MATANUSKA-SUSITNA
BOROUGH SCHOOL DISTRICT

BID #B23-01

NEW BUILDING AT ACADEMY CHARTER SCHOOL

Due Date and Time: September 9, 2022 at 2:00 P.M.

Enclosed:

Bid
Documents
and
Affidavit

Matanuska-Susitna Borough School District

Purchasing Department
690 Cope Industrial Way
Palmer, AK 99645

P: (907) 861-5120 || F: (907) 861-5184
bids@matsuk12.us
www.matsuk12.us/bids

TABLE OF CONTENTS

TABLE OF CONTENTS . . . . . P. 1

ADVERTISEMENT FOR BID . . . . . P. 2

REQUEST FOR BID AND INSTRUCTIONS TO BIDDERS . . . . . P. 3

ATTACHMENT A: SCOPE OF SERVICES . . . . . P. 11

ATTACHMENT B: SPECIAL CONDITIONS . . . . . P. 13

ATTACHMENT C: BID FORM . . . . . P. 15

APPENDIX 1: ADDENDUM ACKNOWLEDGEMENT . . . . . P. 17

APPENDIX 2: NON-COLLUSION CERTIFICATE . . . . . P. 18

APPENDIX 3: INSURANCE . . . . . P. 19

APPENDIX 4: VENDOR PAPERWORK . . . . . P. 21

APPENDIX 5: PROPOSED SUBCONTRACTORS AND SUPPLIERS . . . . . P. 22

APPENDIX 6: PRE-BID SCHEDULE. . . . . P. 23

APPENDIX 7: BUILDING PLANS. . . . . P. 24

APPENDIX 8: DOL PAMPHLET 600, ISSUE 44, APRIL 1, 2022 . . . . . P. 60

ADVERTISEMENT

	DATE OF ADVERTISEMENT
Frontiersman	August 19 and 21, 2022
Anchorage Daily News	August 18 and 21, 2022

Type of Ad: Classified / Public Notice

The material herein must be printed in its entirety on the dates shown above. Affidavit of publication is required prior to payment.

Matanuska-Susitna Borough School District Bid

BID #B23-01

NEW BUILDING AT ACADEMY CHARTER SCHOOL

Notice is hereby given that the Matanuska-Susitna Borough School District (MSBSD) will consider bids from qualified individuals and firms for the provision of:

NEW BUILDING AT ACADEMY CHARTER SCHOOL

Bids are due on or before September 9, 2022 at 2:00 P.M. Palmer, Alaska time. Sealed bids must be submitted and received by the MSBSD Purchasing Department, 690 Cope Industrial Way, Palmer, AK 99645, on or before said date and time designated for receipt of bids. All bids must be marked" BID #B23-01 ."

Bid documents can be viewed on the MSBSD website at www.matsuk12.us/bids and are also available at the MSBSD Purchasing Department, 690 Cope Industrial Way, Palmer, AK 99645. For more information, call (907) 861-5120.

A pre-bid conference will be held at Academy Charter School on August 25, 2022. Attendance is not mandatory, but it is highly recommended that bidders attend. For more information, please refer to Appendix 6 of the bid documents. MSBSD personnel will be available. All questions will be answered in writing and issued as an addendum to the bid documents. The MSBSD reserves the right to accept or reject any or all bids and waive any minor technicalities, informalities, and/or irregularities as it deems appropriate.

8/1/22	Requested By:	A. Carney	Approved By:	B. Munson

NEW BUILDING AT ACADEMY CHARTER SCHOOL

BID #B23-01

INVITATION TO BID

THIS IS NOT A PURCHASE ORDER

The Matanuska-Susitna Borough School District (MSBSD) is requesting bids from qualified bidders to provide

NEW BUILDING AT ACADEMY CHARTER SCHOOL

as specific herein.

Bids will be accepted until	September 9, 2022	at	2:00 P.M.
Questions will be accepted until	August 30, 2022	at	4:00 P.M.

BIDDER USE ONLY

THIS PAGE MUST BE COMPLETELY FILLED IN, SIGNED, AND RETURNED WITH YOUR PACKET.

Company Name

Address

City | State | Zip

Telephone Number | Fax Number

State of Alaska Business License Number | Matanuska-Susitna Borough Business License Number

Authorized Signature | Printed Name | Date

INSTRUCTIONS TO BIDDERS

1. GENERAL INFORMATION:

The Matanuska-Susitna Borough School District (MSBSD) is soliciting bids from qualified bidders to provide the scope of services as specified in Attachment A, Scope of Services. Copies of the bid documents can be viewed in the Purchasing section of the MSBSD website at www.matsuk12.us/bids and can be obtained in the Purchasing Department at 690 Cope Industrial Way, Palmer, Alaska 99645 or by calling (907) 861-5120. Office hours are 7:00am - 4:30pm, Monday through Friday.

Bids must be fully executed, signed by each bidder, and enclosed in a sealed envelope with the bidder's name, address, and phone number clearly indicated on the outside, as per Section 8 of this Instructions to Bidders. Bids must be submitted to the MSBSD Purchasing Department at 690 Cope Industrial Way, Palmer, Alaska 99645. Signed bids must be in the office of the MSBSD Purchasing Department on or before the date and time designated for receipt of bids. **The MSBSD will not accept or consider bids that are oral, telephonic, telegraphic, faxed, e-mailed, or otherwise electronically transmitted.**

2. GENERAL STATEMENT:

In rendering the services hereunder, the selected bidder shall adhere to the following general terms and conditions. The term "selected bidder" refers to the bidder awarded a contract to provide services and/or products as required herein. The term "agreement" hereafter refers to this Invitation to Bid, any and all attachments and appendices, any and all addenda, and the bidder's response and acceptance by the MSBSD. A contract may be issued upon award of this bid.

3. PRE-BID CONFERENCE:

A pre-bid conference will be held at Academy Charter School on August 25, 2022. Attendance is not mandatory, but it is highly recommended that bidders attend. For more information, please refer to Appendix 6 of the bid documents. MSBSD personnel will be available. All questions will be answered in writing and issued as an addendum to the bid documents.

4. EXAMINATION OF BID DOCUMENTS:

A. Bidders shall carefully examine the bid documents before submitting a bid. The submission of a bid shall be an admission that the bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements and accuracy of the bid documents.

B. The MSBSD assumes no responsibility for any understanding or representations concerning conditions made by any of its officers, agents, or employees prior to the execution of the bid, unless such understanding or representations are expressly stated in the bid documents or addenda.

C. Bidders shall include in their bid sums sufficient to cover all items and services required by the bid documents, and shall rely entirely upon their own examination in making their bid. The submission of a bid shall be taken as prima facie evidence of compliance with this paragraph.

5. INTERPRETATION OR CORRECTION OF BID DOCUMENTS:

Bidders shall notify the Purchasing Department promptly of any error, omission, or inconsistency that may be discovered during examination of the bid documents. Requests from bidders for interpretation or clarification of the bid documents shall be made in writing to the Purchasing Department by

August 30, 2022 at 4:00 P.M. Palmer, Alaska time.

Any questions received after this date and time will not be answered. Questions should reference the applicable bid number and title and can be submitted by mail, fax, or e-mail to the following:

Mail: MSBSD Purchasing Department; 690 Cope Industrial Way; Palmer, AK 99645
Fax: MSBSD Purchasing Department; (907) 861-5184
E-mail: bids@matsuk12.us

5. INTERPRETATION OR CORRECTION OF BID DOCUMENTS (CONT.):

Interpretations, corrections, responses to questions, and changes of the Bid Documents will be made by addenda. Interpretations, corrections, responses to questions, and changes of the Bid Documents made in any other manner will not be binding on the MSBSD and bidders shall not rely on them. All addenda issued shall become part of the agreement documents. It is the bidder's sole responsibility to ascertain that they have received all addenda issued by the Purchasing Department. Each addendum will be issued by both fax machine and U.S. mail. All addenda will also be posted in the Purchasing section of the MSBSD website at www.matsuk12.us/bids. **All addenda must be acknowledged in the space provided on Appendix 1 or the bid may be deemed non-responsive.**

6. PREPARATION AND SUBMISSION OF BIDS:

A. Each bid must be signed in longhand by the bidder with their usual signature. Bids submitted by partnerships must be signed with the partnership name by one of the partners, followed by the signature and designation of the partner signing. Bids submitted by corporations must be signed with the legal name of the corporation, followed by the name of the state of incorporation, and the signature of the president, secretary, or other person authorized to bind in the matter. The full name and address of each person signing shall be typed or printed below the signature.

B. Bids shall be submitted on the forms furnished and must be manually signed. Bids must be submitted in a sealed envelope and addressed as indicated in Section 8 of this Instructions to Bidders.

C. Bids shall specify a price, typed or written in ink, for each bid item called for. Bids may be rejected if they show an omissions, alteration of the forms, additions not called for, conditional or alternate bids not called for, qualified bids, or irregularities of any kind.

D. Bidders shall bear all costs directly or indirectly related to preparing a bid, preparing presentations or supplements, and/or clarifying a bid as may be required by the MSBSD in response to this solicitation.

7. SUBMITTAL REQUIREMENTS:

All of the following must be included with the bid or the bid may be considered non-responsive and be rejected:

A. Invitation to Bid signature page, signed by responsible party.

B. Bid Form, fully executed and signed.

C. Appendix 1, Addendum Acknowledgement, fully executed and signed.

D. Appendix 2, Non-Collusion Certificate, fully executed and signed.

E. Evidence of Insurance, as required in the Invitation to Bid and Appendix 3, will be required prior to an award to the successful bidder.

F. Appendix 4, Vendor Paperwork, fully executed.

G. Appendix 5, Proposed Subcontractors and Suppliers List, fully executed (if applicable)

H. Copies of Alaska Business License and all other licenses, certificates, or permits required by city, borough, state, and federal law as applicable.

I. Any additional submittal requirements per Attachment A: Scope of Services.

8. BIDS:

A. Signed bids **MUST** be in the MSBSD Purchasing Department office on or before

September 9, 2022 at 2:00 P.M. Palmer, Alaska time.

B. It is the responsibility of all bidders to ensure that their bids and associated documents are in the office of the Purchasing Department prior to the date and time designated for receipt of bids. Bids **MUST** be in **SEALED** envelopes clearly marked as follows:

Bid Number: BID #B23-01

Bid Title: NEW BUILDING AT ACADEMY CHARTER SCHOOL

Due: September 9, 2022 at 2:00 P.M.

8. BIDS (CONT.):

C. Bidders are cautioned that mailed bids which arrive after the date time designated for receipt of bids will not be opened or considered. Bidders are further cautioned not to rely on the U.S. Postal System or any other second party for timely delivery of their bid. It is the bidder's sole responsibility to ensure that their bid and associated documents are in the physical possession of the Purchasing Department prior to the date and time scheduled for receipt of bids.

D. All bids shall be submitted on the attached bid forms in the spaces indicated and must comply with these instructions. The bid must be completed and signed by an authorized representative of the firm submitting the bid.

E. Scheduled bid openings are open to the public and are located in the Purchasing Department.

9. WITHDRAWAL FROM CONSIDERATION:

Bids may be withdrawn upon written request delivered to the MSBSD Purchasing Department on or before the date and time designated for receipt of bids. However, no bidder shall withdraw or cancel their bid for a period of ninety (90) calendar days prior to the date and time designated for receipt of bids, nor shall the selected bidder withdraw, cancel or modify their bid after having been notified by the Purchasing Department that said bid has been accepted by the MSBSD.

10. MODIFICATION OF BIDS:

Prior to the date and time designated for receipt of bids, a bid may be modified or withdrawn by notice to the MSBSD at the place designated for receipt of bids. Such notice shall be in writing over the signature of the bidder. That notice shall be date and time stamped by the MSBSD on or before the date and time designated for receipt of bids. A modification must not reveal the amount of the original bid. A bid bond, if required, shall be in an amount sufficient for the bid as modified.

11. AWARD OF CONTRACT:

A. The MSBSD will award a contract to the lowest responsive and responsible bidder. This bid will be awarded on the basis defined in Attachment A, Scope of Services.

B. The MSBSD, as it deems appropriate, shall have the right to reject any and all bids. Bids may be rejected if they do not include a required bid bond or other data required by the bid documents. All responsive bids may be rejected if the MSBSD, in its sole judgment, considers them too costly.

C. The MSBSD has the right to accept Alternatives in any order or combination unless otherwise specifically provided in the Bid Documents, and to determine the low bidder on the basis of the sum of the Base Bid and Alternatives accepted.

D. In determining the lowest responsive and responsible bidder, the MSBSD may consider, in addition to price, at any point in the selection process, any of the following factors:

I. The ability, capacity, and skill of the bidder to perform the contract.
II. Whether the bidder can perform the contract within the time specified without delay or interference.
III. The character, integrity, judgment, experience, and efficiency of the bidder.
IV. The quality of performance by the bidder on previous contracts of a similar nature.
V. Whether the bidder is in arrears on any existing contract with the MSBSD or is in litigation, arbitration, or other legal dispute with the MSBSD.
VI. Previous compliance by the bidder with laws and regulations relating to the contract.
VII. The number and scope of conditions attached to the bid.
VIII. The number and scope of minor variations contained in the bid.
IX. If the contract is one which will require future maintenance or repairs, the availability of replacements, replacement parts, and maintenance service for any machinery, equipment, or other material proposed to be installed or supplied by the bidder.
X. The quality, availability, and adaptability of the supplier, equipment, or contractual services to the particular use required.
XI. Whether the bidder is prepared to furnish supplies, equipment, or contractual services which meet the specifications of the MSBSD.

E. The MSBSD reserves the right to make award within a ninety (90) calendar day award period from the date the bids are opened. Bids submitted must be firm for the award period and the contracted service period.

12. AVAILABILITY OF FUNDS:

A. The MSBSD reserves the right, at its sole discretion, to cancel this Invitation to Bid or any part thereof, at any time, prior to an award of contract issued under this Invitation to Bid.

12. AVAILABILITY OF FUNDS (CONT.):

B. Awards are contingent upon the appropriation of MSBSD budget funds.

13. REQUEST FOR ADDITIONAL INFORMATION:

A. The MSBSD reserves the right to request current audited financial statements; qualifications of management personnel, including project manager or field supervisors performance references; or other information deemed relevant at any time prior to bid award. Bidder agrees to provide such requested information within three (3) business days of the request.

B. Prior to the final selection, bidders may be required to submit additional information, which the MSBSD may deem necessary to further evaluate the bids.

C. The MSBSD reserves the right to make investigations of the qualifications of the bidder as it deems appropriate, including but not limited to a background investigation conducted by proper authorities.

14. PUBLIC RECORDS CLAUSE:

This Invitation to Bid and the resulting bids received, together with copies of all documents pertaining to the award of a contract, will be kept by the Purchasing Department and made a part of the record which will be open to public inspection, unless restricted by the bidder and School Board Policy, once the Notice of Intent to Award has been issued. If a bid contains any information which is proprietary or confidential, each page of the confidential information must be clearly marked with a diagonal watermark that reads "CONFIDENTIAL"; such information will be kept confidential if appropriate and will not be released to the public. The MSBSD is not responsible for the release of any documents not marked in this manner. A confidential watermark is required. The bid tabulation sheet shall be open to public inspection as soon as practicable after the Notice of Intent to Award has been issued.

15. PROTEST OF AWARD:

The MSBSD has a process in place for an unsuccessful bidder to submit a written protest, requesting a review of the bid award.

A. An unsuccessful bidder must submit its protest within [three (3)] days of the date of the Notice of Intent to Award issued by the MSBSD's Purchasing Department.

B. The protest must be made in writing, delivered to the same location as the original bid, and must set forth in detail the reason(s) for the protest, with specific reference to the relevant provision of the Bid Documents.

C. Upon receipt of the protest, the Purchasing Department shall schedule an informal hearing to include the successful bidder, the protesting bidder, the Assistant Superintendent of Business and Operations, and a representative of the Purchasing Department. At such time, the bidder making protest can express his/her concerns with said award.

D. Following the informal hearing, the Assistant Superintendent of Business and Operations will send the MSBSD's decision on the protest to all involved parties.

E. If the contract award for the proposed project is required to be approved by the MSBSD School Board, the involved parties will be notified of the date and time of the applicable School Board meeting.

16. CONTRACT:

The contract between the MSBSD and the bidder shall consist of (1) the Invitation to Bid and any attachments and/or amendments and/or addenda thereto; (2) the bid submitted by the bidder in response to the Invitation to Bid; and (3) the actual written agreement or contract. In the event of a conflict in language between the documents referenced above, the provisions and requirements set forth and/or referenced in the bid documents shall govern.

17. INSURANCE:

It is specifically agreed between the parties executing this agreement that it is not intended by any of the provisions of this agreement to create in the public or any member thereof a third-party benefit hereunder, or to authorize anyone not a party to this agreement to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of this agreement. The successful bidder shall procure and maintain minimum insurance requirements and shall provide all required documentation as per attached Appendix 3 to the MSBSD upon award of this agreement. Failure to furnish proper evidence of insurance, or the lapse of insurance required under the provisions of this agreement, may be grounds for termination. The duties required under this subsection shall survive the termination expiration of this agreement. **It is highly recommended that the**

17. INSURANCE (CONT.):
bidders confer with their respective insurance companies or brokers to determine if their insurance program complies with the MSBSD's insurance requirements, as per attached Appendix 3.

18. LICENSES:
All individuals or businesses conducting business within the State of Alaska and within the Matanuska-Susitna Borough are hereby advised that they must obtain both a State of Alaska and a Matanuska-Susitna Borough business license. For information on how to obtain the appropriate business license or see if any exemptions may apply, please visit the following websites.

State of Alaska:
https://www.commerce.alaska.gov/web/cpbl/BusinessLicensing/BusinessLicensingFormsFees.aspx

Matanuska-Susitna Borough
http://www.matsugov.us/business-licenses

19. INVOICES AND METHOD OF PAYMENT:
Billings for services must be verified by a responsible representative of the MSBSD before payment can be made. Payments shall be made to the bidder within thirty (30) calendar days after the MSBSD receives and approves a written request for payment or invoice. The request for payment or invoice may be submitted to the MSBSD, Attn: Accounting Department, 501 N. Gulkana St., Palmer, AK 99645, or invoices can be e-mailed to accounting@matsuk12.us.

20. FEDERAL EXCISE TAXES:
The MSBSD is exempt from Federal Excise Taxes. An Exemption Certificate will be furnished upon request.

21. MODIFICATIONS:
The MSBSD may, from time to time, require modifications in the scope of services to be performed under this agreement. However, it is expressly understood that this agreement shall not under any circumstances be modified without written authorization from the MSBSD. All modifications in the terms of this agreement, to include adding additional schools or sites, shall be incorporated by written amendments to this agreement executed by both parties.

22. INDEMNIFICATION:
A. Any and all employees of the bidder and other persons, while engaged in the performance of any work or services required by the bidder under this agreement, shall not be considered employees of the MSBSD.

