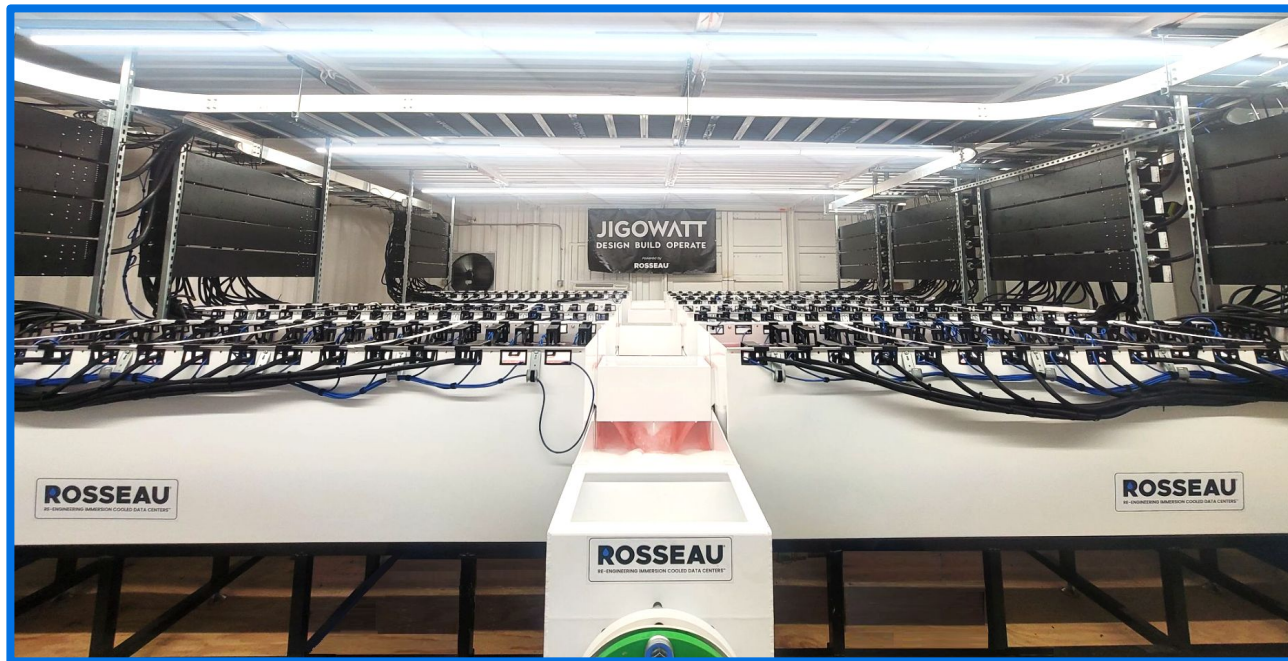
COOLING POST

Rosseau One: Unmatched Scale and Speed

**One. Unified.
Immersion System.**

Scale.
The largest immersion cooling solution on the planet. Operates 2-3MW of mining load.

Speed.
Our service team deploys each Rosseau One in 4 days.

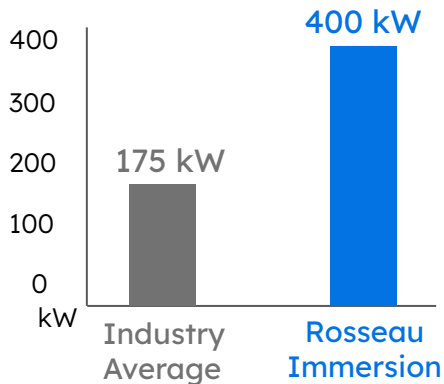


Rosseau One: Unparalleled Power Density

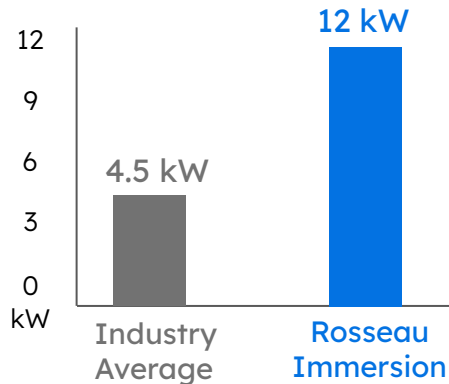
Accelerate your ROI: Industry-leading power density delivers maximum miner efficiency and overclocking capability, while future-proofing mining operations for the growing energy density of ASICs.



Power Density per Tank
(3'x10')



Power Density per Miner



Accelerate and Maximize Revenue with Rosseau Immersion

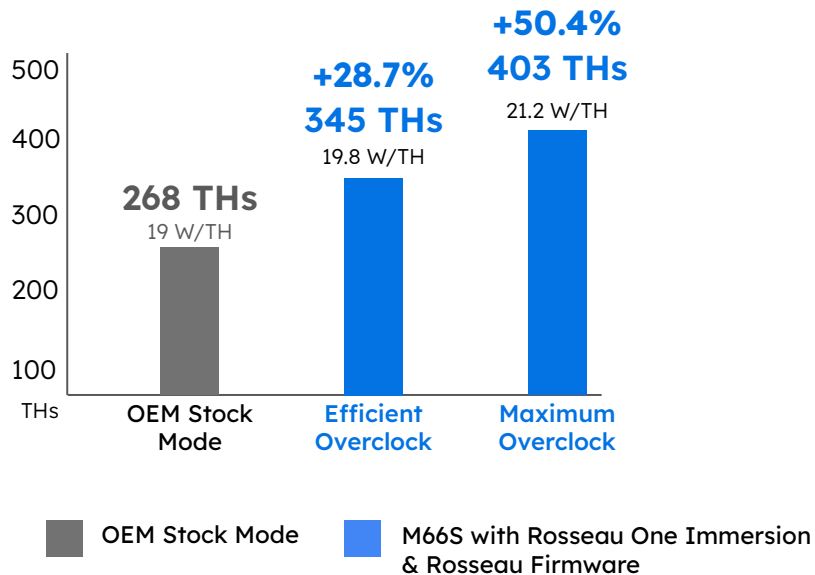
Why is Power Density Core to Profitability?

- Maximizes miner efficiency (W/TH)
- Accelerates IRR with overclocking
- Future-ready operations amid rising ASIC power densities.

“Most importantly going forward, the trend of increasing transistor counts, coupled with the end of Dennard scaling, will result in chips with thermal design power (TDP) that is beyond the capabilities of air cooling... Immersion is substantially easier to engineer and evolve over time.”

- Microsoft Research, 2023

Rosseau Immersion: MicroBT M66S Hashrate Increase



Massive Cost Savings on Every Purchase of Miners

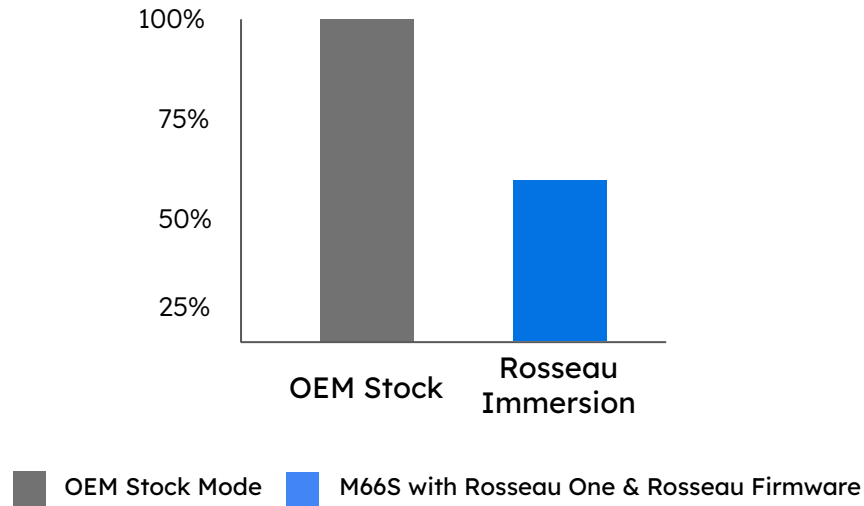
Meet your terahash targets with up to 35% fewer ASIC purchases via overclocking.

CapEx savings far exceed the incremental cost of immersion vs. air-cooling. Savings compound with each purchase of miners.

Did you Know? “Overclocking is NOT hazardous, nor does it reduce the lifespan of any electronic so long as thermal stability within its targeted thermal safety zone is maintained.”

- Mission Critical Magazine

M66S Capex per Megawatt
Decrease \$/MW of 35%



Future Proof. Flexible. Scalable.

Mining devices are becoming more powerful.

The industry leading cooling performance of the Rosseau One delivers the profits and peace of mind that come with not needing to replace your immersion cooling infrastructure.

Do More with Less.

Leading power density significantly reduces real estate, energy consumption, and deployment costs & timelines

Flexible Cooling Options.

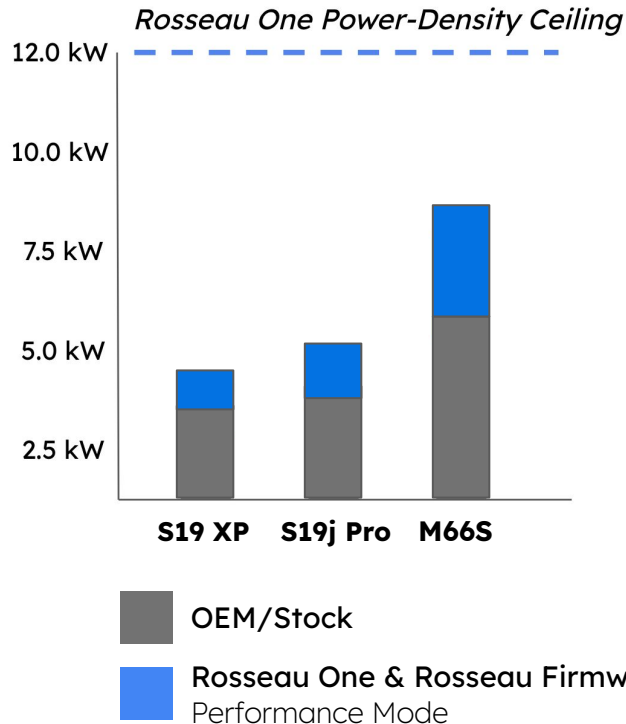
Compatible with both dry or wet cooling towers
Configurable in a single or dual loop design

Simple Integration.

Piping to a single inlet and outlet integrates the entire Rosseau One system



Miner Power-Density (kW)



Rosseau: A 'Unified System' Approach to Immersion Cooling

Rosseau's 'unified immersion system' solves the critical problems associated with the 'siloe immersion tank' approach used by traditional immersion providers

	'Siloed Tank' Approach	Rosseau 'Unified System' Approach
Reliability & Operational Resilience	Small, single pump in each tank is a single point of failure, leading to downtime and potential miner damage due to overheating following a pump failure	- System-level pump skid has multiple pumps (2-4 per system) - Uses industrial-scale pumps rated to last 20 years. - No moving parts in the tank greatly improves reliability
Heat Transfer Performance	Each tank has a small plate exchanger with very limited surface area for heat exchange, which severely limits system performance.	System-level, industrial-scale heat exchange maximizes surface area for heat transfer for unprecedented cooling performance, uptime, efficiency, overclocking and a future-proof deployment.
Scalability	Significant time to install piping and components in every tank increases labor costs & delays operations	Rapid install with one inlet and outlet pipe and no tank-level components saves money and accelerates time to revenue.
Support for Diverse Types of Computing	Transition from bitcoin to HPC (and often between miner models) requires you to replace all equipment – pumps, plate exchangers, tanks, and piping, with considerable costs and downtime involved.	<u>HPC READY</u> : Replace one tank or many in minutes, while re-using 100% of your existing pumping, piping and cooling infrastructure. Easy, fast and inexpensive to diversify your computing applications.

High Performance. Fueled.

Rosseau Performance Fluid: The industry's best immersion cooling fluid - designed for maximum protection and performance of power dense computing workloads.

- **Superior thermal transfer** capability and device protection (10% better than typical fluids).
- **Protects cables** from becoming brittle and needing replacement, reducing downtime and costs.
- **Compatible with plastic piping** (polypropylene, c-PVC, etc.) enabling lower facility piping and installation costs.