B. Each party shall indemnify, defend, and hold the other party harmless from and against any claim of, or liability for, negligent acts, errors, and omissions of the other party under this agreement. However, a party is not required to indemnify, defend, or hold the other party harmless for a claim of, or liability for, the independent negligent acts, errors, and omissions of the other party. If there is a claim of, or liability for, a joint negligent act, error, or omission of both parties, the indemnification, defense, and hold harmless obligations of this provision shall be apportioned on a comparative fault basis. This indemnification shall survive the expiration or termination of this Agreement.

23. PROTECTION OF EQUIPMENT AND PROPERTY:
The bidder assumes full responsibility for and shall indemnify the MSBSD for any loss or damage to any MSBSD property resulting in whole or in part from the acts or omissions of the bidders, or any employee, agent or representative of the bidder.

24. BIDDER'S PERSONNEL REQUIREMENTS:
The MSBSD may, by serving written notice, require the bidder to promptly remove from the site of work any employee or worker the MSBSD deems incompetent, careless, or otherwise objectionable including, but not limited to, violation of MSBSD policies relating to alcohol, illegal drugs or firearms on MSBSD property.

25. EQUAL EMPLOYMENT OPPORTUNITY:
Bidders, in submitting bids, certify that if awarded a contract under this Invitation to Bid, they will not discriminate against any employee or applicant for employment because of race, color, religion, gender, age, national or ethnic origin, disability, marital status, change in marital status, pregnancy, parenthood, or any other basis prohibited by Alaska state or federal laws. The bidder will take affirmative action to ensure non-discrimination. Such action shall include but not be limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. The bidder agrees to post in a conspicuous place, available to employees and applicants for employment, notices setting forth the provision of this non-discrimination clause.

26. DRUG, TOBACCO, AND ALCOHOL-FREE WORKPLACE:

The selected bidder agrees to comply with MSBSD School Board Policy (BP) 4020, Drug, Tobacco and Alcohol-Free Workplace. This policy states, in part: "In the interest of the health and safety of students and employees, it is a violation of this policy for students, staff, parents, visitors, contractors and all others to use, distribute or sell tobacco, any non-FDA-approved tobacco or nicotine delivery products or devices including but not limited to, cigarettes, cigars, dip, hookah pens, e-cigarettes, and dissolvable nicotine products on District premises, at school-sponsored activities on or off District premises and in District-owned, rented or leased vehicles."

27. CODE OF ETHICS:

A. The selected bidder shall comply with MSBSD School Board Policy BP 4119.21, Code of Ethics.

B. The selected bidder shall also comply with BP 3515.7, Restrictions on Sex Offenders on Campus. This policy states, in part: "To protect the morals, health, and safety of students, it is the policy of the district to deny entrance onto the premises of any district school or any building used for school activities to registered sex offenders or persons required to register under the sex offender registration act of whom the district has knowledge."

C. The selected bidder shall take affirmative action to ensure that no contractor, employee, or subcontractor who will be working on MSBSD property has a criminal record of any conviction for child abuse or assault, be on the State of Alaska or any State Sexual Offender Registry, or has been convicted of a crime of moral turpitude. Any waiver of this section must be in writing, signed by the District's Superintendent. The MSBSD has the right to verify such records at any time during the life of the contract.

28. OCCUPATIONAL SAFETY AND HEALTH WARRANTY:

If awarded the agreement, the bidder warrants that the products sold or services rendered shall conform to the standards and/or regulations promulgated by the U.S. Department of Labor under the Occupational Safety and Health Act of 1970 (29 U.S.C. 651, OL 91-596) and all amendments thereto. In the event the product sold does not conform to the OSHA standards and/or regulations, the MSBSD may return the product for correction or replacement at bidder's option and at bidder's expense. Services performed by the bidder which do not conform to OSHA standards and/or regulations must be corrected by bidder at bidder's expense or by the MSBSD at bidder's expense in the event bidder fails to make the appropriate correction within a reasonable time.

29. COMPLIANCE:

A. The selected bidder shall comply with all state, federal and local laws, regulations or orders applicable to the purchase, manufacture, processing and delivery of the service.

B. General Conditions:

I. General Statement: The following conditions shall be followed by the selected bidder. These conditions shall be adhered to, relative to any project for which the selected bidder provides services. The MSBSD reserves the right to delete or alter the following terms and conditions or to add additional terms and conditions at its discretion. The selected bidder shall perform services and otherwise comply with all conditions as set forth in this Invitation to Bid including all attachments and appendices hereto and all additional requirements identified in the bid documents.

II. Governing Laws: The agreement shall be governed as to performance and interpretation in accordance with the laws of the State of Alaska.

III. Compliance with All Laws: The bidder shall comply with all applicable laws, ordinances, executive orders and regulations of the federal, state, and local government, which may in any manner affect the performance of the agreement and all applicable MSBSD policies, rules and procedures.

IV. Relationship of All Parties: It is expressly understood and agreed by the bidder and the MSBSD that the bidder's relationship to the MSBSD is that of an independent contractor.

30. CONFLICT OF INTEREST:

A. The contracting party expressly represents that the contract is not contrary to MSBSD School Board Policy BP 2300, Conflict of Interest and that the contracting party has read and understands BP 2300. If this representation is false, the Superintendent may terminate the contract without regard to partial performance and in the event of such a termination, the MSBSD will have no further liability or obligation to the contracting party.

B. Any employee and/or employee with immediate family members that may have a financial interest in the contract must file an annual BP 2300, Conflict of Interest Affidavit with MSBSD. The following definitions apply to this policy: Immediate family member means an employee's grandparent, parent, child, grandchild, brother, sister, spouse, child of a spouse, or regular member of the employee's household.

31. ASSIGNMENTS AND SUBCONTRACTORS:

A. The bidder shall not sell, assign, transfer, or convey any contract resulting from this bid, in whole or in part, without the prior written consent of the MSBSD.

B. The bidder shall ensure that subcontractors are appropriately licensed, insured and bonded, and qualified to meet all of the requirements of this Invitation to Bid. If a bid with subcontractors is selected, the bidder must provide the following information concerning each prospective subcontractor within five (5) working days of the written request by the MSBSD:

- The complete name and address of the subcontractor;
- The type and percentage of work the subcontractor will perform;
- Certificate of Insurance
- Other requested information relevant to the qualifications of the subcontractor.

C. Sub-contractors must comply with all licensing, indemnity, insurance limits, and insurance requirements imposed on the bidder.

32. TERMINATION FOR CAUSE:

A. If, through any cause, the bidder shall fail to fulfill in a timely and proper manner their obligation under this agreement, or if the bidder shall violate any of the covenants, agreements, or stipulations of any awarded contract, the MSBSD shall thereupon have the right to terminate this agreement by serving written notice to the bidder of such termination and specifying the effective date thereof, at least 30 (thirty) days before the effective date of such termination. However, if the MSBSD determines that the continuation of this agreement constitutes an imminent threat to the health and safety of its students and staff, this agreement may be terminated by the MSBSD effective immediately.

B. In the event it becomes necessary to terminate this agreement awarded as a result of this bid, regardless of the circumstances or time remaining on the contract, the bidder will be responsible for any and all expenses incurred by the MSBSD. These expenses can include, but are not limited to, cost of locating interim services, cost of re-issuing a bid, and any additional cost to the MSBSD by the new bidder greater than the current contract.

C. The bidder shall be entitled to receive just and equitable compensation for any satisfactory work completed in accordance with the payment provision as set forth under Section 18 of this bid document. Equitable compensation shall not exceed the amount reasonably billed for work actually done and expenses reasonably incurred. The MSBSD's contract administrator shall determine whether work completed is satisfactory.

33. TERMINATION FOR CONVENIENCE OF THE MSBSD:

A. The MSBSD may terminate any awarded contract or agreement at any time by serving written notice to the bidder of such termination and specifying the effective date of such termination at least 30 (thirty) days prior to the effective date of termination.

B. Upon termination of any awarded contract or agreement, the MSBSD shall pay the bidder any payments due at that time.

34. FAILURE OF FUNDING:

A. The MSBSD shall be excused from performance under the contract if funding is not appropriated.

B. The MSBSD may reduce the scope and amount of services provided under the contract to counteract a funding shortfall.

ATTACHMENT A:
SCOPE OF SERVICES

1. SCOPE

The Matanuska-Susitna Borough School District (MSBSD) is seeking bids from qualified contractors to construct a new 30 ft x 80 ft. building at Academy Charter School (ACC) as described herein. The work will include general contracting and subcontractor trades including but not limited to, general construction, earthwork, structural, mechanical, electrical, and specialty systems.

2. BACKGROUND

Ranging in enrollment from 20 students to more than 1,500 students, the schools of the MSBSD educate approximately 19,000 students at 46 schools located throughout the Matanuska-Susitna Borough. The MSBSD also supports a variety of administrative services including but not limited to Facilities, Purchasing and Warehouse, Nutrition Services, and Central Office Administration. MSBSD schools include 21 elementary schools, four middle schools, nine high schools, six non-traditional schools, and six charter schools.

3. GENERAL INFORMATION

The bidder will supply all supervision, labor materials, and tools necessary to provide a completed project per the attached construction documents. The Facilities Department will review designs and submittals and will advise the contractor on required modifications during the scheduled project meetings.

A. The awarded bidder shall construct all systems of sufficient sizes and capacities in conformance with all applicable laws and regulations satisfying all authorities having jurisdiction.
B. Construction shall comply with all applicable codes as a minimum and with any additional items contained herein that may be above the minimum. Use the latest State of Alaska adopted editions of the IBC, IFC, IMC, IFGC and NEC.
C. The Construction must meet or exceed all NFPA, and OSHA standards and structural building codes as dictated by local jurisdiction.
D. The contactor must coordinate and comply with the City of Palmer building department requirements. The contractor is responsible for coordinating inspections and receiving final City approvals for occupancy.
E. Contractor must coordinate with the City of Palmer as well as all utilities such as MEA, MTA, etc. to complete connections for the new building.
F. The MSBSD Facilities Department is responsible for paying building permit fees.
G. The contractor will work with the MSBSD and design team to complete the project based on the following milestone schedule dates:
    1. Complete exterior site work and foundation including utilities by October 30, 2022. Contractor is responsible for protecting the foundation from weather/winter while waiting on the PEMB package.
    2. Substantial completion by June 1, 2023 and building occupancy by July 1, 2023.
H. The bidder will make every effort to complete the project within the constraints of the construction budget established by the MSBSD. Anticipated building budget is $600,000 for the base bid services.
I. Academy Charter School has procured the following building material, which the contractor can use on the project.
    1. Ten (10) rolls of geotextile fabric, AASHTO M288 Class 3. The rolls are 12.5’ by 432’.
J. The MSBSD may be open to a phased construction approach with completion of the foundation and site work in fall of 2022 and completion of the rest of construction in spring of 2023, as long as the final completion date of July 1, 2023 is maintained.

K. It is expected that the submittal documents will include re-bar shop drawings, concrete mix designs, water and sewer piping data, pre-engineered building reactions and shop drawings, and mechanical and electrical gear / data submittals.

L. Additive Alternates: Bidders must provide pricing for the base bid and the five (5) bid alternates noted in the construction documents. The alternates are noted on the bid form as well as the cover page of the attached project plans.

4. CONTRACT AWARD

The MSBSD will recommend award of a contract to the lowest responsive and responsible bidder based on total base bid plus any alternates selected. Pricing must be included for all line items or the bid may be considered non-responsive.

5. CONTRACT TERM

The term of any contract resulting from this solicitation shall begin on September 19, 2022, and end July 1, 2023. The MSBSD may extend this contract by giving written notice to the selected bidder prior to the expiration of the then-existing term, if it is found to be in the MSBSD's best interest.

6. CONTRACT MANAGEMENT

At the commencement of any resulting contract, the MSBSD and the successful proposer shall each designate a contract administrator. Such persons shall be each respective party's single point of contact for purposes of management of the contract. The proposer's contract administrator shall assume responsibility for the coordination of all contract issues under the contract.

ATTACHMENT B:
SPECIAL CONDITIONS FOR CONSTRUCTION BIDS

1. **GENERAL INFORMATION:**
   The following special conditions apply to bids and contracts of a construction nature.

2. **CONTRACT MANAGEMENT:**
   At the commencement of the resulting contract, the MSBSD and the successful bidder shall each designate a project manager. Such person shall be the respective party's single point of contact for purposes of management of the contract. The bidder's project manager shall assume responsibility for the coordination of all contract issues under the contract.

3. **BONDS OF CONTRACTORS FOR PUBLIC BUILDING OR WORKS:**
   In certain circumstances, Alaska Statute AS 36.25.010 requires contractors to furnish to the state or a political subdivision of the state certain bonds, which become binding upon the award of the contract. If required, the successful bidder shall furnish a performance and payment bond in the full amount of the contract and shall maintain the bond in force during the duration of the contract. The bond shall be for the faithful performance of this contract in all respects including, but not limited to, payments for all materials and labor. All alterations, extensions of time, additional work, and other changes authorized by the contract documents may be made without securing the consent of the surety of sureties. The bond shall be with a corporate surety authorized to do business in Alaska, having an A.M. Best rating of B+7 or higher, and acceptable to the MSBSD. A Power of Attorney for the person signing the bond for the surety must be submitted with the bond.

4. **WAGE RATES (STATE OF ALASKA PREVAILING WAGE SCALE AND ALASKA HIRE):**
   Attention of bidders is particularly called to the requirements of conditions of employment to be observed and minimum wage rates to be paid under the contract. The requirements of Alaska's Little Davis Bacon Act (AS 36.050.010) are applicable to this project. All work performed "on-site" is covered and subject to the provisions of this act. Each bidder must inform themselves fully of the conditions relating to the construction of the project and the employment of labor thereon and adhere to those conditions. Failure to do so will not relieve a successful bidder of their obligation to furnish all material and labor necessary to carry out the provisions of the contract. The State of Alaska, Department of Labor, Wage and Hour Administration Pamphlet No. 600 is available online at http://labor.alaska.gov/lss/pamp600.htm. Laborers' and Mechanics' minimum rates of pay are updated April 1 and September 1 of each year. It is the responsibility of the bidder to obtain the new labor wage and hour rates when available from the State of Alaska, Department of Labor, and to use the prevailing wage scale and hiring requirements when formulating their bid.
   For the purposes of this Invitation to Bid, Issue # 44 , released April 1, 2022 will apply.

5. **LICENSES:**
   In addition to the licenses required in section 18 of the Instructions to Bidders, all individuals or businesses contracting for construction work under Alaska's Little Davis Bacon Act (AS 36.050.010) are hereby advised that they must obtain a contractor's license. For information on how to obtain the appropriate license or see if any exemptions may apply, please visit the following website: https://www.commerce.alaska.gov/web/cbpl/ProfessionalLicensing/ConstructionContractors.aspx.

6. **SUBCONTRACTORS:**
   Refer to Section 31 of the Instructions to Bidders, entitled "Assignments and Subcontractors", for the MSBSD's requirements regarding subcontractors.

7. **CONTRACTOR PERSONNEL:**
   The personnel identified or described in the bidder's proposal shall perform the services provided for the MSBSD under any resulting contract. The bidder agrees that any personnel substituted during the term of the contract must be able to conduct the required work to industry standards and be equally or better qualified than the personnel originally assigned. The MSBSD reserves the right to approve personnel assigned to work under the contract, and any changes or substitutions to such personnel. The MSBSD's approval of a substitution will not be unreasonably withheld. Any such approval or disapproval shall not relieve the bidder from its obligations under the contract. In the event that personnel become unavailable, it will be the bidder's responsibility to provide an equally qualified replacement in time to avoid delays to the work.

8. MEETINGS AND NOTIFICATIONS:

A. Technical or Contractual Problems: The bidder will be required to meet with the MSBSD's personnel, or designated representatives, to resolve technical or contractual problems that may occur during the term of the contract, at no additional cost to the MSBSD. Meetings will occur as problems arise and will be coordinated by the MSBSD. Failure to participate in problem resolution meetings or failure to make a good faith effort to resolve problems may result in termination of the contract.

B. Progress Meetings: During the term of the contract, the MSBSD's project manager will plan and schedule Project Status Meetings with the successful bidder to discuss the progress made by the bidder and the MSBSD in the performance of their respective obligations under the contract. Project managers for all subcontractors who are then performing work on the project or whose work affects the status of the project shall participate in person or by telephone conference in the Project Status Meeting. At each such meeting, the successful bidder shall provide the MSBSD with a written status report that identifies project status including all work completed and milestones completed, issue tracking/resolution including projected schedule to resolve issues, change management, any problem or circumstance encountered by bidder, or of which bidder gained knowledge during the period since the last such status report, which may prevent bidder from completing any of its obligations as required or that may generate charges in excess of those previously agreed to by the parties. The successful bidder shall identify the amount of excess charges, if any, and the cause of any identified problem or circumstance and the steps taken to remedy the same. Either party also may request additional Progress Status meetings. Upon two (2) business days' prior telephone, e-mail, or written notice from a party, the other party shall use good faith efforts to make itself available for any meetings during business hours reasonably requested by the other party. The successful bidder's subcontractors shall make good faith efforts to attend such meetings if requested by the MSBSD.

C. Failure to Notify: In the event successful bidder fails to specify in writing any problem or circumstance with respect to the period during the term covered by bidder's status report, it shall be conclusively presumed for purposes of the resulting contract that no such problem or circumstance arose during such period, and the bidder shall not be entitled to rely upon such problem or circumstance as a purported justification for either claiming it is entitled to receive any amount (including without limitation damages or additional charges arising out of a breach by the MSBSD of any MSBSD obligation) with respect to any of bidder's obligations under the contract in excess of those previously agreed to; or failing to complete any of bidder's obligations. Submission by the successful bidder of the status reports shall not alter, amend or modify the bidder's or the MSBSD's rights or obligations pursuant to any provision of the resulting contract.

D. MSBSD's Failure or Delay: For a problem or circumstance identified in the bidder's status report, which the bidder claims was the result of the MSBSD's failure or delay in discharging any MSBSD obligation, the MSBSD shall review and determine if such problem or circumstance was in fact the result of such alleged failure or delay. If the MSBSD agrees as to the cause of such problem or circumstance, then the parties shall extend any deadlines or due dates affected thereby, and provide for any additional charges by the bidder. If the MSBSD does not agree as to the cause of such problem or circumstance, the parties shall each attempt to resolve the problem or circumstance in a manner satisfactory to both parties.