Built-In Intelligence

Flexible Operation.

Stay online 24/7 with an easily serviceable pump skid. Two pumps capable of up to 600 GPM each (1200GPM total) of continuous load, providing backup pumping power at all times.

Customizable Control.

Integrated VFDs optimize load balancing among the pumps. Designed to plug-and-play with common BMS systems. Includes Grundfos' programmable automation and remote access capabilities.



Superior Cooler Technology

Rosseau is partnered with Kelvion, the world's #1 manufacturer of dry and adiabatic coolers, to provide miners with a total solution that offers unparalleled performance, reliability, and efficiency.

22-Fan Kelvion Cooler - Key Specifications	
Dimensions	45'x10'x12' (LxWxH)
Dry Mode Capacity in W. Texas	Up to 2.72MW
Adiabatic Mode Capacity in W. Texas	Up to 3.2MW
Operating Weight	20,740 lbs
Voltage	460-480V (3-phase)

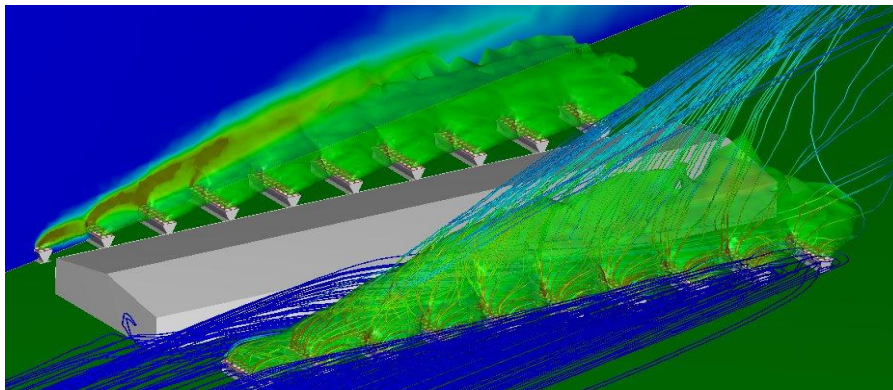


Press Release: ["Kelvion and Rosseau Announce Partnership to Deliver Enhanced Immersion Cooling Solutions for HPC" - March 25th, 2024](#)

Rosseau's Data Center Engineering Solutions

Get world-class, end-to-end data center design for optimized hashrate. Rosseau's engineering team has previously led design for 4 of the 10 largest data centers in the US, and many more globally. We're a one-stop engineering solution for bitcoin mining and HPC applications.

Through CFD simulations, Rosseau designs data centers with proven cooling performance that ensures operational stability, optimal energy consumption and miner efficiency.



Rosseau Engineering Solutions:

- Computational Fluid Dynamics (CFD):
- Mechanical Design
- Electrical Design

Prior experience includes data center design for:



Turnkey Service

Rosseau's partnership approach is centered on our commitment to your success.

We provide everything you need for the best immersion mining operation. From site design, to build-out, to ongoing maintenance, we are service-driven and focused on helping you create long-term value.

Rosseau solution & services include:

- ◆ Rosseau One
- ◆ Cooling Equipment
- ◆ Pumps & Piping
- ◆ OEM-direct ASICs
- ◆ PDUs
- ◆ Custom Firmware
- ◆ Dielectric Fluid
- ◆ Engineering Solutions
- ◆ On-Site Services
- ◆ Installation & Training

ROSSEAU

INCREDIBLE SERVICE



Custom site design and installation

Client Success Story

Enterprise Bitcoin Miner Secures Massive Operating Advantage with Rosseau Immersion & 99% Uptime

Rosseau immersion surpassed *all* of Jigowatt's performance benchmarks, including miner terahash output, miner efficiency, and mining infrastructure ROI.

The unprecedented performance and economics led to Jigowatt appointing Rosseau as their exclusive immersion solutions provider for a 200MW mining operation.

Get the world's greatest immersion mining operations by running Rosseau.

JIGOWATT

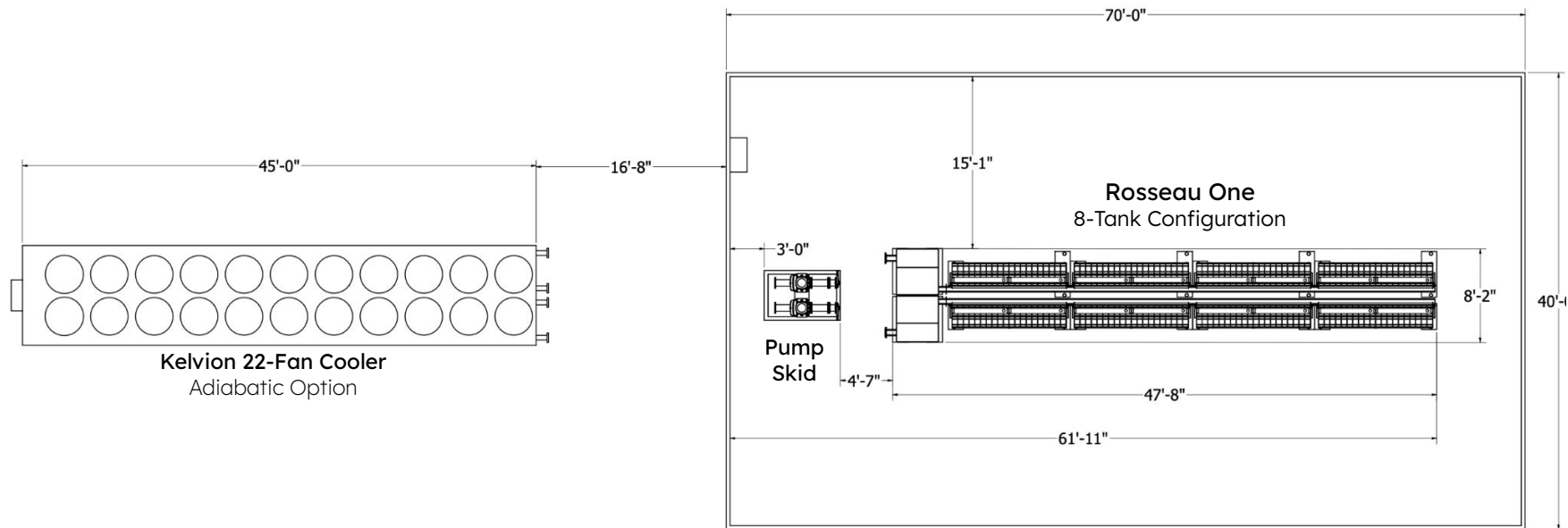
"Jigowatt Announces Strategic Partnership with Rosseau for Advanced Immersion Cooling in 200MW Bitcoin Mining Operation"