ATTACHMENT C:
BID FORM

BASE BID		
Item No.	**Proposal Item**	**Amount**
1	Construct new building at Academy Charter School per the bid documents.	$_____
	TOTAL BASE BID	**$_____**

ADDITIVE ALTERNATES		
2	Provide addition to the base bid structure as illustrated on sheets A1.2 and A2.0. Price must include foundation system, steel structural system, exterior roofing and siding package matching base bid, and including two (2) thermally insulated exterior hollow metal doors and frames.	$_____
3	Substitute base insulated metal panels for spray applied urethane insulation on walls and ceiling. Install spray applied intumescent paint over insulation to provide 20 minute fire barrier.	$_____
4	Substitute base bid and Alternate 3 insulation systems for fiberglass batt insulation with polypropylene liner system. Install gypsum wall board over metal studs to 8' aff around perimeter of building.	$_____
5	Install a 4" concrete slab on grade apron on west side of structure as indicated on sheet A1.0. Price must include NFS subgrade.	$_____
6	Replace the epoxy floor finish with concrete sealer in the following rooms: 100 Storage/Cleaning 101 Work Room 103 Washroom 104 Washroom	$_____
7	Eliminate epoxy paint on steel structure.	$_____

The undersigned hereby further proposes to furnish all services, including labor, supplies, and supervision necessary to construct the new building at Academy Charter School in full accordance with the Bid documents:

Company Name

Authorized Signature | Printed Name | Date

APPENDIX 1:
ADDENDUM ACKNOWLEDGEMENT

Please sign below to acknowledge receipt of all addenda. Return this form with your bid packet. Failure to acknowledge receipt of addenda may result in a determination of your proposal as non-responsive.

If no addenda have been issued, please indicate "NONE" below.

Addendum No.	Receipt Acknowledged (Signature)	Date

APPENDIX 2:
NON-COLLUSION CERTIFICATE

The bidder certifies that:

1. The prices in this offer have been arrived at independently and neither the bidder nor any representatives of the bidder has in any way colluded, conspired, connived, or agreed, directly or indirectly, with any other bidder, firm, or person relating to:
   - Those prices;
   - The intention to submit an offer; or
   - The methods or factors used to calculate the prices offered.

2. The prices in this offer have not and will not be knowingly disclosed by the bidder, directly or indirectly, to any other bidder or competitor before contract award unless otherwise required by law.

3. No attempt has been made or will be made by the bidder to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

_____
Signature

_____
Printed Name

_____
Title

_____
Business Name

_____
Date

APPENDIX 3:
INSURANCE REQUIREMENTS

It is highly recommended that contractor and any subcontractor confer with their respective insurance providers and/or brokers to determine if their insurance program is in compliance with the insurance requirements of the Matanuska-Susitna Borough School District (MSBSD).

At their own cost, the Contractor and any subcontractor shall procure and maintain in full force and effect at all times during the term of this Agreement, the following insurance policies required hereunder. Failure to furnish proper evidence of insurance, or the lapse of insurance required under the provisions of the contract, shall be grounds for termination.

If the contractor or any subcontractor maintains broader coverage and/or higher limits than the minimums indicated below, the MSBSD requires and shall be entitled to the broader coverage and/or the higher limits maintained. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the MSBSD.

Insurance companies shall be rated no less than A-7 by AM Best rating service. MSBSD reserves the right to review and revise any of the following insurance requirements, based on insurance market conditions, availability or affordability of coverage, or changes within the scope of work which apply to this contract. In addition, the MSBSD reserves the right to reject any insurance policies that fail to meet the criteria listed within this section, or which are provided by insurance carriers that are in poor financial condition or become in poor financial condition during the term of this contract.

The following insurance coverages are required:

1. **WORKERS' COMPENSATION INSURANCE:**
   Workers' Compensation insurance in compliance with the laws of the State of Alaska, with Statutory Limits, and Employers' Liability insurance with a limit no less than $1,000,000 Bodily Injury by Accident-Each Accident, $1,000,000 Bodily Injury by Disease-Each Employee, $1,000,000, Bodily Injury by Disease Policy Limit, and any other coverage that may apply to work performed by employees in this agreement and any project hereunder.

   In the event that the contractor hires, directs, or causes any third party to enter any MSBSD owned or controlled premises for the purposes of performing services as described under the terms of this Agreement, the Workers' Compensation insurance coverage maintained by the subcontractor shall not be less than the Statutory Limits.

2. **COMMERCIAL GENERAL LIABILITY INSURANCE:**
   Commercial General Liability insurance on an occurrence form with limits of liability not less than $1,000,000 per occurrence bodily injury and property damage, $1,000,000 personal and advertising injury, and $2,000,000 aggregate. Coverage shall include the following extensions: A) Contractual Liability; B) Premises/Operations; and C) Products/Completed Operations.

3. **EXCESS LIABILITY INSURANCE:**
   Excess liability insurance with a limit of liability not less than $4,000,000 per occurrence or claim, and $4,000,000 policy aggregate over the Commercial General Liability, Business Auto Liability and Employers Liability policies.

   In the event that the contractor hires, directs, or causes any third party to enter any MSBSD owned or controlled premises for the purposes of performing services as described under the terms of this Agreement, the excess liability insurance coverage maintained by the subcontractor shall not be less than $2,000,000 less than the amount required of the contractor.

4. **BUSINESS AUTOMOBILE / MOTOR VEHICLE LIABILITY:**
   Motor Vehicle Liability insurance with limits of liability of not less than $1,000,000 per occurrence combined single limit bodily injury and property damage. Coverage shall include all owned vehicles, all non-owned vehicles, and all hired vehicles.

5. **BUILDERS RISK/INSTALLATION FLOATER POLICY:**
   Builder's Risk/Installation Floater insurance utilizing an "all Risk" (Special Perils) coverage form to

include earthquake and flood, with limits equal to the full amount of the contract and no coinsurance penalty provisions. Such coverage shall name the MSBSD as loss payee as their interest may appear.

6. **CONTRACTOR'S POLLUTION LEGAL LIABILITY:**
Contractor's Pollution Legal Liability with limits no less than $1,000,000 per occurrence or claim, and $2,000,000 policy aggregate for jobs valued less than $350,000 and $2,000,000 per occurrence or claim, and $3,000,000 policy aggregate for jobs valued greater than $350,000.

7. **PROFESSIONAL LIABILITY:**
Professional Liability coverage appropriate to the contractor's profession, with limits no less than $1,000,000 per occurrence or claim, $2,000,000 aggregate. If the policy is written on a claims-made form, the Contractor shall provide insurance for a period of no less than five years after final payment of this agreement. The policy(s) shall evidence a retroactive date no later than the effective date of this contract.

8. **ADDITIONAL INSURED:**
With the exception of Workers' Compensation and Professional Liability policies, the following shall be listed as an Additional Insured on each policy: The MSBSD including its officers, officials, employees, volunteers, agents, assigns, subsidiaries, contractors, and subcontractors.

9. **WAIVER OF SUBROGATION:**
With the exception of Professional Liability insurance, all other policies must document that the insurer has agreed to waive all rights of subrogation against the MSBSD, including its officers, officials, employees, volunteers, agents, assigns, subsidiaries, contractors, and subcontractors.

10. **PRIMARY COVERAGE:**
The insurance coverage of the contractor shall be primary as respects to MSBSD, its officers, officials, employees, volunteers, agents, assigns, and subsidiaries. Any insurance or self-insurance maintained by MSBSD, its officers, officials, employees, volunteers, agents, assigns, and subsidiaries shall be excess of the Contractor or subcontractor's insurance and shall not contribute to it.

11. **INDEMNIFICATION AND HOLD HARMLESS:**
Each party shall indemnify, defend, and hold the other party harmless from and against any claim of, or liability for, negligent acts, errors, and omissions of the other party under this agreement. However, a party is not required to indemnify, defend, or hold the other party harmless for a claim of, or liability for, the independent negligent acts, errors, and omissions of the other party. If there is a claim of, or liability for, a joint negligent act, error, or omission of both parties, the indemnification, defense, and hold harmless obligations of this provision shall be apportioned on a comparative fault basis.

12. **CANCELLATION NOTICE:**
All insurance policies described above shall include an endorsement stating the following: "thirty (30) days Advance Written Notice of Cancellation or Non-Renewal shall be sent to: MSBSD, Attn: Purchasing Department, 690 Cope Industrial Way, Palmer, AK 99645.

13. **CERTIFICATES OF INSURANCE:**
The contractor and any subcontractor shall provide the MSBSD two (2) Certificates of Insurance and/or copies of policies acceptable to the MSBSD for the coverage's listed herein no later than the time the agreements are returned for execution.

14. **CONTINUATION OF COVERAGE:**
If any of the above coverage expires during the term of this agreement, the contractors and any subcontractor shall deliver renewal certificates of insurance and/or policies to the MSBSD at least ten (10) days prior to the expiration date.

The duties required under this appendix shall survive the termination or expiration of this Agreement.

APPENDIX 4:
VENDOR PAPERWORK

Please complete this form in its entirety. Any applicable supplemental documents can be attached as needed. A W-9, available at www.irs.gov/uac/about-form-w9, must be submitted with this form or the application will be denied.

Please check one: ☐ New Vendor Application ☐ Vendor Update/Change

Vendor Legal Name _____ EIN or SSN _____

Operating Name (DBA) _____

Vendor Mailing Address _____

City, State, Zip Code _____

Vendor Remit-To Address _____

City, State, Zip Code _____

Vendor Contact Name _____

Contact E-mail Address _____ Phone # _____

Vendor Website URL _____ Fax # _____

Describe the services, materials, and/or equipment to be provided:

How long have you been in business providing these services, materials, and/or equipment?Describe any special instructions for shipping to Alaska:

Do you accept Purchase Orders (POs)? ☐ Yes ☐ No

How to you prefer to receive POs? Mail ☐ Email ☐ Fax

What is your preferred method of payment? ☐ EFT ☐ Check

Do you provide services to the public? ☐ Yes ☐ No

Do you have a current Business License?Do ☐ Yes ☐ No License # _____ State _____

you have a State of AK Business License?Do ☐ Yes ☐ No License # _____

you have a Mat-Su Business License? ☐ Yes ☐ No License # _____

Are you currently an MSBSD employee? ☐ Yes* ☐ No *Stop. Complete a Conflict of Interest Affidavit.

Are you related to an MSBSD employee? ☐ Yes* ☐ No *Stop. MSBSD employee must complete a Conflict of Interest Affidavit.

Do you have employees? ☐ Yes* ☐ No *Do you carry Worker's Compensation insurance? ☐ Yes ☐ No

Upon request, can you provide three (3) references from individuals/companies you have served? ☐ Yes ☐ No

Authorized Agent Signature (Required) Date Printed Name and Title

Purchasing Department Use Only:

W-9 Attached? ☐ Yes ☐ No

Pre-Pay? ☐ Yes ☐ No

Sent to Acctg.: _____

Approved? Yes ☐ ☐ No* Vendor # _____

Approved/Denied By _____

*Reason for Denial _____

Alt. Vendor # _____ Alt. Vendor Name _____

APPENDIX 5:
PROPOSED SUBCONTRACTORS AND SUPPLIERS LIST

NOTE: Please return this with your bid, if applicable. Put an "X" in the right columns indicating if the company is a sub-contractor or a supplier.

#	ITEM	CONTRACTOR NAME, ADDRESS, & E-MAIL	SUB	SUP
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

_____
Signature

_____
Company Name

_____
Date

APPENDIX 6:
PRE-BID SCHEDULE

AUGUST 25, 2022
3:00 PM

A pre-bid conference will be held on August 25, 2022 at 3:00 P.M., Palmer, Alaska Time. Attendance at the pre-bid conference is not mandatory but it is highly recommended that bidders attend. Purchasing and Facility Department personnel will be available to help field questions. All questions will be answered in writing and issued as an addendum to the Bid documents.

We will meet at the front doors of Academy Charter School located at 801 E. Arctic Avenue, Palmer, AK at 3:00 pm.

Please call the Purchasing Department at (907) 861-5120 or send an email to bids@matsuk12.us with any questions regarding this conference schedule.

MAINTENANCE/STORAGE BUILDING

ACADEMY CHARTER SCHOOL

OWNER
ACADEMY CHARTER SCHOOL
801 E ARCTIC AVENUE
PALMER AK 99645
- 99645

ARCHITECT
WOLF ARCHITECTURE, INC.
625 SOUTH COBB, STE. 200
PALMER AK 99645
907-746-6670
GARY WOLF

STRUCTURAL ENGINEER
PND ENGINEERS
625 S COBB
PALMER AK 99645
907-561-1011
DAVID BENTI

MECHANICAL ENGINEER
UNIGROUP ENGINEERING
1000 O'MALLEY ROAD, SUITE 200
ANCHORAGE AK 99515
907-345-3647
JT CHARLEY CHIEN, PE

ELECTRICAL ENGINEER
Q ENGINEERS, INC.
7240 LAKE OTIS PKWY
ANCHORAGE, AK 99507
907-268-4154
SANDON BROEK, PE

INDEX OF DRAWINGS

GENERAL
G0.01 COVER & INDEX SHEET
G0.02 ARCHITECTURAL SYMBOLS AND ABBREVIATIONS
G0.03 TYPICAL ADA DETAILS

CIVIL
C0.1 CIVIL NOTES, LOCATION MAP, LEGEND
C1.0 OVERALL SITE PLAN
C1.1 SITE PLAN
C2.0 GRADING PLAN
C3.0 SITE SECTIONS
C4.0 WATER SERVICE
C5.0 SEWER SERVICE
C6.0 CIVIL DETAILS

STRUCTURAL
S1.0 DESIGN CRITERIA
S1.1 CONCRETE REINFORCING SCHEDULES AND TYPICAL DETAILS
S2.0 FOUNDATION PLAN
S3.0 FOUNDATION DETAILS

ARCHITECTURAL
A1.0 ARCHITECTURAL SITE PLAN
A1.1 FIRST FLOOR PLAN
A1.2 FLOOR PLAN ALTERNATE 1
A1.3 FIRST FLOOR REFLECTED CEILING PLAN
A2.0 EXTERIOR ELEVATIONS

INDEX OF DRAWINGS

A3.1 BUILDINGWALL SECTIONS
A5.0 DETAILS
A7.0 SHEET SPECIFICATION
A7.1 SHEET SPECIFICATIONS

MECHANICAL
M1.0 MECHANICAL LEGENDS AND NOTES
M1.1 MECHANICAL EQUIPMENT AND SCHEDULES
M1.2 MECHANICAL AND PLUMBING SPECIFICATIONS
M2.0 MECHANICAL PLAN - UNDERGROUND
M2.1 MECHANICAL PLAN - FIRST FLOOR
M2.2 MECHANICAL PLAN - ROOF
M2.3 MECHANICAL PLAN - RADIANT SYSTEM PLAN
M3.1 MECHANICAL BUILDING VIEWS AND SECTIONS
M4.1 MECHANICAL AREA PLAN, SECTIONS AND ELEVATIONS

ELECTRICAL
E-001 LEGENDS AND SPECIFICATIONS
E-101 POWER LAYOUT
E-102 LIGHTING LAYOUT
E-400 ONE LINE DIAGRAM, SCHEDULE CALCULATIONS, DETAILS
E-600 ELECTRICAL SITE PLAN

PROJECT INFORMATION

PROJECT NAME:	MAINTENANCE/STORAGE BUILDING		
PROJECT ADDRESS:	801 EAST ARCTIC AVENUE		
ARCHITECT:	WOLF ARCHITECTURE, INC.	CONTACT:	GARY WOLF
	625 SOUTH COBB, STE. 200	PHONE:	907-746-6670
	PALMER AK 99645	FAX:	907-746-6680
DESCRIPTION:	BICYCLE STORAGE / MAINTENANCE		
ZONING:			

LIST OF ALTERNATES

ALT. 1 BUILDING ADDITION
- PROVIDE PRICE FOR THE ADDITION TO THE BASE BID STRUCTURE AS ILLUSTRATED ON SHEETS A1.2 AND A2.0. - PRICE TO INCLUDE FOUNDATION SYSTEM, STEEL STRUCTURAL SYSTEM, EXTERIOR ROOFING AND SIDING PACKAGE MATCHING BASE BID, AND INCLUDING 2) THERMALLY INSULATED EXTERIOR HOLLOW METAL DOORS AND FRAMES.

ALT. 2 ALTERNATIVE INSULATION SYSTEM

ALT. 2a SUBSTITUTE BASE BID INSULATED METAL PANELS FOR SPRAY APPLIED URETHANE INSULATION ON WALLS AND CEILING. INSTALL SPRAY APPLIED INTUMESCENT PAINT OVER INSULATION TO PROVIDE 20 MINUTE FIRE BARRIER

ALT. 2b SUBSTITUTE BASE BID AND ALT 2a INSULATION SYSTEMS FOR FIBERGLASS BATT INSULATION W/ POLYPROPYLENE LINER SYSTEM. INSTALL GYPSUM WALL BOARD OVER METAL STUDS TO 8' AFF AROUND PERIMETER OF BUILDING

ALT. 3 CONCRETE APRON
- PROVIDE PRICE FOR 4" CONCRETE SLAB ON GRADE APRON AT WEST SIDE OF STRUCTURE AS INDICATED ON SHEET A 1.0
  1. PRICE TO INCLUDE NFS SUBGRADE.

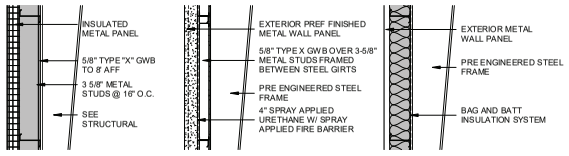
ALT. 4 SUBSTITUTE FINISHES
ELIMINATE EPOXY FLOORING SUBSTITUTE THE FOLLOWING FLOOR FINISHES
100 STORAGE / CLEANING - CONCRETE SEALER
101 WORK ROOM - CONCRETE SEALER
103 / 104 WASHROOMS - CONCRETE SEALER

ALT. 5 ELIMINATE EPOXY PAINT ON STEEL STRUCTURE.
STEEL STRUCTURE TO REMAIN WITH FACTORY FINISH

STATE OF ALASKA 49TH 6.30.2022 GARY S. WOLF AR257 REGISTERED PROFESSIONAL ARCHITECT

6/30/2022 CONSTRUCTION DOCUMENTS

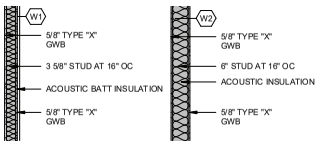
EXTERIOR WALL ASSEMBLIES



EX1 (BASE BID) EX2 (ALT 2a) EX-1b (ALT 2b)

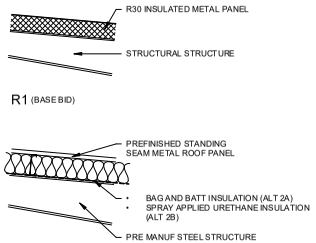
NOTE:
1. REFER TO LIST OF ALTERNATES.
2. BIDDERS ARE TO PROVIDE PRICING FOR A VARIETY OF INSULATION/SIDING PACKAGES.
3. SHEET A5.0 DETAILS ILLUSTRATE A VARIETY OF INSULATION SCENARIOS AND ARE FOR REFERENCE OF DETAILING EXPECTATIONS RELATIVE TO FINISH CONDITIONS. THE FINAL DESIGN PACKAGE DETAILING WILL BE MODIFIED TO ILLUSTRATE THE SIDING TYPE AWARDED.

INTERIOR WALL ASSEMBLIES



W1 W2

ROOF ASSEMBLIES



R1 (BASE BID)

R2 (ALT 2)

ROOM FINISH SCHEDULE

ROOM NUMBER	NAME	CEILING	FLOOR MAT *	BASE CLR	NORTH WALL FIN	EAST WALL FIN	SOUTH WALL FIN	WEST WALL FIN	NOTES
100	BIKE MAINTENANCE INSTRUCTION	PT/FF	PC	RB	FF/PT	PT	PT/FF	PT/FF	RUBBER BASE (RB) ON GYP WALL ONLY
101	WORK ROOM	PT/FF	PC	RB	PT/FF	PT/FF	PT/FF	PT/FF	RUBBER BASE (RB) ON GYP WALL ONLY
102	MECHANICAL	PT	PC	RB	PT	PT	PT	PT	
103	WASHROOM	PT	PC	RB	PT	PT	PT	PT	
104	WASHROOM	PT	PC	RB	PT	PT	PT	PT	

BASE BID WORK INCLUDES PAINTING STEEL FRAME WORK - COLOR TO BE SELECTED BY OWNER
* SEE ALTERNATE 4 FOR CHANGES TO SCHEDULED BASE BID FINISHES

CPT CARPET TILES
FF FACTORY FINISH
PC POLISHED CONCRETE
PT PAINT
RB RUBBER BASE

BUILDING CODE ANALYSIS

GOVERNING CODES: 2015 INTERNATIONAL BUILDING CODE (AK AMMENDMENTS)
2012 ICC/ANSI A117.1 (AK AMMENDMENTS)
2012 INTERNATIONAL MECHANICAL CODE (AK AMMENDMENTS)
2012 INTERNATIONAL FUEL AND GAS CODE (AK AMMENDMENTS)
2012 INTERNATIONAL FIRE CODE (AK AMMENDMENTS)
2012 NFPA STANDARD 13 & 72 FIRE PROTECTION
1997 UNIFORM PLUMBING CODE (AK AMMENDMENTS)
2017 NATIONAL ELECTRICAL CODE (AK AMMENDMENTS)

NOTE: EXISTING BUILDING, MAINTAINING OCCUPANCY TYPE B

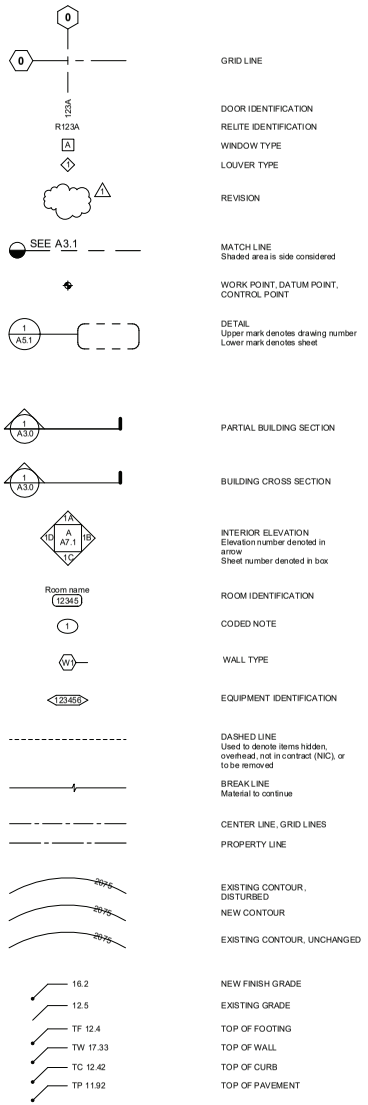
OCCUPANCY GROUP:
E OCCUPANCY: 4,800 (INCLUDING ALT 1) SF - 1 LEVELS/ 9,500 SF ALLOWABLE AREA (506.2)

CONSTRUCTION TYPE: V-B

BUILDING HEIGHT:
ALLOWABLE - 1 STORIES, 40'-0"
ACTUAL- 1 STORIES, 23'-0"

FIRE-RATED ASSEMBLIES:	RATING:	ASSEMBLY:
STRUCTURAL FRAME	0-HR	N/A
EXTERIOR BEARING WALLS	0-HR	N/A
INTERIOR BEARING WALLS	0-HR	N/A
FLOOR/CEILING	0-HR	N/A
ROOF/CEILING	0-HR	N/A
FIRE BARRIERS	N/A	
FIRE PARTITIONS	N/A	

ARCHITECTURAL MATERIALS



GRID LINE

DOOR IDENTIFICATION

RELITE IDENTIFICATION

WINDOW TYPE

LOUVER TYPE

REVISION

MATCH LINE
Shaded area is side considered

WORK POINT, DATUM POINT, CONTROL POINT

DETAIL
Upper mark denotes drawing number
Lower mark denotes sheet

PARTIAL BUILDING SECTION

BUILDING CROSS SECTION

INTERIOR ELEVATION
Elevation number denoted in arrow
Sheet number denoted in box

ROOM IDENTIFICATION

CODED NOTE

WALL TYPE

EQUIPMENT IDENTIFICATION

DASHED LINE
Used to denote items hidden, overhead, not in contract (NIC), or to be removed

BREAK LINE
Material to continue

CENTER LINE, GRID LINES

PROPERTY LINE

EXISTING CONTOUR, DISTURBED

NEW CONTOUR

EXISTING CONTOUR, UNCHANGED

NEW FINISH GRADE

EXISTING GRADE

TOP OF FOOTING

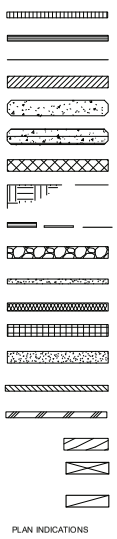
TOP OF WALL

TOP OF CURB

TOP OF PAVEMENT

ARCHITECTURAL MATERIALS

DETAIL INDICATIONS



ACOUSTIC TILE OR BOARD

ASPHALT CONCRETE PAVING

ROOFING

BRICK

CONCRETE

PRECAST CONCRETE

CONCRETE MASONRY UNIT

EARTH / FINISH GRADE

GLASS

GRAVEL

GYPSUM BOARD

INSULATION, BATT

INSULATION, RIGID

MORTAR, PLASTER, SAND

MDF

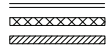
PLYWOOD

WOOD, FINISH

WOOD FRAMING
Continuous member

WOOD FRAMING
Interrupted member

PLAN INDICATIONS



STUD WALL

BRICK

CONCRETE MASONRY UNIT

CONCRETE

ABBREVIATIONS

∠	ANGLE
℄	CENTERLINE
#	POUND OR NUMBER
&	AND
@	AT
°	DEGREE
±	PLUS / MINUS
Ø	DIAMETER
A/C	AIR CONDITIONING
AB	ANCHOR BOLT
AC	ASPHALT CONCRETE
ACOUS	ACOUSTICAL
AD	AREA DRAIN
ADDL	ADDITIONAL
ADJ	ADJUSTABLE
ADJT	ADJACENT
AFF	ABOVE FINISHED FLOOR
AGGR	AGGREGATE
AJ	ACCENT JOINT
AL	ALUMINUM
ALT	ALTERNATE
ANC	ANCHOR(AGE)
APC	ACOUSTICAL PANEL CEILING
APPD	APPROVED
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASB	ASBESTOS
ASPH	ASPHALT
AUTO	AUTOMATIC
AVP	ACOUSTICAL WALL PANEL
BD	BOARD
BET	BETWEEN
BITUM	BITUMINOUS
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM
BOF	BOTTOM OF FRAME
BOM	BOTTOM OF MASONRY
BOTT	BOTTOM
BRG	BEARING
BSMT	BASEMENT
BUR	BUILT UP ROOF
C	COURSES
CAB	CABINET
CB	CATCH BASIN, CHALKBOARD
CC	CUBICLE CURTAIN & TRACK
CEM	CEMENT
CER	CERAMIC
CG	CORNER GUARD
CI	CAST IRON
CIP	CAST-IN-PLACE CONCRETE
CJ	CONTROL JOINT
CLG	CEILING
CLKG	CAULKING
CLO	CLOSET
CLR	CLEAR, COLOR
CMU	CONCRETE MASONRY UNIT
CNTR	COUNTER
CO	CLEANOUT
COL	COLUMN
COMBO	COMBINATION TPD, SNR, & SCD
COMP	COMPOSITION, COMPOSITE
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE
CORR	CORRIDOR
CPT	CARPET
CT	CERAMIC TILE
CTR	CENTER
CW	CURTAIN WALL
D	DEEP, DEPTH
DBL	DOUBLE
DEMO	DEMOLISH, DEMOLITION
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DISP	DISPOSAL
DIV	DIVISION
DN	DOWN
DP	DAMPPROOF(ING)
DR	DOOR
DS	DOWNSPOUT
DSP	DRY STANDPIPE
DWG	DRAWING
DWR	DRAWER
E	EAST
EA	EACH
EHD	ELECTRIC HAND/HAIR DRYER
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EM	ENTRY MAT
EMB	ENAMELIZED MARKING BOARD
EMER	EMERGENCY
ENCL	ENCLOSURE
EP	ELECTRICAL PANELBOARD, EPOXY PAINT
EPT	EPOXY PAINT
EQ	EQUAL
EQUIP	EQUIPMENT
EW	EYEWASH
EWC	ELECTRIC WATER COOLER
EXC	EXCAVATE
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION
EXPO	EXPOSED
EXT	EXTERIOR
FA	FIRE ALARM
FAB	FABRICATE
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET (RECESSED)
FEC-S	FIRE EXTINGUISHER CABINET (SEMI-RECESSED)
FF	FACTORY FINISHED
FFL	FINISHED FLOOR LINE
FHC	FIRE HOSE CABINET
FIN	FINISH
FLASH	FLASHING
FLR	FLOOR, FLOORING
FLUOR	FLUORESCENT
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUDS
FOSH	FACE OF SHEATHING
FP	FIREPROOF
FR	FIRE RESISTANT
FRMG	FRAMING
FRP	FIBER REINFORCED PLASTIC
FRTW	FIRE RETARDANT TREATED WOOD
FS	FLOOR SINK
FT	FOOT, FEET
FTG	FOOTING
FURR	FURRING
FUT	FUTURE
FWC	FABRIC WALL COVERING
GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GEN	GENERAL
GI	GALVANIZED IRON
GL	GLASS
GLB	GLUE LAMINATED BEAM
GLZ	GLAZING
GMU	GLAZED MASONRY UNIT
GND	GROUND
GR	GRADE
GYP	GYPSUM BOARD (SCHEDULES ONLY)
GYP BD	GYPSUM BOARD
H	HIGH
HB	HOSE BIB
HC	HOLLOW CORE, HANDICAP (ACCESSIBLE)
HD	HEAD
HDW	HARDWARE
HDWD	HARDWOOD
HORIZ	HORIZONTAL
HSS	HOLLOW STEEL SECTION
HT	HEIGHT
HTG	HEATING
HVAC	HEATING/ VENTILATING/ AIR CONDITIONING
HWH(T)	HOT WATER HEATER (TANK)
I/S	INSIDE
ID	INSIDE DIAMETER (DIM)
INCL	INCLUDE
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
INTERCOM	INTERCOMMUNICATION
JAN	JANITOR
JST	JOIST
JT	JOINT
KIT	KITCHEN
L	LENGTH, LONG
LAB	LABORATORY
LAM	LAMINATE
LAV	LAVATORY
LKR	LOCKER
LMS	LIQUID MARKING SURFACE
LN	LINOLEUM
LT	LIGHT, LEFT
LV	LOUVER
MACH	MACHINE
MATL	MATERIAL
MAX	MAXIMUM
MB	MARKING BOARD
MBR	MEMBER
MC	MEDICINE CABINET
MCSP	MINERAL COMPOSITE SCULPTURAL PANEL
MDF	MEDIUM DENSITY FIBERBOARD
MECH	MECHANICAL
MED	MEDIUM
MEMB	MEMBRANE
MEZZ	MEZZANINE
MFR	MANUFACTURER
MH	MANHOLE, MOP HOLDER
MIN	MINIMUM
MIR	MIRROR
MIR-S	MIRROR W/ SHELF
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MTD()	MOUNTED
MTL	METAL
MUL	MULLION
N	NORTH
NAT	NATURAL
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
O/S	OUTSIDE
OA	OVERALL
OBS	OBSCURE
OC	ON CENTER
OCC	OCCUPANT, OCCUPANCY
OD	OUTSIDE DIAMETER (DIM)
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFF	OFFICE
OFOI	OWNER FURNISHED OWNER INSTALLED
OH	OVERHEAD
OHD	OVERHEAD DOOR
OPNG	OPENING
OPP	OPPOSITE
ORIG	ORIGINAL
PAR	PARALLEL
PB	PEG BOARD
PC	PRECAST
PCC	PORTLAND CEMENT CONCRETE
PCD	PAPER CUP DISPENSER
PERF	PERFORATED
PERP	PERPENDICULAR
PL	PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLUMB	PLUMBING
PLYWD	PLYWOOD
PNL	PANEL
POS	POSITIVE
PR	PAIR
PREFAB	PREFABRICATE(D)
PREFIN	PREFINISH(ED)
PROJ	PROJECT
PS	PROJECTION SCREEN
PT	POINT, PAINT
PTD	PAPER TOWEL DISPENSER
PTDR	COMBINATION PAPER TOWEL DISPENSER & RECEPTACLE
PTN	PARTITION
PTR	PAPER TOWEL RECEPTACLE
PVMT	PAVEMENT
PWP	PLASTIC WALL PROTECTION
QT	QUARRY TILE
R	RISER, RADIUS
R&S	CLOSET ROD & SHELF
RAF	RESILIENT ATHLETIC FLOORING
RB	RUBBER BASE
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
RDO	ROOF DRAIN, OVERFLOW
REBAR	REINFORCING BAR
RECD	RECEIVED
REF	REFERENCE
REFL	REFLECTED
REFR	REFRIGERATOR
REINF	REINFORCE(D)(ING)
REQD	REQUIRED
RESIL	RESILIENT
RF	ROOF
RFT	RESILIENT FLOORING TILE
RH	ROBE HOOK
RM	ROOM
RO	ROUGH OPENING
RSD	RECESSED SOAP DISPENSER
RST	RUBBER STAIR TREAD
RT	RIGHT
RWL	RAIN WATER LEADER
S	SOUTH
SC	SOLID CORE
SCD	SEAT COVER DISPENSER
SCHED	SCHEDULE
SD	SOAP DISPENSER
SDG	SIDING
SECT	SECTION
SHR	SHOWER
SHT	SHEET
SHTG	SHEETING / SHEATHING
SIM	SIMILAR
SLR	SEALER
SND	SANITARY NAPKIN DISPENSER
SNR	SANITARY NAPKIN RECEPTACLE
SPEC	SPECIFICATION
SQ	SQUARE
SS	SOLID SURFACE
SSK	SERVICE SINK
SST	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STN	STAIN
STOR	STORAGE
STRFT	STOREFRONT
STRUCT	STRUCTURAL
SUB	SUBSTITUTE
SUSP	SUSPENDED
SV	SHEET VINYL
SWC	SANITARY WALL COVERING
SYM	SYMMETRICAL
SYS	SYSTEM
T	TREAD, TEE
TB	TOWEL BAR, TACK BOARD
TC	TOP OF CURB
TEL	TELEPHONE
TEMP	TEMPORARY
TERR	TERRAZZO
TF	TOP OF FOOTING
THK	THICK
THRU	THROUGH
TOF	TOP OF FRAME
TOM	TOP OF MASONRY
TP	TOP OF PAVEMENT
TPD	TOILET PAPER DISPENSER
TR	TOWEL RACK
TS	TUBE STEEL
TV	TELEVISION
TVB	TELEVISION BRACKET
TW	TOP OF WALL
TYP	TYPICAL
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UPT	UNGLAZED PORCELAIN TILE
UR	URINAL
USK	UTILITY SINK
VB	VAPOR BARRIER
VCT	VINYL COMPOSITION TILE
VENT	VENTILATE
VER	VERIFY
VERT	VERTICAL
VEST	VESTIBULE
VOL	VOLUME
VRB	VENTILATING RUBBER BASE
VTR	VENT THROUGH ROOF
VWC	VINYL WALL COVERING
W	WEST, WIDE, WIDTH
W/	WITH
W/D	WASHER/DRYER
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WH	WALL HUNG
WP	WATERPROOF, WALL PADS
WPTL	WOOD PRESERVATIVE TREATED LUMBER
WS	WEATHER STRIPPING
WSCT	WAINSCOT
WT	WEIGHT
WTR	WATER
WWF	WELDED WIRE FABRIC

PROJ. NO 2132
DRAWN JC
CHECKED GW
DATE 6/30/2022
FULL SIZE DRAWINGS: 22" x 34"

DESIGN / BUILD SOLICITATION DOCUMENTS

MAINTENANCE/STORAGE BUILDING
CONSTRUCTION DOCUMENTS
ACADEMY CHARTER SCHOOL
807 EAST ARCTIC AVENUE

6.30.2022

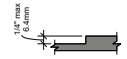
625 S COBB ST
PALMER, AK
T: 907.746.6670
F: 907.746.6680
wolfarchitecture.com

Wolf ARCHITECTURE

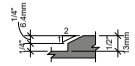
SHEET CONTENTS
ARCHITECTURAL SYMBOLS AND ABBREVIATIONS

G0.02

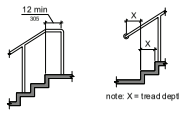
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303.2 VERTICAL CHANGE IN LEVEL

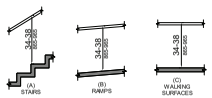


303.3 BEVELED CHANGE IN LEVEL

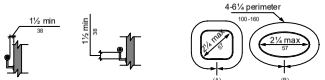


505.10.2
TOP HANDRAIL
EXTENSION AT STAIRS

505.10.3
BOTTOM HANDRAIL
EXTENSION AT STAIRS



505.4 HANDRAIL HEIGHT



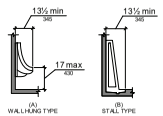
505.5 HANDRAIL
CLEARANCE

505.6 HORIZONTAL
PROJECTIONS BELOW
GRIPPING SURFACE

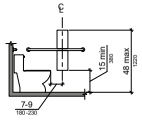
505.7.2 HANDRAIL NON-
CIRCULAR CROSS SECTION



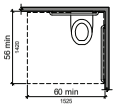
602.5
DRINKING FOUNTAIN
SPOUT LOCATION



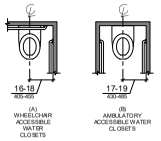
605.2 HEIGHT AND DEPTH OF URINALS



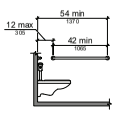
604.7 DISPENSER OUTLET LOCATION



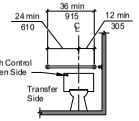
604.3.1 SIZE OF CLEARANCE AT WATER CLOSETS