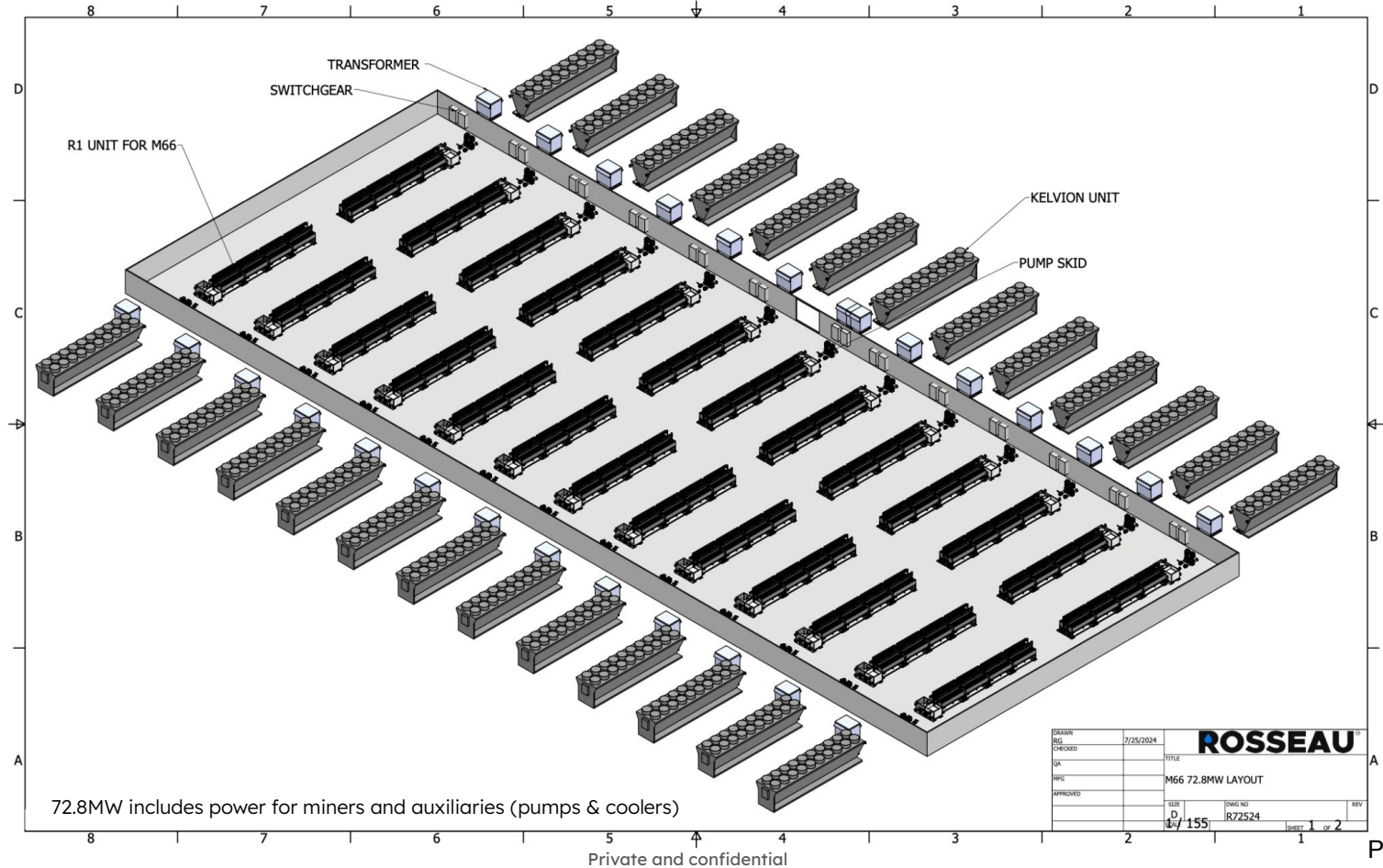
– Yahoo Finance, Jan '24

Rosseau One Dimensional Layout

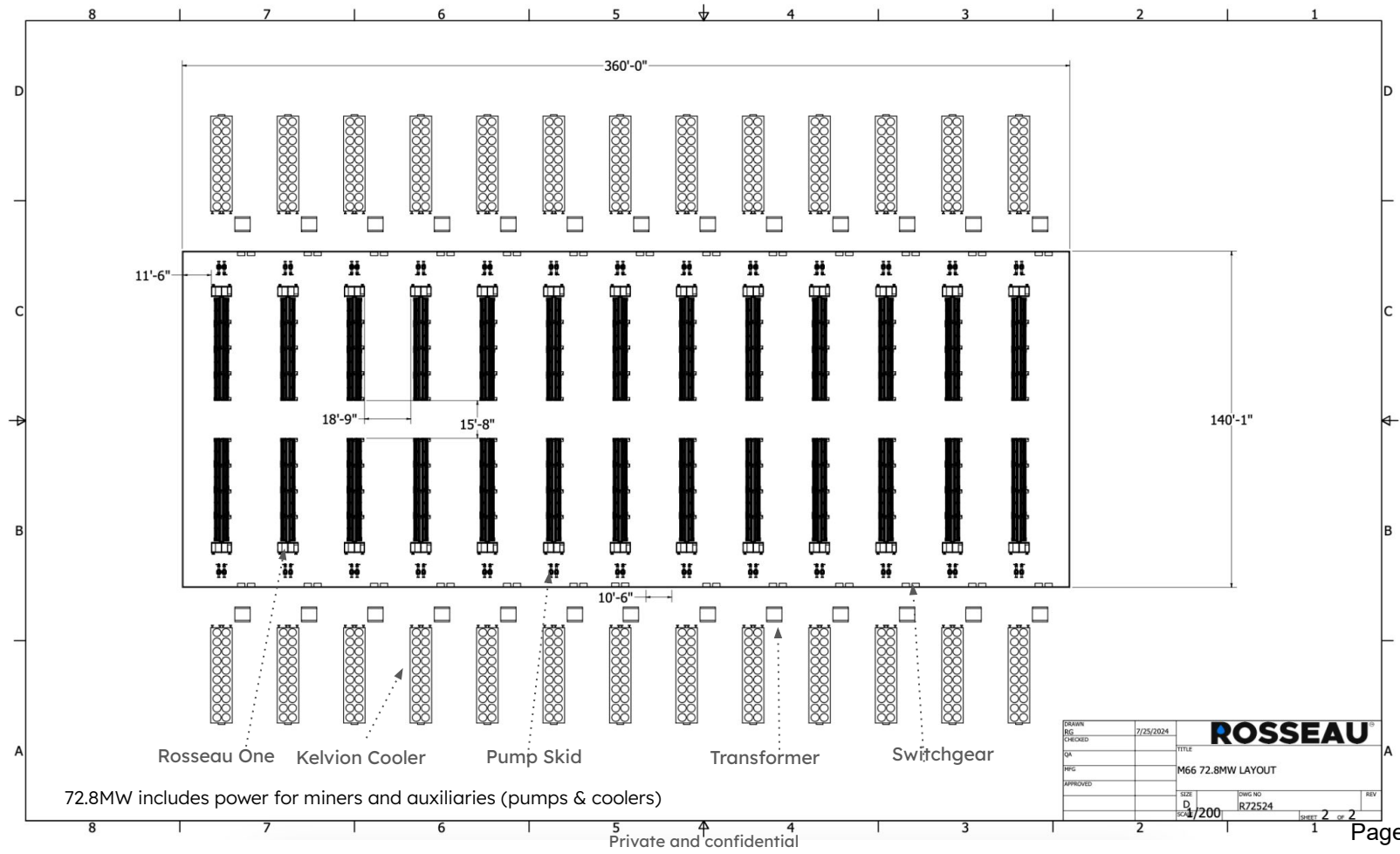
Operates 320 x WhatsMiner M66 Series Device. Produces 128,960 TH/s at a mining load of 2.72 MW per Rosseau system¹. Universal tank design is compatible with Bitmain S19, S21, and WhatsMiner M66S devices.



Rosseau One Solution: Sample Layout for 72.8MW



Rosseau One Solution: Sample Layout for 72.8MW



M66S Miner Performance Profile for BlockMetrix Minnesota Site

Rosseau One & Kelvion's 22-Fan Dry Cooler allows M66s to operate on 'maximum overclock' for 100% of hours during the year in Minnesota while maintaining optimal fluid temperatures & miner efficiency.

Rosseau One: M66S Miner Performance Profiles	M66S Miners per Rosseau One	Rosseau One System Load	Miner Load	M66S Miner Hashrate	M66S J/THs	Total Hours During % of the Year
Maximum Overclock	320	2.7MW	8500W	403	21.2	100% (8760 hours)
Efficient Overclock		2.4MW	7500W	345	19.5	100% (8760 hours)
OEM Stock		2.1MW	6550W	268	19	100% (8760 hours)

- Miner performance profile calculated based on a maximum fluid inlet temperature of 37°C or below.

13.6MW Rosseau Solution Pricing for M66S miners.

Rosseau One (R1) Solution for 13.6MW of Mining Load	Total Installed Price
5 x Rosseau One 8-Tank System including PDU mounts (320 x M66S miners per R1 System) 5 x Grundfos 1200 GPM Dual-Pump Skid & VFDs 5 x Kelvion 22-Fan Dry Cooler - Rosseau Performance Fluid for 5 Rosseau Systems - Complete Valves, Pipes, Connectors & Filtration for 5 Rosseau Systems 80 x 3-Phase, 20 Port PDUs - Complete Installation & Commissioning of 5 Rosseau Systems (including Rosseau One, Pumps, Coolers, PDUs, Fluid & Piping)	\$3,440,350 Price per MW & THs¹: \$252,970 \$5.34/TH

1. Per megawatt and per THs calculations reflect overclocking of the M66S to 403THs at 8500W. Equal to 128,960 TH/s and 2.72MW per Rosseau One System.
2. Quotation is valid for 30 days. Does not include taxes or shipping. Does not include taxes or shipping. R1 lead time is 12 weeks. Kelvion lead time is 12-16 weeks
3. Installation includes end-to-end mechanical installation and integration of the Rosseau Systems, Grundfos Pump Skid, and Kelvion Adiabatic Coolers. Client to provide crane for mounting of the cooler.

Project Execution Timeline for 23MW

The 23MW project installation and commissioning of Rosseau One systems and related cooling equipment can be completed by Feb 15th 2025 given a project kickoff date in October, 2024.

			PHASE ONE - 23MW																																								
WBS NUMBER	TASK TITLE	DURATION WEEKS	MONTH 1				MONTH 2				MONTH 3				MONTH 4				MONTH 5				MONTH 6				MONTH 7				MONTH 8				MONTH 9				MONTH 10				
			W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4					
1	Phase 1: 23 Megawatt (MW) Deployment																																										
1.1	Site Deployment Design	4																																									
1.2	Manufacturing & Production	16																																									
1.3	Equipment Delivery & Deployment	4																																									
1.4	Equipment Commissioning & Training	2																																									

Phase 1: 23MW Expected Schedule 

Phase 1 Buffer Schedule 

Equipment production, delivery and deployment includes Rosseau One Systems, Piping, Rosseau Performance Fluid, Rosseau One Pump Skid, and Kelvion Coolers. Exact lead time of the Kelvion cooler will be determined at the date of order placement.

Power Density is Your Total Competitive Edge

The industry-leading power density of Rosseau immersion lowers costs, grows revenues, enhances operating KPIs, and delivers the total confidence that only future-proof infrastructure can provide.

Lower TCO	- Significantly reduce miner energy costs - Lower maintenance costs - Lower staffing costs - Lower cooling costs (average PUE of 1.03) - Extended ASIC lifespan
Increase Revenues	- Significantly reduce downtime - Avoid throttling of ASICs due to heat - Increase hashrate through more power-dense ASICs
Ready for Rising Miner Power Density	Rosseau immersion eliminates costly infrastructure upgrades by preparing operations for increasingly powerful ASICs.