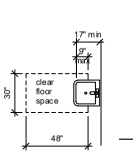
604.2 WATER CLOSET LOCATION



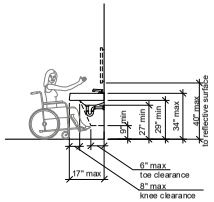
604.5.1 SIDE WALL GRAB BAR
AT WATER CLOSETS



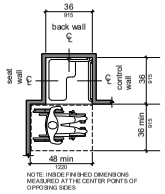
604.5.2 REAR WALL GRAB BAR
AT WATER CLOSETS



CLEAR FLOOR SPACE AT
LAVATORIES

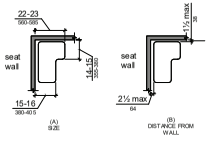


LAVATORY CLEARANCE

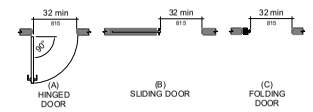


NOTE: INSIDE FINISHED DIMENSIONS
MEASURED AT THE CENTER POINTS OF
OPPOSING SIDES

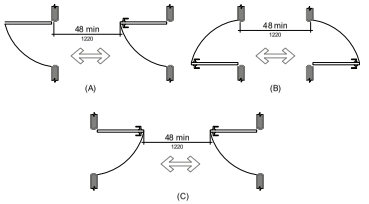
608.2.1 TRANSFER TYPE SHOWER
COMPARTMENT SIZE AND CLEARANCE



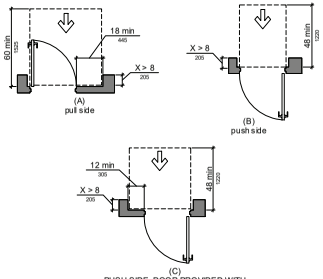
610.3.2 L-SHAPED SHOWER SEAT



404.2.3 CLEAR WIDTH OF DOORWAYS

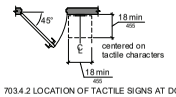


404.2.6 DOORS IN SERIES AND GATES IN SERIES

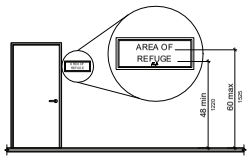


PUSH SIDE, DOOR PROVIDED WITH
BOTH CLOSER AND LATCH

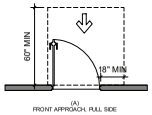
404.2.4.3 MANEUVERING CLEARANCES AT RECESSED DOORS AND GATES

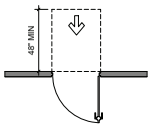


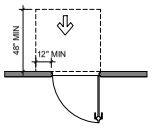
703.4.2 LOCATION OF TACTILE SIGNS AT DOORS

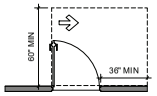


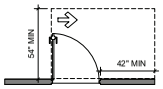
703.4.1 HEIGHT OF TACTILE CHARACTERS ABOVE FINISH FLOOR OR GROUND

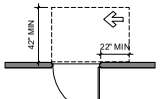


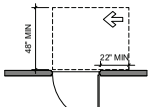


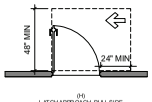


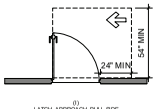


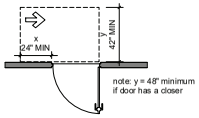


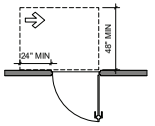




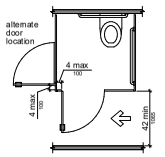




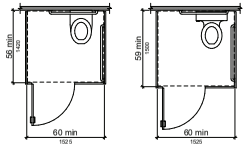




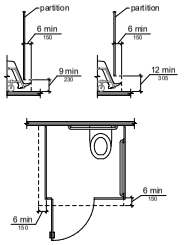
404.2.4.1 MANEUVERING CLEARANCES AT MANUAL SWINGING DOORS AND GATES



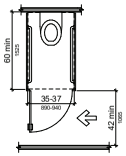
604.8.1.2 WHEELCHAIR ACCESSIBLE TOILET
COMPARTMENT DOORS



604.8.1.1 SIZE OF WHEELCHAIR ACCESSIBLE TOILET
COMPARTMENT



604.8.1.4 WHEELCHAIR ACCESSIBLE TOILET
COMPARTMENT TOE CLEARANCE



604.8.2 AMBULATORY ACCESSIBLE
TOILET COMPARTMENT

Wolf ARCHITECTURE
625 S COBB ST
PALMER, AK
T: 907.746.6670
F: 907.746.6680
wolfarchitecture.com

PROJ. NO 2132
DRAWN Author
CHECKED Checker
DATE 6/30/2022
FULL SIZE DRAWINGS: 22" x 34"

DESIGN / BUILD SOLICITATION DOCUMENTS

MAINTENANCE/STORAGE BUILDING
CONSTRUCTION DOCUMENTS
ACADEMY CHARTER SCHOOL
801 EAST ARCTIC AVENUE

6.30.2022

SHEET CONTENTS
TYPICAL ADA DETAILS

G0.03

BID #B23-01

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE INSTALLED AS SPECIFIED IN THE MOST CURRENT EDITION OF THE CITY OF PALMER STANDARD SPECIFICATIONS AND ANY SPECIAL PROVISIONS.
2. CAUTION, EXISTING UTILITIES SHOWN ARE NOT COMPREHENSIVE. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION / CONSTRUCTION, AND SHALL CALL FOR UTILITY LOCATES A MINIMUM OF TWO UTILITY WORKING DAYS PRIOR TO COMMENCEMENT OF EXCAVATION.
3. ALL CURB AND GUTTER, SIDEWALK, AND PAVEMENT CUTS SHALL BE SAW-CUT AT REMOVAL LIMITS. SAWCUTS SHALL BE PARALLEL OR PERPENDICULAR TO STREET CENTERLINE. ASPHALT REMOVAL LIMITS SHALL BE A MINIMUM OF TWO (2) FEET FROM THE LIP OF GUTTER FOR THE LENGTH OF CURB AND GUTTER REMOVAL, OR AS DIRECTED BY THE ENGINEER. TACK COAT SHALL BE APPLIED TO THE SAW-CUT EDGE OF THE ASPHALT PRIOR TO PLACEMENT OF PAVEMENT.
4. ADDITIONAL LOCATION OF PAVEMENT, CURB & GUTTER, AND SIDEWALK REMOVAL AND REPLACEMENT SHALL BE AS DIRECTED BY THE ENGINEER.
5. SHOULD INSULATION BE PRESENT IN THE ROAD SECTION, REPLACE AND REMOVE ALL INSULATION WITH MATCHING THICKNESS AND KIND.
6. ALL BACKFILL SHALL BE COMPACTED TO 95% MAX. DENSITY AT OPTIMUM MOISTURE AS DETERMINED BY AASHTO ASTM-D1557.
7. MAINTAIN A MINIMUM OF 36-INCHES OF VERTICAL SEPARATION BETWEEN ANY STORM SEWER (STORM DRAIN OR FOOTING DRAIN) AND WATERLINE (MAINS OR SERVICES) OR SANITARY SEWER (MAINS OR SERVICES). IF 36-INCHES CANNOT BE MAINTAINED, PROVIDE A MINIMUM OF 4-INCH THICK INSULATION.
8. ALL WATER/SEWER PIPE INSULATION SHALL BE RIGID BOARD, HIGH DENSITY EXTRUDED POLYSTYRENE INSULFOAM II, MIN. 60 P.S.I., FOR UNDERGROUND INSTALLATIONS EQUIVALENT TO R-20 PER FOUR (4) INCH THICK INSULATION.
9. CONTRACTOR SHALL VERIFY AND RECORD THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL UTILITIES ENCOUNTERED IN THE FIELD AND RECORD ANY CHANGES ON THE CONTRACTOR RECORD DRAWINGS.
10. THE CONTRACTOR SHALL RESTORE ALL DISTURBED PROPERTY, INCLUDING DRAINAGE SWALES, DISTURBED BY CONTRACT ACTIVITIES TO PRECONSTRUCTION CONDITION.
11. THE CONTRACTOR SHALL RECORD SURVEY NOTES FOR SUBMITTAL WITH RECORD DRAWING PLANS PRIOR TO CONTRACT FINAL PAYMENT.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EROSION AND SEDIMENT CONTROLS AS NECESSARY TO COMPLY WITH FEDERAL, STATE, AND MUNICIPAL LAWS THAT PROHIBIT UNPERMITTED DISCHARGE OF POLLUTANTS, INCLUDING SEDIMENTS, THAT ARE A RESULT OF EROSION AND OTHER CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL CONDUCT ALL WORK SO SEDIMENT IS NOT TRANSPORTED ONTO THE ROADWAY OR ADJACENT PROPERTY. AT A MINIMUM, THE CONTRACTOR SHALL SWEEP UP ANY SEDIMENT TRACKED ONTO PAVED SURFACES IN PUBLIC RIGHT-OF-WAY EACH DAY OF THE TRACKING TO MINIMIZE THE WASH-OFF OF SEDIMENT INTO THE STORM DRAINS OR WATERWAYS.
13. IF GROUNDWATER IS ENCOUNTERED, THE CONTRACTOR IS RESPONSIBLE FOR PREPARING A DEWATERING PLAN. THE PLAN MUST BE SUBMITTED TO CITY OF PALMER FOR REVIEW AND APPROVAL.
14. WATER RESULTING FROM THE CONTRACTOR'S DEWATERING EFFORT MAY NOT BE PUMPED OR OTHERWISE DIVERTED INTO EXISTING STORM DRAINS UNLESS THE CONTRACTOR OBTAINS PERMITS INCLUDING, BUT NOT LIMITED TO, THOSE REQUIRED BY THE CITY OF PALMER. IT IS NOT ALLOWABLE UNDER ANY CIRCUMSTANCES FOR THE CONTRACTOR TO DIVERT WATER FROM EXCAVATIONS IN TO ROADWAYS. CONTRACTOR SHALL PROVIDE A DISPOSAL SITE FOR EXCESS WATER AND SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS AND APPROVALS. CONTRACTOR SHALL PROVIDE COPIES OF NECESSARY PERMITS AND APPROVALS TO THE MOA RIGHT OF WAY PERMIT OFFICE.
15. ALL FILL AND BACKFILL SHALL BE PLACED IN LIFTS NOT TO EXCEED 12".
16. INSTALL LOCATOR TAPE OVER ALL UTILITIES THREE FEET BELOW FINISH GRADE OR TWO FEET DEEP IN PAVEMENT STRUCTURAL SECTION.

SEWER NOTES

1. EXISTING CUSTOMERS SHALL BE NOTIFIED SEVENTY-TWO (72) HOURS IN ADVANCE OF SERVICE INTERRUPTION. THE CONTRACTOR SHALL PROVIDE TEMPORARY SERVICE TO EXISTING CUSTOMERS IF DEEMED NECESSARY BY THE ENGINEER.
2. ALL MANHOLES SHALL HAVE A MINIMUM OF ONE GRADE RING (6"). MAXIMUM GRADE RING ADJUSTMENT SHALL NOT EXCEED EIGHTEEN (18) INCHES.
3. ALL SEWER MAINS AND SERVICES SHALL BE PVC C900, DR18 PIPE.
4. SANITARY SEWER SERVICES SHALL BE 4" PVC C900, DR18 UNLESS NOTED ON PLANS. CONSTRUCT SERVICE WITH A MINIMUM SLOPE OF 2%.
5. SANITARY SEWER SERVICES SHALL BE PLACED NO CLOSER THAN: 15 FEET HORIZONTALLY MEASURED TO ANY FIRE HYDRANT OR FIRE HYDRANT LEG; 10 FEET HORIZONTALLY MEASURED TO ANY WATER MAIN, WATER SERVICE, STORM SEWER, FOOTING DRAIN, STREET LIGHT, TRANSFORMER PAD, ELECTRICAL/TELEPHONE/CABLE BOX; AND 5 FEET HORIZONTALLY MEASURED TO ANY SIDE LOT LINE.
6. ALL BEDDING SHALL BE CLASS "E".
7. SANITARY SEWER MAINS AND SERVICE CONNECTION TRENCHES AND BEDDING SHALL BE COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY.
8. THE CONTRACTOR SHALL RELOCATE AND SEWER SERVICE CONNECTIONS INSTALLED WITH LESS THAN MINIMUM STANDARD MEASURED DISTANCES PRIOR TO FINAL ACCEPTANCE BY THE CITY OF PALMER.
9. STATIONING IS ALONG CENTERLINE OF SEWER PIPE.
10. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION / CONSTRUCTION, AND SHALL CALL FOR UTILITY LOCATES A MINIMUM OF TWO UTILITY WORKING DAYS PRIOR TO COMMENCEMENT OF EXCAVATION.
11. CONTRACTOR SHALL RECORD THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL UTILITIES ENCOUNTERED IN THE FIELD ON THE CONTRACTOR'S AS-BUILT PLANS. CONTRACTOR SHALL RECORD SURVEY NOTES AND FIELD INSTALLATION NOTES FOR SUBMITTAL WITH RECORD DRAWING PLANS. LOCATION REFERENCES SHALL BE TO PIPE STATION.

CALL BEFORE YOU DIG

The Contractor shall notify all area utility companies prior to commencement of excavation. The following is a partial list:

LOCATE CALL CENTER of ALASKA 278-3121

WATER NOTES

1. CITY OF PALMER DPW AND EXISTING CUSTOMERS SHALL BE NOTIFIED SEVENTY-TWO (72) HOURS IN ADVANCE OF WATER SERVICE INTERRUPTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY WATER SERVICE TO THE EXISTING CUSTOMERS IF THE OUTAGE EXCEEDS 6-HOURS OR IF DEEMED NECESSARY BY THE ENGINEER. THE CONTRACTOR SHALL HAVE A TEMPORARY WATER SERVICE PLAN REVIEWED AND APPROVED BY ADEC.
2. ALL WATER PIPES SHALL BE HDPE, SDR 11.
3. ALL BENDS, TEES, FIRE HYDRANTS, AND DEAD-ENDS SHALL HAVE RESTRAINED FITTINGS.
4. NO PIPE LENGTH LESS THAN EIGHT (8') FEET SHALL BE INCORPORATED IN THE WATER SYSTEM EXCEPT FOR THOSE NECESSARY FOR FIRE HYDRANTS OR VALVE LOCATIONS UNLESS RESTRAINED.
5. THRUST RESTRAINT SHALL BE PROVIDED BY USE OF FIEL-LOK GASKETS (OR EQUAL) OR MEG-A-LUG FITTINGS (OR EQUAL) ON ALL MECHANICAL JOINTS. THE US OF THRUST BLOCKS WILL NOT BE ALLOWED FOR DUCTILE IRON PIPE, BUT ARE REQUIRED FOR PVC PIPE (DIP FITTINGS).
6. WATER SERVICES SHALL BE HDPE, SDR 11.
7. WATER SERVICES SHALL BE PLACED NO CLOSER THAN: 15 FEET HORIZONTALLY MEASURED TO ANY FIRE HYDRANT OR FIRE HYDRANT LEG; 10 FEET HORIZONTALLY MEASURED TO ANY SANITARY SEWER MAIN, SANITARY SEWER SERVICE, STORM SEWER, ELECTRICAL/TELEPHONE/CABLE BOX; AND 5 FEET HORIZONTALLY MEASURED TO ANY SIDE LOT LINE.
8. THE CONTRACTOR SHALL PROVIDE ALL SETUP AND TEAR DOWN REQUIRED TO OPEN BORE FLUSH NEWLY INSTALLED WATER PIPE. CITY OF PALMER WILL PROVIDE FLUSH WATER FROM THE CITY OF PALMER WATER DISTRIBUTION SYSTEM. THE CONTRACTOR MUST REQUEST WATER IN A WRITTEN NOTICE AT LEAST 48 HOURS PRIOR TO OPEN BORE FLUSHING. OPEN BORE FLUSHING MUST TAKE PLACE PRIOR TO INSTALLATION OF WATER SERVICES.
9. ALL WATER PIPES AND SERVICES SHALL HAVE A MINIMUM OF 10 FEET OF BURY AT ALL POINTS.
10. ALL WATER MAIN AND SERVICE TRENCHES AND BEDDING SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY.
11. MAXIMUM DEFLECTION OF PIPE PER JOINT SHALL NOT EXCEED 80% OF THE MANUFACTURE'S RECOMMENDED DEFLECTION (4 DEGREES) FOR DIP. PVC PIPE SHALL NOT BE DEFLECTED WITHOUT THE USE OF FITTINGS OR DEFLECTION COUPLINGS. FLEXING OR BENDING OF PVC PIPE WILL NOT BE ALLOWED.
12. ALL PIPE BEDDING SHALL BE CLASS "E".
13. CONTRACTOR SHALL RELOCATE ANY WATER SERVICE CONNECTIONS INSTALLED WITH LESS THAN MINIMUM STANDARD DISTANCES PRIOR TO ACCEPTANCE BY CITY OF PALMER.
14. ALL WATER/SEWER PIPE INSULATION SHALL BE RIGID BOARD, HIGH DENSITY EXTRUDED INSULATION, MIN. 60 P.S.I., FOR UNDERGROUND INSTALLATIONS EQUIVALENT TO R-20 PER FOUR (4) INCH THICK INSULATION.

SURVEY NOTES

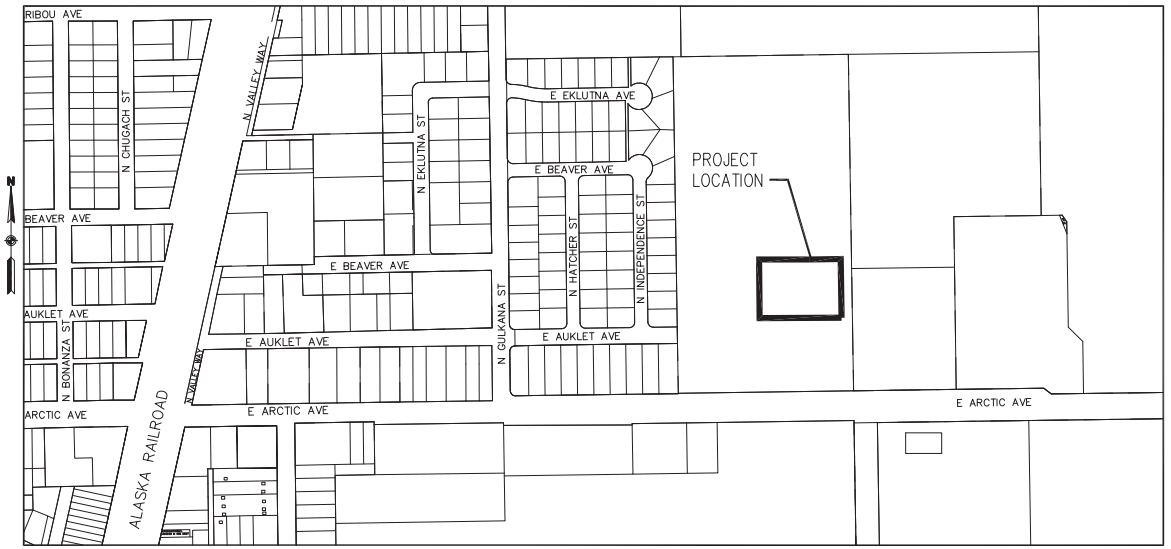
1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE POSITION OF THE HORIZONTAL AND VERTICAL CONTROL USED.
2. SURVEY PERFORMED BY COLVER SURVEYING.