Contact us today to get started.

We look forward to serving you.

Daniel Koff, COO
Email: dan@rosseau.io
Phone: +1-415-609-0220

As the physical properties have been entered manually, please check the compatibility of the materials in contact with the fluid. The thermodynamical performance of the unit is a theoretical calculation based upon the physical properties entered. The fluid must be Newtonian and 100% liquid. Please make sure the PED fluid group does correspond to the fluid used.

BASIC DATA

Capacity [kW]	2,717.49	Fluid outlet [°C]	25.0	Coils x Sections x Circuits	2 x 2 x 90 (Total circuits X: 360)
Volume flow rate [gpm]	958	Pressure drop [kPa]	200	Passes (per coil)	2 (Same ends)
Fluid	User defined fluid	Ambient [°C]	17.3	Operation mode	EC
	Rosseau_40C	Rel. humidity [%] ⁽⁸⁾	56.0		
Fluid inlet [°C]	50.0				

USER DEFINED FLUID PARAMETERS

Reference temperature	37.5 °C	Density	791.90 kg/m³	Prandtl number	119.84087
Dynamic viscosity	0.007919 Pas	Kinematic viscosity	10.0 mm²/s	Specific heat	2.27 kJ/kgK
Heat conductivity	0.15 W/mK	Solidification temperature ⁽⁹⁾	-13.5 °C	Flash point ⁽¹⁰⁾	154.0 °C

AIR DATA

Air volume flow	598,202 m³/h
Fans in stand-by	-
Ext. static pressure	0 Pa
Altitude	0 m
Air outlet temp.	31.1 °C
Coil direction	V-Bank
Air direction	Vertical

HEAT EXCHANGER

Surface	12,197 m²
Fin spacing	2.1 mm (12 FPI)
Internal volume	1,973.4 dm³
Int. fluid velocity	0.88 m/s
Max. operating pressure ⁽¹⁾	10 bar

MATERIALS

Tubes	Copper
Fins	Alu
Casing	Galvanised steel
Finish	Painted RAL 7032 (Pebble Grey)
Corrosion class	-

FAN(S)

22 PIECE(S) : 480V/3PH/60HZ;IP55

Fan diameter	910 mm
Range of temp.	-40.0 to 60.0 °C
Mean sound power LwA ⁽²⁾	101 dB(A)

SOUND POWER SPECTRUM

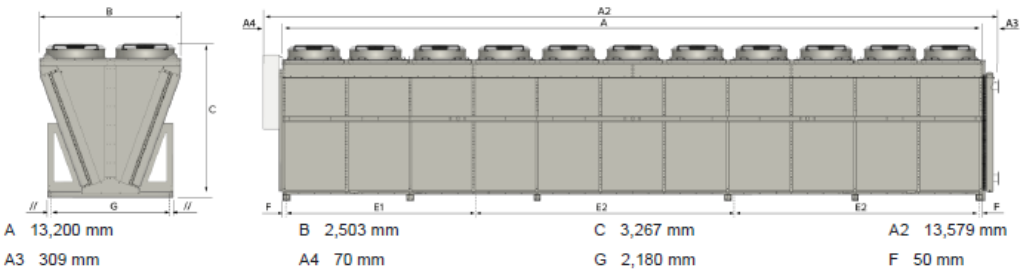
Sound power spectrum 125 Hz	- dB
Sound power spectrum 250 Hz	- dB
Sound power spectrum 500 Hz	- dB
Sound power spectrum 1 kHz	- dB

FAN SET SERIAL PLATE DATA (PER FAN) ⁽³⁾

Speed	1050 rpm
Power nominal	3,200 W
Starting current	6.9 A

Mean sound pressure LpA (10m) ⁽²⁾	68 dB(A)	Sound power spectrum 2 kHz	- dB	Full load current	4.9 A
		Sound power spectrum 4 kHz	- dB	SELECTED SPEED DATA (PER FAN) ⁽³⁾	
Horizontal sound pressure LpA (10m)	66 dB(A)	Sound power spectrum 8 kHz	- dB		
				Speed	1050 rpm
				Power input	2,907 W
				Operating current	4.5 A
				Control voltage EC	10 V

CONNECTIONS		WEIGHT ⁽⁴⁾		REGULATION(S)	
Connections in/out	8 x 100 mm	Dry weight	7,659 kg	ErP	2015
Ends	Same ends	Weight incl. fluid	9,222 kg	Energy efficiency class (2015)	
Type	Flange			PED Category	0

DIMENSIONS ⁽⁴⁾	
 A 13,200 mm A3 309 mm B 2,503 mm A4 70 mm C 3,267 mm G 2,180 mm A2 13,579 mm F 50 mm	

OPTIONS AND ACCESSORIES (EXCL. VAT)			
CATEGORY	OPTION GROUP		ITEM
Coil	016.9	Connections	8 x Flanges, 100 mm
Coil	018.1	Tube	Viscous fluid optimized tubes 3.2
Accessories	371.7	Controller	Kelvion-Controls Digital Modbus + BACnet (programmable controller, incl. contactors or motorstarters, second Modbus interface, BACnet license)

Subject to modifications.

Any data or other information in this selection software shall be deemed to be a general description of product properties and shall not be binding upon Kelvion. Binding product specifications may be agreed by Kelvion in bids, proposals, tenders or other offers issued in response to inquiries or calls for tenders or other invitations to bid.

Notes

(1) Classification acc. to EU Pressure Equipment Directive: Category "0" when fluid group "2" at max. allowable pressure of PS = 10 bar.

(2) Figures derived according to EN 13487. Sound pressure level given is mean value free field over reflective plain. Tolerances: ± 2 dB (global) / ± 5 dB (octave band). These values can be affected by the site environment.

(3) The current consumption can vary depending on air density and mains voltage.

(4) Weights and dimensions do not apply to all possible variants.

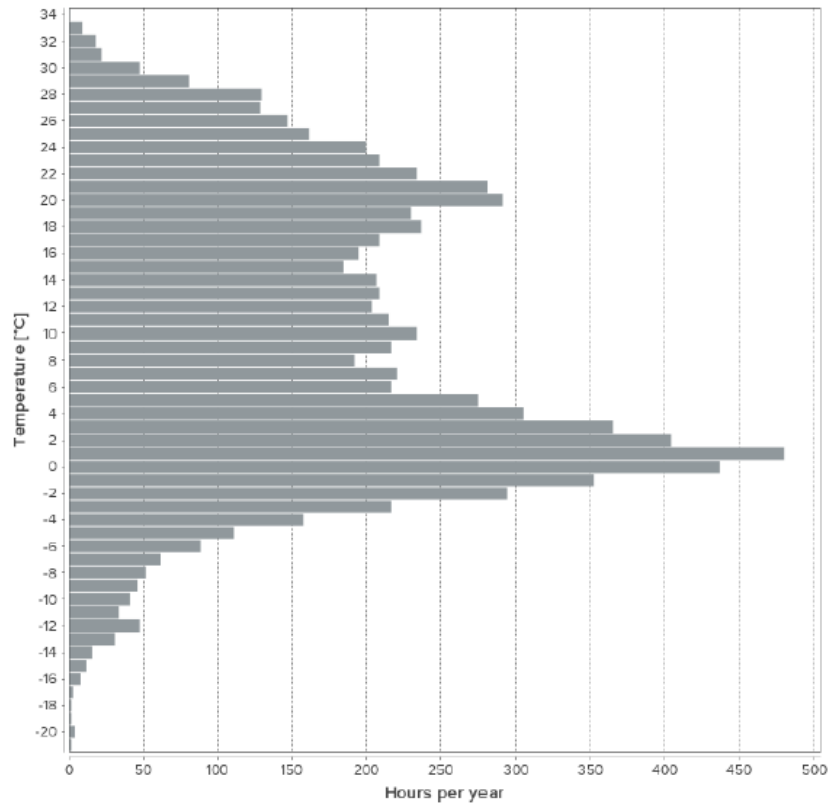
(5) If frequency converters are used for speed control, please take into account the guidelines of the fan-set manufacturer.

(6) The use of low speed fans in combination with phase control can cause humming noise.

(7) Kelvion will define the production site depending e.g. on type series, execution and location.

AVERAGE CONSUMPTIONS WITHIN TEMPERATURE SECTIONS

Frequency of the temperature ranges of the year 2020



INTAKE TEMPERATURE [°C]	TOTAL HEAT REJECTION [KW]	FLUID [°C]		FANS POWER INPUT [KW]	QTY HOURS
TEMP. FROM – TO	AT UNIT	FLUID INLET	FLUID OUTLET		
-21.0 – -20.0	2,720.00	50.0	25.0	0.51	2
-20.0 – -19.0	2,720.00	50.0	25.0	0.54	4
-19.0 – -18.0	2,720.00	50.0	25.0	0.56	2
-18.0 – -17.0	2,720.00	50.0	25.0	0.58	2
-17.0 – -16.0	2,720.00	50.0	25.0	0.64	3
-16.0 – -15.0	2,720.00	50.0	25.0	0.66	8
-15.0 – -14.0	2,720.00	50.0	25.0	0.70	12
-14.0 – -13.0	2,720.00	50.0	25.0	0.74	16
-13.0 – -12.0	2,720.00	50.0	25.0	0.78	31
-12.0 – -11.0	2,720.00	50.0	25.0	0.82	48

INTAKE TEMPERATURE [°C]	TOTAL HEAT REJECTION [KW]	FLUID [°C]		FANS POWER INPUT [KW]	QTY HOURS
TEMP. FROM – TO	AT UNIT	FLUID INLET	FLUID OUTLET		
-11.0 – -10.0	2,720.00	50.0	25.0	0.87	34
-10.0 – -9.0	2,720.00	50.0	25.0	0.93	41
-9.0 – -8.0	2,720.00	50.0	25.0	0.99	46
-8.0 – -7.0	2,720.00	50.0	25.0	1.06	52
-7.0 – -6.0	2,720.00	50.0	25.0	1.13	62
-6.0 – -5.0	2,720.00	50.0	25.0	1.21	89
-5.0 – -4.0	2,720.00	50.0	25.0	1.30	111
-4.0 – -3.0	2,720.00	50.0	25.0	1.40	158
-3.0 – -2.0	2,720.00	50.0	25.0	1.52	217
-2.0 – -1.0	2,720.00	50.0	25.0	1.65	294
-1.0 – 0.0	2,720.00	50.0	25.0	1.79	352
0.0 – 1.0	2,720.00	50.0	25.0	1.96	437
1.0 – 2.0	2,720.00	50.0	25.0	2.15	480
2.0 – 3.0	2,720.00	50.0	25.0	2.38	404
3.0 – 4.0	2,720.00	50.0	25.0	2.64	365
4.0 – 5.0	2,720.00	50.0	25.0	2.95	305
5.0 – 6.0	2,720.00	50.0	25.0	3.31	275
6.0 – 7.0	2,720.00	50.0	25.0	3.77	217
7.0 – 8.0	2,720.00	50.0	25.0	4.33	221
8.0 – 9.0	2,720.00	50.0	25.0	5.00	192
9.0 – 10.0	2,720.00	50.0	25.0	5.91	217
10.0 – 11.0	2,720.00	50.0	25.0	7.04	234
11.0 – 12.0	2,720.00	50.0	25.0	8.63	215
12.0 – 13.0	2,720.00	50.0	25.0	10.94	204
13.0 – 14.0	2,720.00	50.0	25.0	13.92	209
14.0 – 15.0	2,720.00	50.0	25.0	18.91	207