ABBREVIATIONS

AC	–	ASBESTOS CEMENT
AD	–	ALGEBRAIC DIFFERENCE
BOH	–	BOTTOM OF HOLE
BOP	–	BOTTOM OF PIPE
BV	–	BUTTERFLY VALVE
BVCE	–	BEGIN VERTICAL CURVE – ELEVATION
BVCS	–	BEGIN VERTICAL CURVE – STATION
CIP	–	CAST IRON PIPE
CS	–	CURB STOP
DIP	–	DUCTILE IRON PIPE
ELEV	–	ELEVATION
EOP	–	EDGE OF PAVEMENT
EVCE	–	END VERTICAL CURVE – ELEVATION
EVCS	–	END VERTICAL CURVE – STATION
F&I	–	FURNISH AND INSTALL
FG	–	FINISHED GRADE
FH	–	FIRE HYDRANT
GV	–	GATE VALVE
H	–	HORIZONTAL
IAW	–	IN ACCORDANCE WITH
INV	–	INVERT
RED	–	REDUCER
K	–	SIGHT DISTANCE
KB	–	KEY BOX
LT	–	LEFT
MSL	–	MEAN SEA LEVEL
OFF	–	OFFSITE
PL	–	PROPERTY LINE
PC	–	POINT OF CURVATURE
POB	–	POINT OF BEARING
PRC	–	POINT OF REVERSE CURVE
PT	–	POINT OF TANGENCY
PVC	–	POLYVINYL CHLORIDE PIPE
PVI	–	POINT OF VERTICAL INTERSECTION
RJIB	–	RESTRAINED JOINT INTEGRAL BELL
RT	–	RIGHT
ROW	–	RIGHT OF WAY
RP	–	RADIUS POINT
SEP	–	SEPARATION
SI	–	STREET INTERSECTION
SP	–	SINGLE PUMPER
STA	–	STATION
STD	–	STANDARD
TBC	–	TOP BACK OF CURB
TOP	–	TOP OF PIPE
TP	–	TOP OF PAVEMENT
VB	–	VALVE BOX
VC	–	VERTICAL CURVE

LEGEND

PROPOSED	EXISTING	
	W	WATER MAIN
		VALVE
		FIRE HYDRANT
		REDUCER
W	W	WATER SERVICE
	S	SANITARY SEWER MAIN
S		SANITARY SEWER SERVICE
		SANITARY SEWER MANHOLE
CO		SANITARY SEWER CLEANOUT
SD	SD	STORM DRAIN PIPE
RG		RAIN GARDEN
		STORM DRAIN MANHOLE
		CENTERLINE
x	x	FENCE
	G	NATURAL GAS
	OHE	OVERHEAD UTILITY
	E	UNDERGROUND ELECTRIC
		PROPERTY LINE
		JUNCTION BOX (ELECTRIC)
		PAVED SURFACE
		CONCRETE SURFACE



LOCATION MAP

STATE OF ALASKA
49TH
DAN E. STEINER
No. CE 9505
8/5/22
REGISTERED PROFESSIONAL ENGINEER

SDCS, LLC
STEINER DESIGN & CONSTRUCTION SERVICES, LLC
5900 W. DEWBERRY DR. PH: (907) 357-5609
WASILLA, AK 99623 FAX: (907) 357-5608

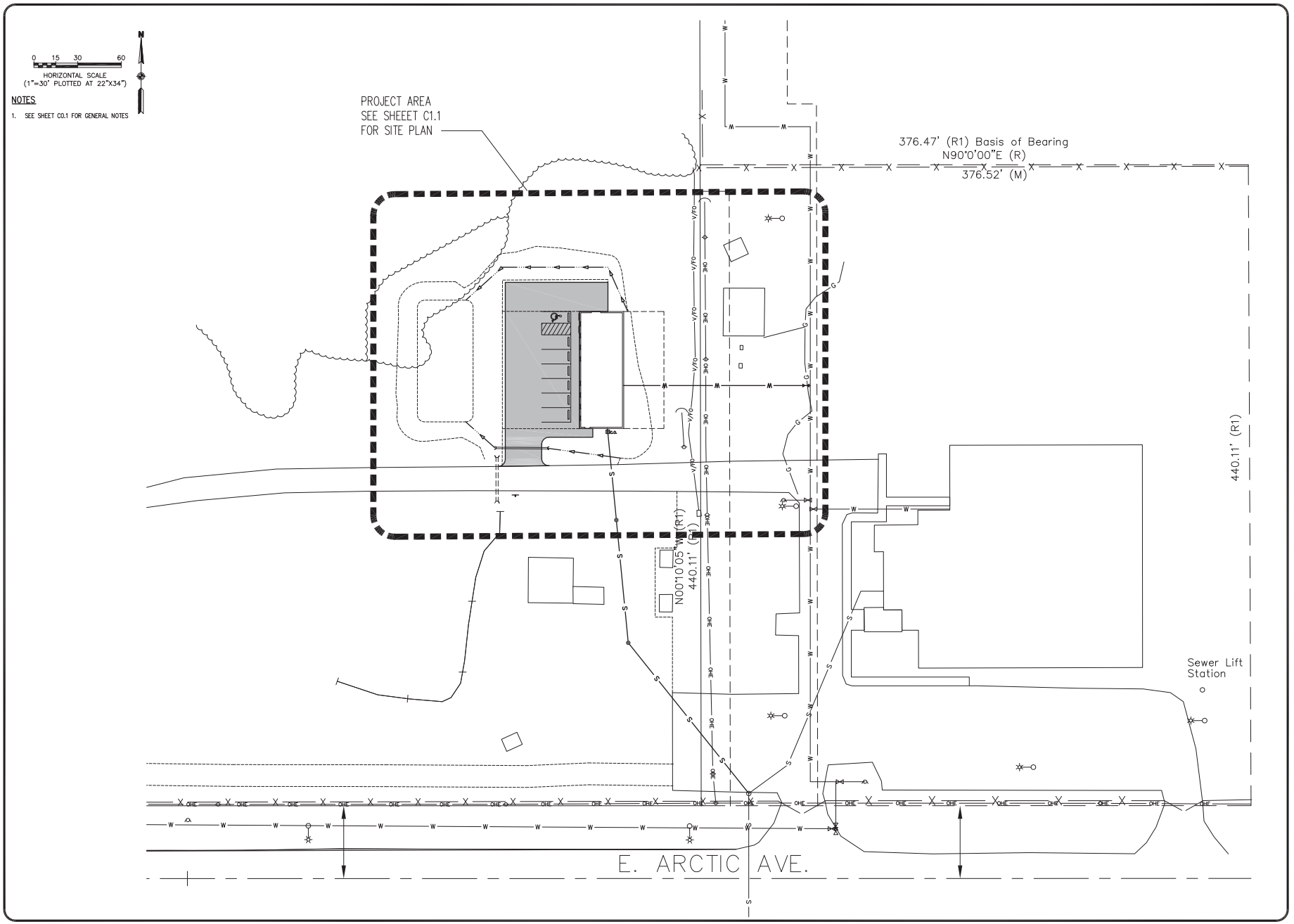
MSB SCHOOL DISTRICT
ACADEMY CHARTER SCHOOL
PROPOSED STORAGE BUILDING
T18N, R2E, SEC. 33, LOT A15
E. ARCTIC AVE. PALMER, ALASKA

BY	DATE	REVISIONS

JOB NO.: 21-019
DATE: 8/5/2022
DRAWN: DES
REVIEWED: DES

SHEET TITLE
CIVIL NOTES
LOCATION MAP
LEGEND

SHEET
C0.1



STATE OF ALASKA
49TH
DAN E. STEINER
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8/5/22
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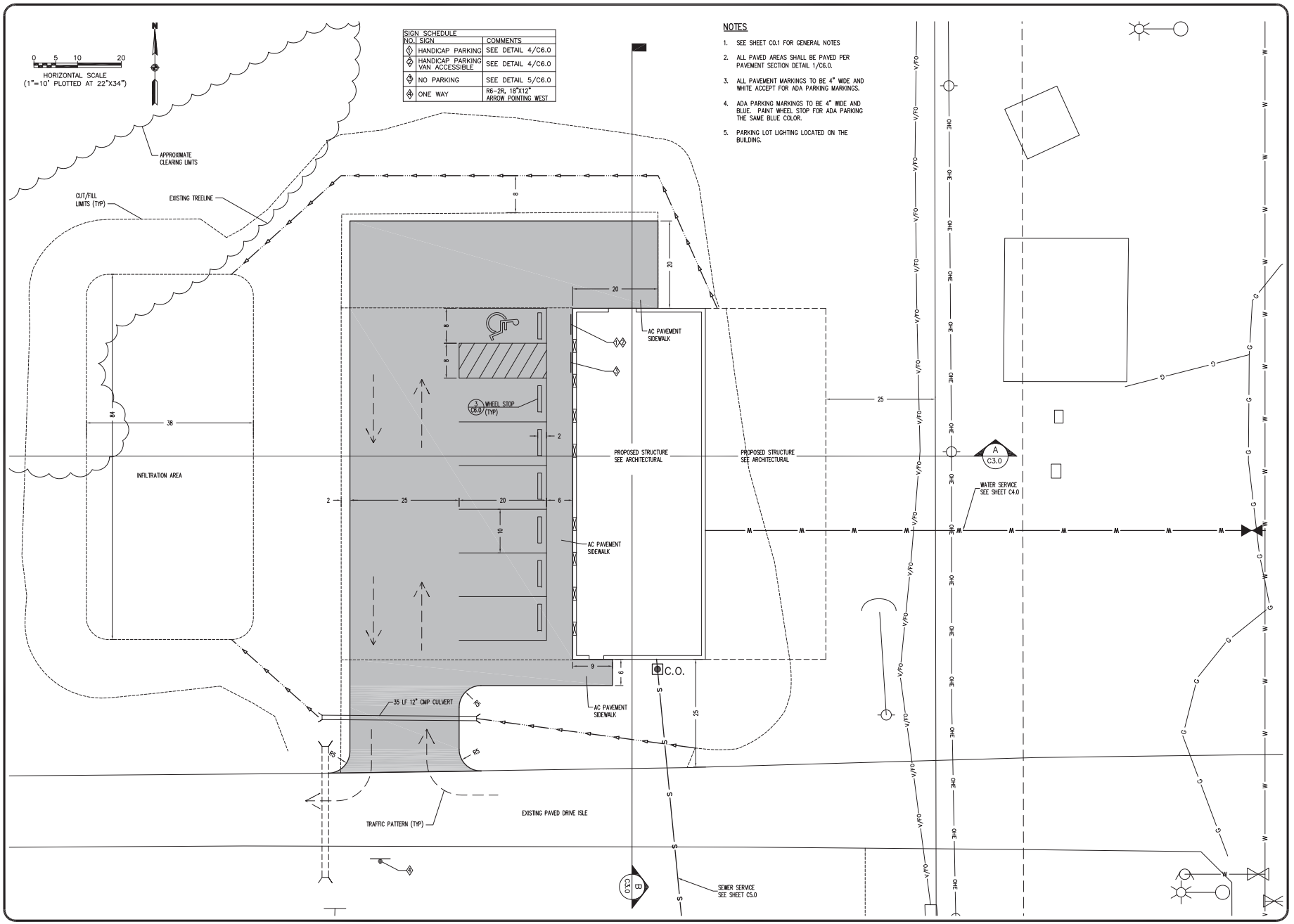
MSB SCHOOL DISTRICT
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E. ARCTIC AVE. PALMER, ALASKA

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JOB NO.: 21-019
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DRAWN: DES
REVIEWED: DES

SHEET TITLE
OVERALL
SITE PLAN

SHEET
C1.0



STATE OF ALASKA
49TH
DAN E. STEINER
No. CE 9505
8/5/22
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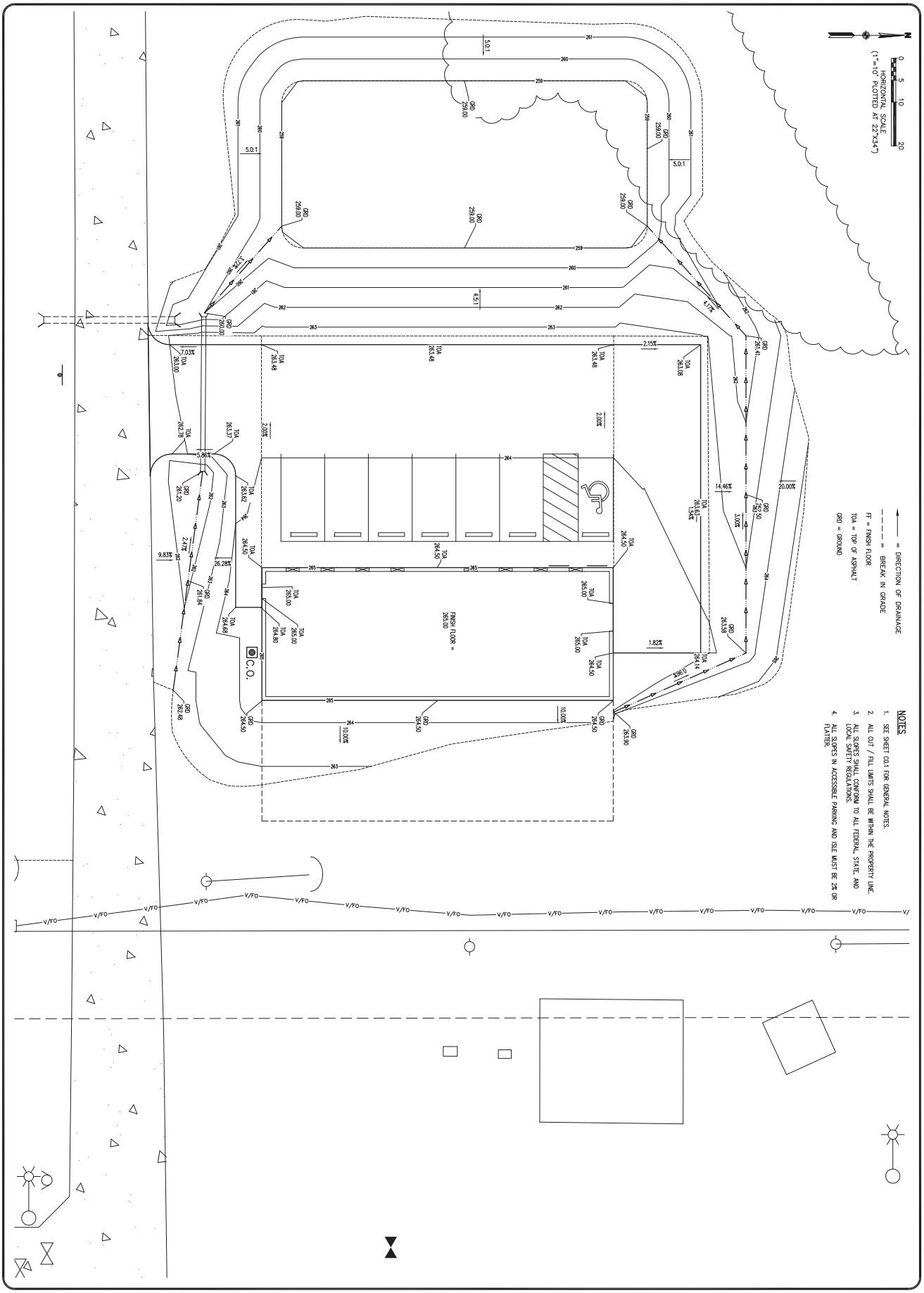
MSB SCHOOL DISTRICT
ACADEMY CHARTER SCHOOL
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T18N, R2E, SEC. 33, LOT A15
E. ARCTIC AVE. PALMER, ALASKA

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JOB NO.: 21-019
DATE: 8/5/2022
DRAWN: DES
REVIEWED: DES

SHEET TITLE
SITE PLAN

SHEET
C1.1



SHEET
C2.0

SHEET TITLE
GRADING PLAN

JOB NO.: 21-019
DATE: 8/5/2022
DRAWN: DES
REVIEWED: DES

BY	DATE	REVISIONS

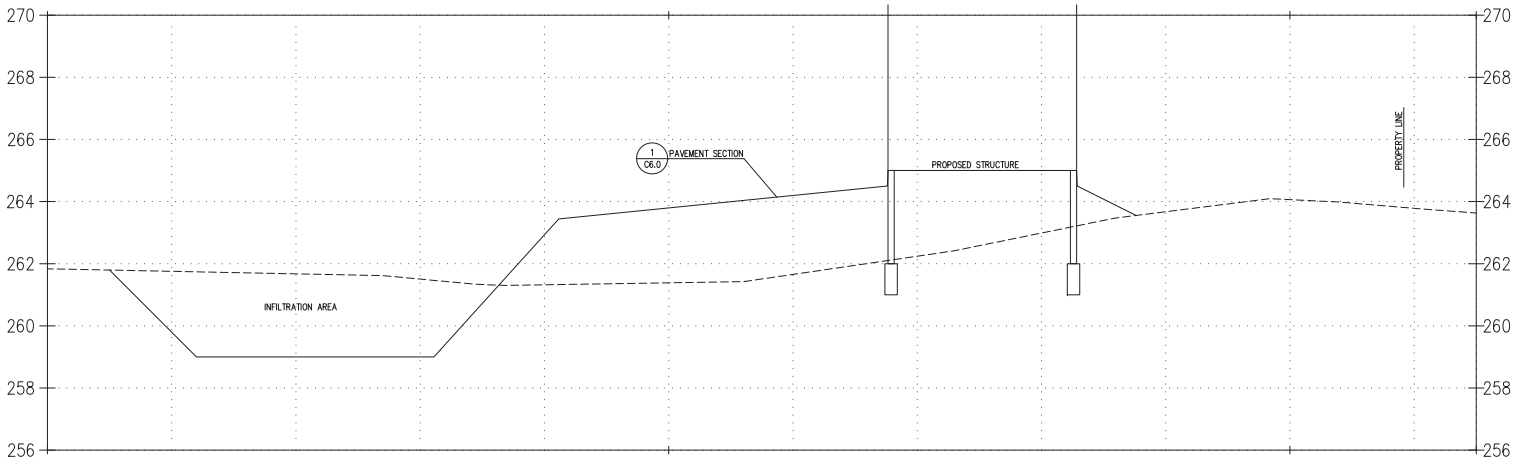
MSB SCHOOL DISTRICT
ACADEMY CHARTER SCHOOL