INTAKE TEMPERATURE [°C]	TOTAL HEAT REJECTION [KW]	FLUID [°C]		FANS POWER INPUT [KW]	QTY HOURS
TEMP. FROM – TO	AT UNIT	FLUID INLET	FLUID OUTLET		
15.0 – 16.0	2,720.00	50.0	25.0	26.70	185
16.0 – 17.0	2,720.00	50.0	25.0	45.04	195
17.0 – 18.0	2,720.00	50.3	25.3	63.95	209
18.0 – 19.0	2,720.00	51.3	26.3	63.95	237
19.0 – 20.0	2,720.00	52.3	27.3	63.95	230
20.0 – 21.0	2,720.00	53.3	28.2	63.95	291
21.0 – 22.0	2,720.00	54.3	29.2	63.95	281
22.0 – 23.0	2,720.00	55.3	30.2	63.95	234
23.0 – 24.0	2,720.00	56.3	31.2	63.95	209
24.0 – 25.0	2,720.00	57.3	32.2	63.95	200
25.0 – 26.0	2,720.00	58.2	33.2	63.95	162
26.0 – 27.0	2,720.00	59.3	34.2	63.95	147
27.0 – 28.0	2,720.00	60.3	35.3	63.95	129
28.0 – 29.0	2,720.00	61.2	36.2	63.95	130
29.0 – 30.0	2,720.00	62.2	37.2	63.95	81
30.0 – 31.0	2,720.00	63.3	38.2	63.95	48
31.0 – 32.0	2,720.00	64.2	39.2	63.95	22
32.0 – 33.0	2,500.00	62.6	39.6	63.95	18
33.0 – 34.0	2,500.00	63.5	40.5	63.95	9
34.0 – 35.0	2,500.00	64.2	41.2	63.95	1
Total	-	-	-	206,871.0 kWh	8,784 h

From: [Daniel Koff](#)
To: [James Kramvik](#); [Clark Swanson](#)
Subject: RE: DB specs
Date: Thursday, September 12, 2024 3:48:46 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)

*** **Warning:** External sender, use extreme caution with attachments and links ***

Hi James,

Yes, you are correct. This product documentation and these sound metrics belong to the 22-Fan Dry Cooler from Kelvion.

Best Regards,
Dan

From: James Kramvik <jkramvik@ci.brainerd.mn.us>
Sent: Thursday, September 12, 2024 3:32 PM
To: Daniel Koff <Dan@rosseau.io>; Clark Swanson <clark@blockmetrix.com>
Subject: RE: DB specs

Thank you Dan, this is for one entire unit consisting of 22 fans correct?

Regards,

James Kramvik



James Kramvik | Community Development Director
City of Brainerd | 501 Laurel Street Brainerd MN 56401
218-454-3408 | jkramvik@ci.brainerd.mn.us

From: Daniel Koff <Dan@rosseau.io>
Sent: Thursday, September 12, 2024 3:30 PM
To: James Kramvik <jkramvik@ci.brainerd.mn.us>; Clark Swanson <clark@blockmetrix.com>
Subject: RE: DB specs

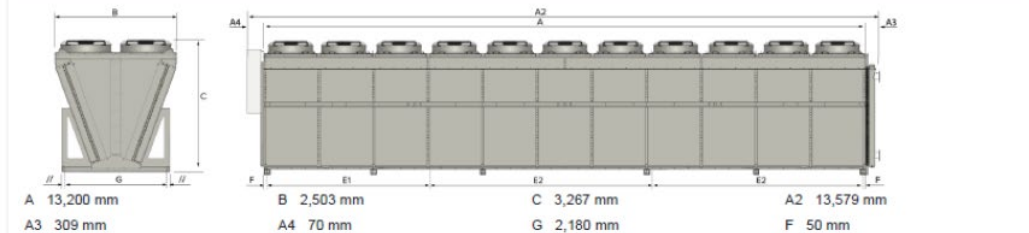
*** **Warning:** External sender, use extreme caution with attachments and links ***

Hi James,

Nice to connect with you.

Per Kelvion's product documentation: the mean sound pressure is 68dB(A) at 10 meters which is about 33 feet.

Here's a snippet (below) from Kelvion's product documentation for easy review with the sound pressure number underlined in red. The complete product document is also attached.

Mean sound pressure LpA (10m) ⁽²⁾	68 dB(A)	Sound power spectrum 2 kHz	- dB	Full load current	4.9 A
Horizontal sound pressure LpA (10m)	66 dB(A)	Sound power spectrum 4 kHz	- dB	SELECTED SPEED DATA (PER FAN) ⁽³⁾	
		Sound power spectrum 8 kHz	- dB		
				Speed	1050 rpm
				Power input	2,907 W
				Operating current	4.5 A
				Control voltage EC	10 V
CONNECTIONS		WEIGHT ⁽⁴⁾		REGULATION(S)	
Connections in/out	8 x 100 mm	Dry weight	7,659 kg	ErP	2015
Ends	Same ends	Weight incl. fluid	9,222 kg	Energy efficiency class (2015)	
Type	Flange			PED Category	0
DIMENSIONS ⁽⁴⁾					
					
A	13,200 mm	B	2,503 mm	C	3,267 mm
A3	309 mm	A4	70 mm	G	2,180 mm
				A2	13,579 mm
				F	50 mm

Let me know if you require anything further and I'll be glad to assist. Feel free to give me a call if that's more convenient for you, James.

Best Regards,
Dan

Daniel Koff
Co-Founder & COO
Rosseau Immersion
M: 415-609-0220

From: James Kramvik <jkramvik@ci.brainerd.mn.us>
Sent: Thursday, September 12, 2024 3:22 PM
To: Clark Swanson <clark@blockmetrix.com>
Cc: Daniel Koff <Dan@rosseau.io>
Subject: RE: DB specs

Hi Dan,

Could you please provide me with data that shows dB levels of the outdoor coolers. 8 units are proposed for the project in Brainerd. I am hoping to get something that would provide evidence of what one of the eight cooling units operates at.

Regards,
James Kramvik

 **James Kramvik** | Community Development Director
City of Brainerd | 501 Laurel Street Brainerd MN 56401
218-454-3408 | jkramvik@ci.brainerd.mn.us

From: Clark Swanson <clark@blockmetrix.com>
Sent: Thursday, September 12, 2024 3:17 PM
To: James Kramvik <jkramvik@ci.brainerd.mn.us>
Cc: Daniel Koff <dan@rosseau.io>

Subject: DB specs

*** **Warning:** External sender, use extreme caution with attachments and links ***

Hi James,

I wanted to introduce you to Dan Koff from Rosseau Systems. Dan can provide you with the dB levels of the fans specifications for our project.

Best regards,

Clark



Clark Swanson
CEO

[3238992518](tel:3238992518)
clark@blockmetrix.com
blockmetrix.com