PROPOSED STORAGE BUILDING

T18N, R2E, SEC. 33, LOT A15
E. ARCTIC AVE. PALMER, ALASKA

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STATE OF ALASKA
49TH
REGISTERED PROFESSIONAL ENGINEER
DANE E. STEINER
No. SE 9505
9/5/22



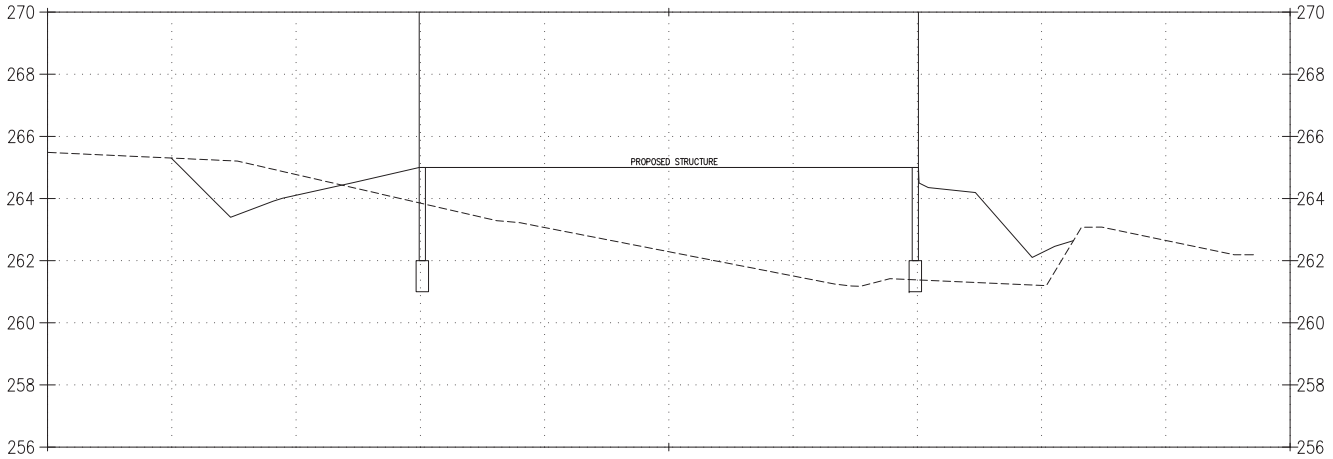
SECTION A

0 5 10 20
HORIZONTAL SCALE
(1"=10' PLOTTED AT 22"X34")

0 1 2 5
VERTICAL SCALE
(1"=2' PLOTTED AT 22"X34")

NOTES

1. SEE SHEET C0.1 FOR GENERAL NOTES.
2. SEE C2.0 SHEETS FOR GRADING AND DRAINAGE.
3. ALL TOPSOIL AND ORGANICS TO BE REMOVED PRIOR TO THE PLACEMENT OF FILL OR BACKFILL.
4. ALL FILL AND BACKFILL SHALL BE COMPACTED TO 95% MAX. DENSITY AS DETERMINED BY ASTM D-1996.
5. ADDITIONAL DETAIL MAY BE ADDED TO SECTIONS ONCE SOIL REPORT IS COMPLETED.



SECTION B

STATE OF ALASKA
49TH
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8/5/22
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STEINER DESIGN & CONSTRUCTION SERVICES, LLC
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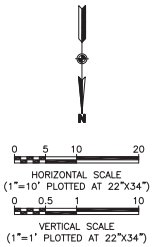
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ACADEMY CHARTER SCHOOL
PROPOSED STORAGE BUILDING
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JOB NO.: 21-019
DATE: 8/5/2022
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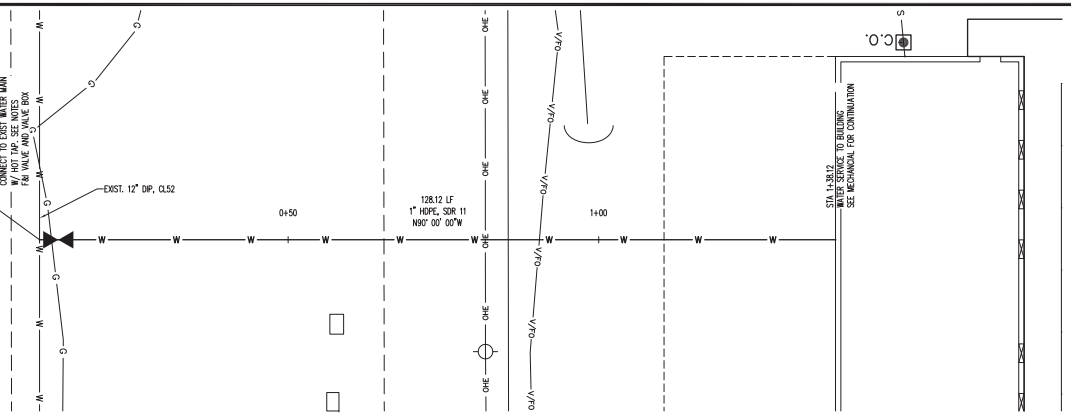
SHEET TITLE
SITE SECTIONS

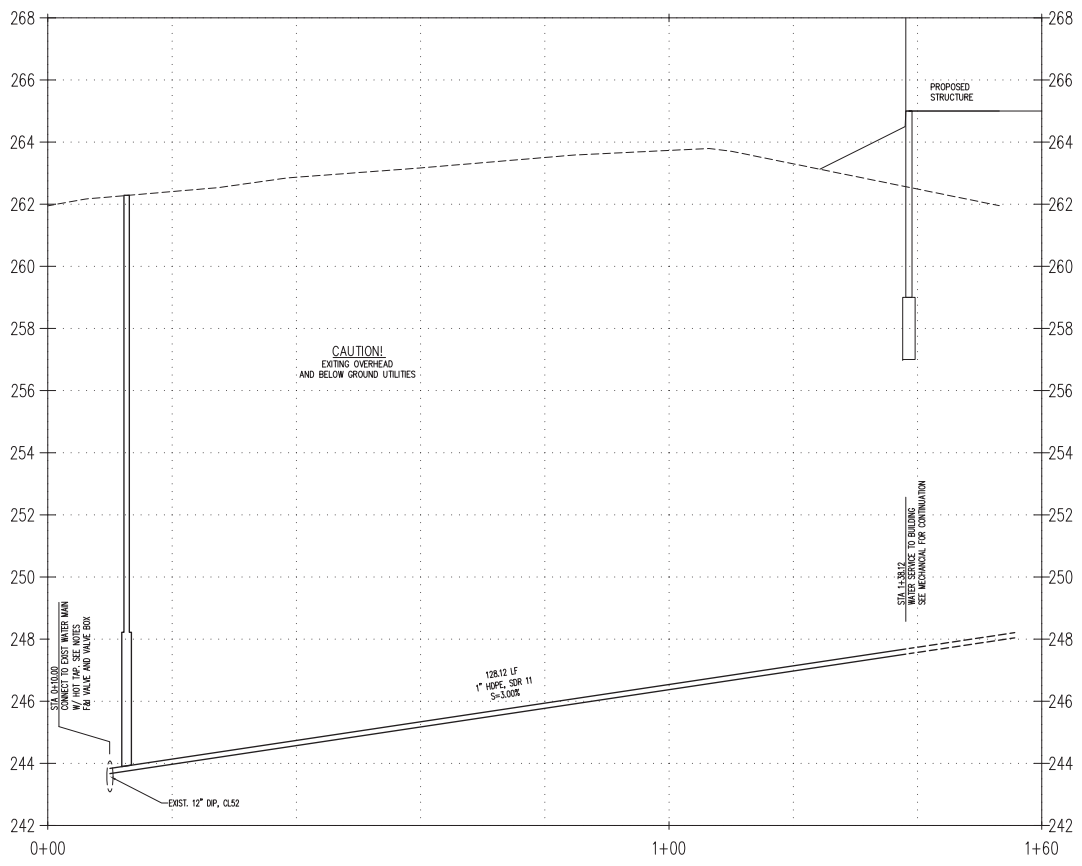
SHEET
C3.0



NOTES

1. SEE SHEET C0.1 FOR GENERAL WATER NOTES AND KEY MAP.
2. SEE CITY OF PALMER DETAILS 20-11 AND 20-13 FOR TYPICAL TRENCH SECTION.
3. DISTANCES ARE FROM CENTER OF FITTING TO CENTER OF FITTING.
4. SEE MECHANICAL SHEETS FOR WATER SERVICE WITHIN BUILDING FOOTPRINT.
5. EXACT LOCATIONS OF EXISTING UTILITIES UNKNOWN. CALL THE LOCATE CENTER OF ALASKA. EXCAVATE WITH CAUTION.
6. RESTORE ALL DISTURBED IMPROVEMENTS TO EXISTING CONDITIONS.
7. THE CONTRACTOR SHALL VERIFY THE ELEVATIONS OF THESE UTILITIES TO VERIFY THAT THERE ARE NO CONFLICTS PRIOR TO CONSTRUCTION OF THE WATER SERVICE.
8. EXACT LOCATION AND CONDITION OF EXISTING WATER MAIN IS UNKNOWN. THE CONTRACTOR SHALL EXPOSE THE EXISTING WATER LINE TO VERIFY PIPE SIZE, TYPE, LOCATION AND CONDITION.
9. BEDROCK CLOSE TO THE SURFACE IN THE AREA. THE CONTRACTOR TO VERIFY THERE IS NO CONFLICTS WITH BEDROCK PRIOR TO CONSTRUCTION OF THE WATER SERVICE.
10. HOT TAP WATER MAIN WITH STAINLESS STEEL TAPPING SLEEVE APPROVED BY THE CITY OF PALMER.
11. WATER METER IN BUILDING TO BE 1"





STATE OF ALASKA
49TH
DAN E. STEINER
No. CE 8505
8/5/22
REGISTERED PROFESSIONAL ENGINEER

SDCS, LLC
STEINER DESIGN & CONSTRUCTION SERVICES, LLC
5900 W. DEWBERRY DR. PH: (907) 357-5609
WASILLA, AK 99623 FAX: (907) 357-5608

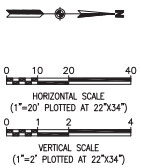
MSB SCHOOL DISTRICT
ACADEMY CHARTER SCHOOL
PROPOSED STORAGE BUILDING
T18N, R2E, SEC. 33, LOT A15
E. ARCTIC AVE. PALMER, ALASKA

BY	DATE	REVISIONS

JOB NO.: 21-019
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REVIEWED: DES

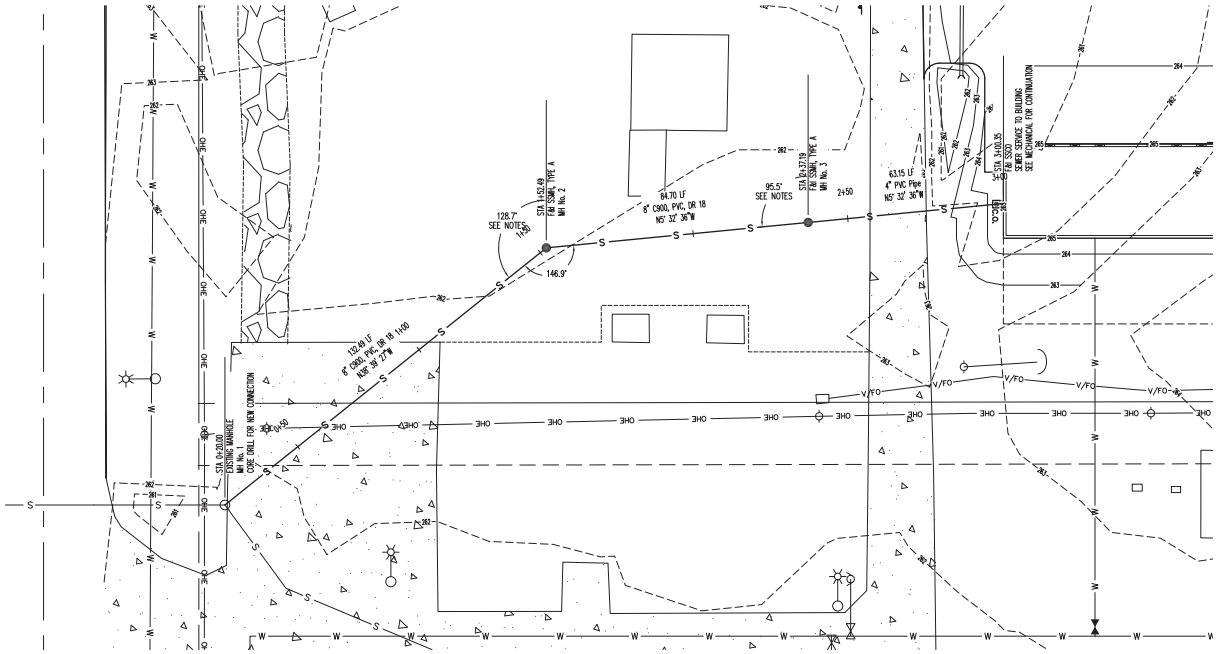
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WATER SERVICE

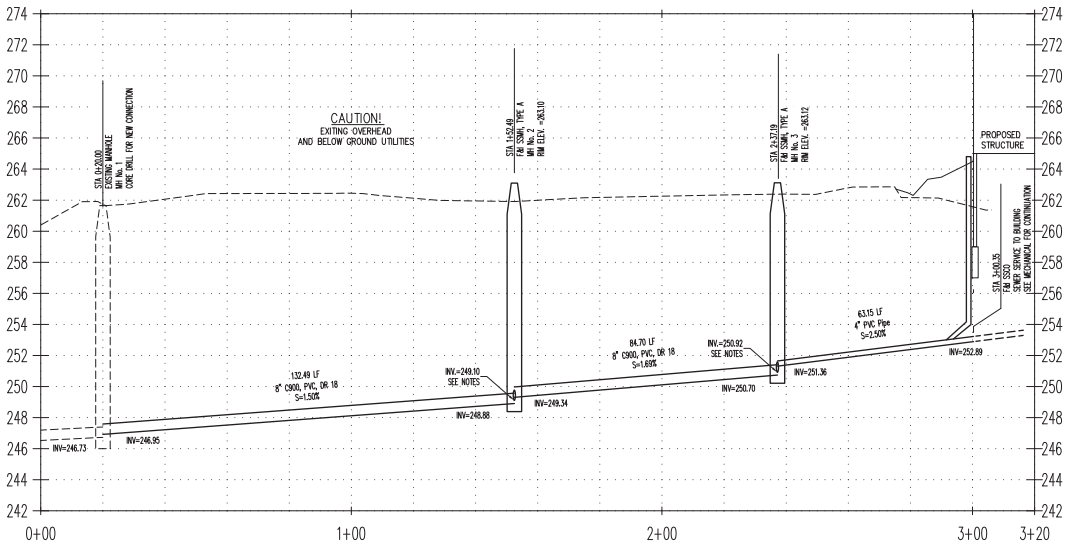
SHEET
C4.0



NOTES

1. SEE SHEET C0.1 FOR GENERAL SEWER NOTES AND KEY MAP.
2. SEE CITY OF PALMER DETAILS 20-11 AND 20-13 FOR TYPICAL TRENCH SECTION.
3. DISTANCES ARE FROM CENTER OF FITTING TO CENTER OF FITTING.
4. CONNECTION OF NEW PIPE FOR SERVICE MUST BE COMPLETED UNDER THE OBSERVATION OF CITY OF PALMER INSPECTOR.
5. SEE MECHANICAL SHEETS FOR SEWER SERVICE WITHIN BUILDING FOOTPRINT.
6. THE CONTRACTOR SHALL VERIFY THE ELEVATIONS OF THESE UTILITIES TO VERIFY THAT THERE ARE NO CONFLICTS PRIOR TO CONSTRUCTION OF THE SEWER SERVICE.
8. IN PROPOSED MANHOLES, CAST ADDITIONAL OPENING AND TROUGH FOR FUTURE 8" CONNECTION. SEE PLAN VIEW FOR ANGLE AND PROFILE FOR INVERT OF ADDITIONAL OPENING.
9. CONTRACTOR TO INSTALL WATER TIGHT REMOVABLE PLUG IN ADDITIONAL MANHOLE OPENINGS.
10. BEDROCK CLOSE TO THE SURFACE IN THE AREA. THE CONTRACTOR TO VERIFY THERE IS NO CONFLICTS WITH BEDROCK PRIOR TO CONSTRUCTION OF THE WATER SERVICE.





STATE OF ALASKA
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MSB SCHOOL DISTRICT
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PROPOSED STORAGE BUILDING
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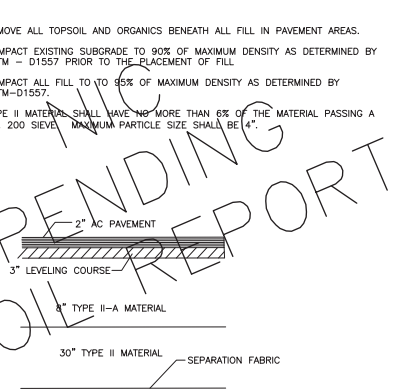
SHEET TITLE
SEWER SERVICE

SHEET
C5.0

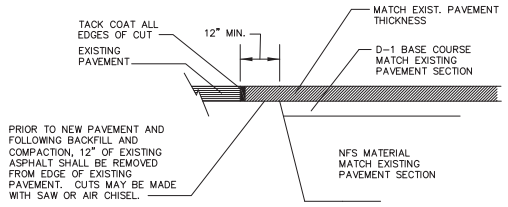
NOTES

1. REMOVE ALL TOPSOIL AND ORGANICS BENEATH ALL FILL IN PAVEMENT AREAS.
2. COMPACT EXISTING SUBGRADE TO 90% OF MAXIMUM DENSITY AS DETERMINED BY ASTM – D1557 PRIOR TO THE PLACEMENT OF FILL
3. COMPACT ALL FILL TO TO 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM–D1557.
4. TYPE II MATERIAL SHALL HAVE NO MORE THAN 6% OF THE MATERIAL PASSING A NO. 200 SIEVE. MAXIMUM PARTICLE SIZE SHALL BE 4".

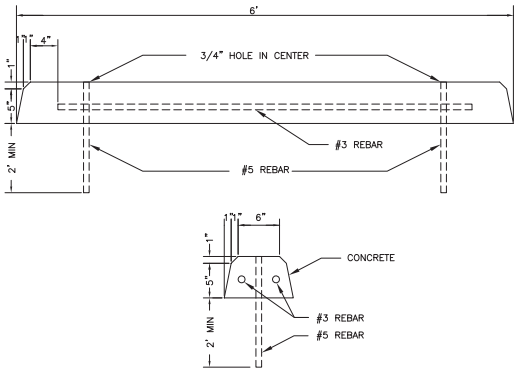
NOT PENDING SOILS REPORT



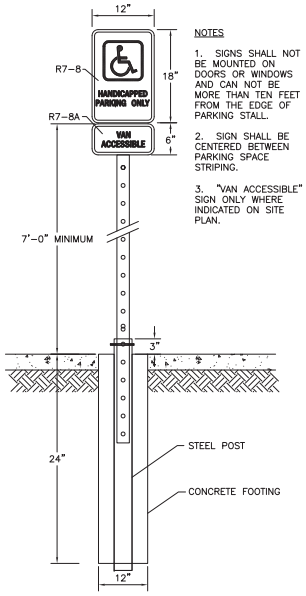
1 C6.0 PAVEMENT SECTION
SCALE: NOT TO SCALE



2 W2.0 PAVEMENT MATCH DETAIL
SCALE: NOT TO SCALE



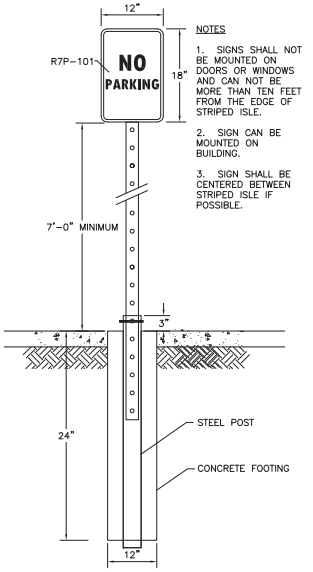
3 C6.0 WHEEL STOP
SCALE: NOT TO SCALE



NOTES

1. SIGNS SHALL NOT BE MOUNTED ON DOORS OR WINDOWS AND CAN NOT BE MORE THAN TEN FEET FROM THE EDGE OF PARKING STALL.
2. SIGN SHALL BE CENTERED BETWEEN PARKING SPACE STRIPING.
3. "VAN ACCESSIBLE" SIGN ONLY WHERE INDICATED ON SITE PLAN.

4 6.0 HANDICAP PARKING SIGN
SCALE: NOT TO SCALE



NOTES

1. SIGNS SHALL NOT BE MOUNTED ON DOORS OR WINDOWS AND CAN NOT BE MORE THAN TEN FEET FROM THE EDGE OF STRIPED ISLE.
2. SIGN CAN BE MOUNTED ON BUILDING.
3. SIGN SHALL BE CENTERED BETWEEN STRIPED ISLE IF POSSIBLE.

5 C6.0 NO PARKING SIGN
SCALE: NOT TO SCALE

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SHEET TITLE
CIVIL DETAILS

SHEET
C6.0

ABBREVIATIONS

AB	ANCHOR BOLT
ACI	AMERICAN CONCRETE INSTITUTE
AISC	AMERICAN INSTITUTE OF STEEL CONSTR.
ALT	ALTERNATE
APA	AMERICAN PLYWOOD ASSOCIATION
ARCH	ARCHITECTURAL
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS
AWS	AMERICAN WELDING SOCIETY
BLKG	BLOCKING
BM	BEAM
BOC	BOTTOM OF CONCRETE
BOD	BOTTOM OF DECK
BOS	BOTTOM OF STEEL
BOT	BOTTOM
BTWN	BETWEEN
CIP	CAST IN PLACE (CONCRETE)
CJP	COMPLETE JOINT PENETRATION
CLR	CLEAR
COL	COLUMN
CONN	CONNECTION
CONT	CONTINUOUS
CVN	CHARPY V NOTCH
DIAM	DIAMETER
DWGS	DWGS
(E)	EXISTING
EA	EACH
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATION
EW	EACH WAY
EQ	EQUAL
F'C	CONCRETE COMPRESSIVE STRENGTH
F'M	MASONRY COMPRESSIVE STRENGTH
FDN	FOUNDATION
FOC	FACE OF CONCRETE
FT	FEET
FTG	FOOTING
GA	GAGE OR GAUGE
GALV	GALVANIZED
GLB	GLUE-LAMINATED BEAM
HI	HIGH
HORIZ	HORIZONTAL
HS	HEADED STUD
HSH	HORIZONTAL SLOTTED HOLE
HSS	HOLLOW STRUCTURAL SECTION
IE	INVERT ELEVATION
INV	INVERT
LO	LOW
LVL	LAMINATED VENEER LUMBER
MAX	MAXIMUM
MECH	MECHANICAL
MF	MOMENT FRAME
MIN	MINIMUM
MT	MAGNETIC PARTICLE STRIP
NA	NOT APPLICABLE
NFS	NON FROST SUSCEPTIBLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OWSJ	OPEN WEB STEEL JOIST
PLF	POUNDS PER LINEAR FOOT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
REINF	REINFORCING
RT	RADIOGRAPHIC TEST
SDI	STEEL DECK INSTITUTE
SJI	STEEL JOIST INSTITUTE
SQ	SQUARE
STD	STANDARD
TBD	TO BE DETERMINED
TEMP	TEMPERATURE
TOC	TOP OF CONCRETE
TOS	TOP OF STEEL
TS	TUBE STEEL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UT	ULTRASONIC
VERT	VERTICAL
W	WIDE FLANGE DESIGNATION
WF	WIDE FLANGE
WP	WORK POINT
WWF	WELDED WIRE FABRIC
W/	WITH

INDEX OF STRUCTURAL DRAWINGS

S1.0	DESIGN CRITERIA
S1.1	CONCRETE REINFORCING SCHEDULES AND TYPICAL DETAILS
S2.0	FOUNDATION PLAN
S3.0	FOUNDATION DETAILS

STRUCTURAL DESIGN CRITERIA SCHEDULE

CRITERIA	DESCRIPTION	VALUE	COMMENTS
CODE	IBC 2012		
SEISMIC	ANALYSIS PROCEDURE SEISMIC DESIGN CATEGORY RISK CATEGORY SEISMIC IMPORTANCE FACTOR, IE SITE CLASS 0.2S SPECTRAL RESPONSE ACCELERATION, Ss 1.0S SPECTRAL RESPONSE ACCELERATION, S1 0.2S SPECTRAL RESPONSE COEFFICIENT, Sds 1.0S SPECTRAL RESPONSE COEFFICIENT, Sd1	ELF E II 1.00 D 1.50 0.75 1.20 0.85	PER ASCE 7-16, FRAME AND COLUMN REACTIONS ARE DETERMINED BY THE STEEL BUILDING MANUFACTURER LATERAL FORCE RESISTING SYSTEM TO BE DETERMINED BY THE STEEL BUILDING MANUFACTURER
WIND	BASIC WIND SPEED (3 SECOND GUST) RISK CATEGORY EXPOSURE FACTOR INTERNAL PRESSURE COEFFICIENT, GCpi	119 MPH II B ±0.18	PER ASCE 7-16 BASIC WIND SPEED MAP FRAME AND COLUMN REACTIONS ARE DETERMINED BY THE STEEL BUILDING MANUFACTURER
ROOF LIVE LOADS	GROUND SNOW LOAD SNOW LOAD EXPOSURE FACTOR THERMAL FACTOR Ct SNOW IMPORTANCE FACTOR FLAT ROOF SNOW LOAD SNOW DRIFT LOADS	50 PSF 1.0 1.0 1.0 40 PSF PER ASCE 7-16	FRAME AND COLUMN REACTIONS ARE DETERMINED BY THE STEEL BUILDING MANUFACTURER
FLOOR LIVE LOADS	1ST LEVEL SLAB ON GRADE	125 PSF	
FOUNDATIONS	ALLOWABLE SOIL BEARING PRESSURE	3000 PSF	

SCHEDULE OF CONSTRUCTION MATERIALS

CONCRETE	LOCATION	28-DAY STRENGTH	MAX. W/C RATIO	AIR ENTRAINMENT
	EXTERIOR CONCRETE (EXPOSED TO FREEZING)	4,500 P.S.I.	0.45	6% +/- 1%
	INTERIOR SLABS (NOT EXPOSED TO FREEZING)	4,000 P.S.I.	0.45	3%
	FOOTINGS, FOUNDATION WALLS	3,000 P.S.I.	0.50	5% +/- 1%
	NOTE: CONCRETE DESIGN PERFORMED USING 3000 P.S.I.			
REINFORCING	APPLICATION	TYPE	COMMENTS	
	FABRICATED AND STRAIGHT BARS	ASTM A615, GRADE 60	SEE LAP SPLICE SCHEDULE FOR LAP LENGTHS	
	FIELD BENT	ASTM A615, GRADE 40		

DEFERRED SUBMITTALS

DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING CALCULATIONS AND DRAWINGS STAMPED BY AN ALASKA REGISTERED PROFESSIONAL ENGINEER FOR THE FOLLOWING ITEMS:

- PRE-ENGINEERED STEEL BUILDING

STRUCTURAL NOTES
ALL MATERIALS, WORKMANSHIP AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH THE STRUCTURAL DRAWINGS, THE SPECIFICATIONS AND NOTES LISTED BELOW. MINIMUM PROVISIONS OF THE INTERNATIONAL BUILDING CODE (IBC 2012), AND LOCAL AMENDMENTS SHALL APPLY WHERE DETAILS ARE NOT SHOWN OR DESCRIBED.

AS-BUILT DRAWINGS
CONTRACTOR SHALL MAINTAIN A CURRENT SET OF DRAWINGS ON SITE, MODIFIED TO REFLECT ALL DESIGN CHANGES TO THE ORIGINAL DRAWING SET.

PND ENGINEERS INC IS NOT RESPONSIBLE FOR SAFETY PROGRAMS, METHODS, OR PROCEDURES OF OPERATION, OR THE CONSTRUCTION OF THE DESIGN SHOWN ON THESE DRAWINGS. DRAWINGS ARE FOR USE ON THIS PROJECT ONLY AND ARE NOT INTENDED FOR REUSE WITHOUT WRITTEN APPROVAL FROM PND. DRAWINGS ARE ALSO NOT TO BE USED IN ANY MANNER THAT WOULD CONSTITUTE A DETRIMENT DIRECTLY OR INDIRECTLY TO PND.

DESIGN/BUILD SOLICITIATION SET

PND ENGINEERS, INC.
1506 West 36th Avenue
Anchorage, Alaska 99503
Phone: 907.561.1011
www.pndengineers.com
AK. LIC# AECC250

STATE OF ALASKA 49TH
David Bertti
David N. Bertti
CE 13838
PROFESSIONAL ENGINEER
DATE 1/26/2022

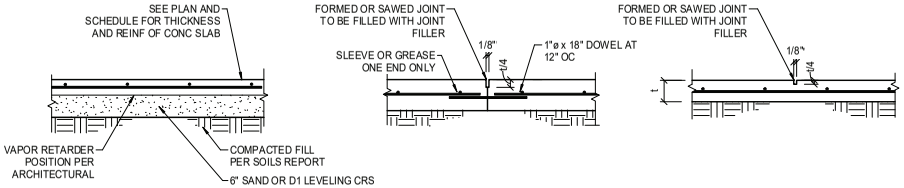
PROJECT: ACADEMY CHARTER SCHOOL MAINTENANCE/STORAGE FACILITY
801 EAST ARCTIC ROAD
PALMER, ALASKA 99645

TITLE: DESIGN CRITERIA

PND Engineers, Inc. (PND) is not responsible for safety programs, methods or procedures of operation, or the construction of the design shown on these drawings. Where specifications are general or not called out, the specifications shall conform to standards of industry. Drawings are for use on this project only and are not intended for reuse without written approval from PND. Drawings are also not to be used in any manner that would constitute a detriment directly or indirectly to PND.

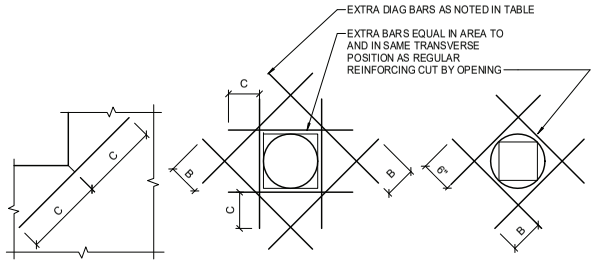
REV.	DATE	DESCRIPTION

DESIGNED BY:	JL
DRAWN BY:	JL
CHECKED BY:	DB
DATE:	01.26.2022
PROJECT NO.	211164
SHT NO.	S1.0
OF	4



TYPICAL INTERIOR SLAB ON GRADE | TYPICAL SLAB CONSTRUCTION JOINTS | TYPICAL SLAB CONTROL JOINT

1 TYPICAL SLAB JOINTS
3/4" = 1'-0"



C=LAP SPLICE MIN
B=12" MIN
EXTRA BARS NOT REQUIRED AT SLEEVES OR WALL PIPES WHEN REINFORCING IS NOT CUT AND OPENING IS LESS THAN 10 INCH

EXTRA DIAG BARS	
CONCRETE THICKNESS	BAR SIZE
4"-7.99"	4
8"-9.99"	5
10"-11.99"	5 T&B
12"-18"	6 T&B

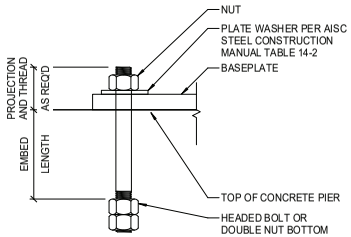
OPENINGS LARGER THAN 21" DIA | OPENINGS LESS THAN 21" DIA

RE-ENTRANT CORNERS | OPENING REINFORCING

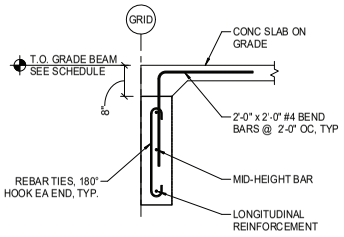
2 TYPICAL WALL OPENING REINFORCING
1" = 1'-0"

ANCHOR-ROD EMBEDMENT	
ANCHOR ROD DIA., IN.	ANCHOR ROD EMBEDMENT, IN.
1/2"	12"
3/4"	24"
1"	24"

NOTE:
ANCHOR DIAMETERS, LAYOUT, & EMBEDMENT TO BE DETERMINED BY EOR AFTER FINAL PEMB DRAWINGS AND REACTIONS ARE PROVIDED. SIZES SHOWN ARE APPROXIMATE AND ARE NOT FOR CONSTRUCTION.



3 TYPICAL ANCHOR ROD
3/4" = 1'-0"



4 TYPICAL GRADE BEAM
3/4" = 1'-0"

FOOTING REINFORCING SCHEDULE

MARK	FTG SIZE	FTG DEPTH	T.O.F. ELEV.	TOP MAT REINFORCING	BOTTOM MAT REINFORCING
F5	5'-0"x5'-0"	24"	SEE PLAN	(6) #6 EA. WAY	(6) #6 EA. WAY

NOTES:

SLAB REINFORCING SCHEDULE

THICKNESS	TYPE	REINFORCING	CONCRETE COVER
6"	ON GRADE	#4 @ 16" OC EW	2" FROM TOP

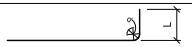
GRADE BEAM SCHEDULE

MARK	BEAM WIDTH	BEAM HEIGHT	T.O. BEAM ELEV	REINFORCING	TIES	REMARKS
GB1	8"	28"	99'-4"	(1) #6 TOP & BOTTOM (1) #6 MID-HEIGHT	#3 TIES @ 12" OC	SEE DETAIL 4 / S1.1 FOR TYPICAL SECTION

NOTES:
GRADE BEAMS REQUIRED TO SUPPORT COMPRESSION AND TENSION FORCES. NO LAP SPLICES PERMITTED SCHEDULE.

ACI STANDARD 90° HOOK DIMENSIONS

BAR SIZE	#3	#4	#5	#6	#7	#8		
MIN. BEND DIAM. (d)	2 1/4"	3"	3 3/4"	4 1/2"	5 1/4"	6"		
EXTENSION LENGTH (L)	6"	8"	10"	12"	14"	16"		



NOTE: REFERENCE ACI 318-05 SEC. 7.1 & 12.5.4

LAP SPLICES

BAR SIZE	#3	#4	#5	#6	#7	#8		
CLASS B SPLICE	28"	37"	47"	56"	81"	93"		

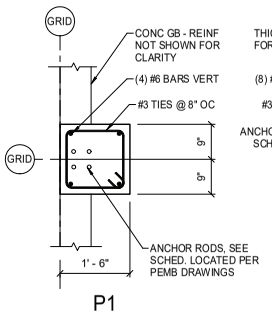
NOTE: INCREASE TABULATED LAP LENGTH BY 20% FOR BUNDLES OF 3 BARS.

REINFORCING CLEARANCE/COVER

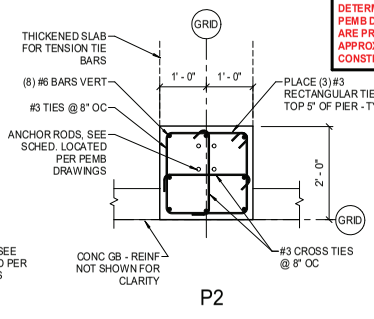
EXPOSURE CONDITION		MIN. COVER	TOLERANCE*
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH		3"	-3/8", +1"
EXPOSED TO EARTH OR WEATHER	#5 AND SMALLER BARS:	1 1/2"	-1/4", +1/2"
	#6 AND LARGER BARS:	2"	-1/4", +1/2"
NOT EXPOSED TO EARTH, WEATHER OR IN CONTACT WITH GROUND:		3/4"	-1/4", +3/8"
TIES AND STIRRUPS		1 1/2"	-1/4", +1/2"

NOTES: "-" INDICATES TOLERANCE DECREASE TOWARDS MEMBER FACE. "+" INDICATES AWAY FROM MEMBER FACE.

NOTE:
CONCRETE PIER SIZES TO BE DETERMINED BY EOR AFTER FINAL PEMB DRAWINGS AND REACTIONS ARE PROVIDED. SIZES SHOWN ARE APPROXIMATE AND ARE NOT FOR CONSTRUCTION.



P1



P2

5 CONCRETE PIER PLANS
3/4" = 1'-0"

DESIGN/BUILD SOLICITIATION SET

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1506 West 36th Avenue
Anchorage, Alaska 99503
Phone: 907.561.1011
www.pndengineers.com
AK. LIC# AECC250

STATE OF ALASKA 49TH
David Bertti
David N. Bertti
CE 13838
PROFESSIONAL ENGINEER
1/26/2022
DATE

PROJECT: ACADEMY CHARTER SCHOOL MAINTENANCE/STORAGE FACILITY
801 EAST ARCTIC ROAD
PALMER, ALASKA 99645

TITLE: CONCRETE REINFORCING SCHEDULES AND TYPICAL DETAILS

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REV.	DATE	DESCRIPTION

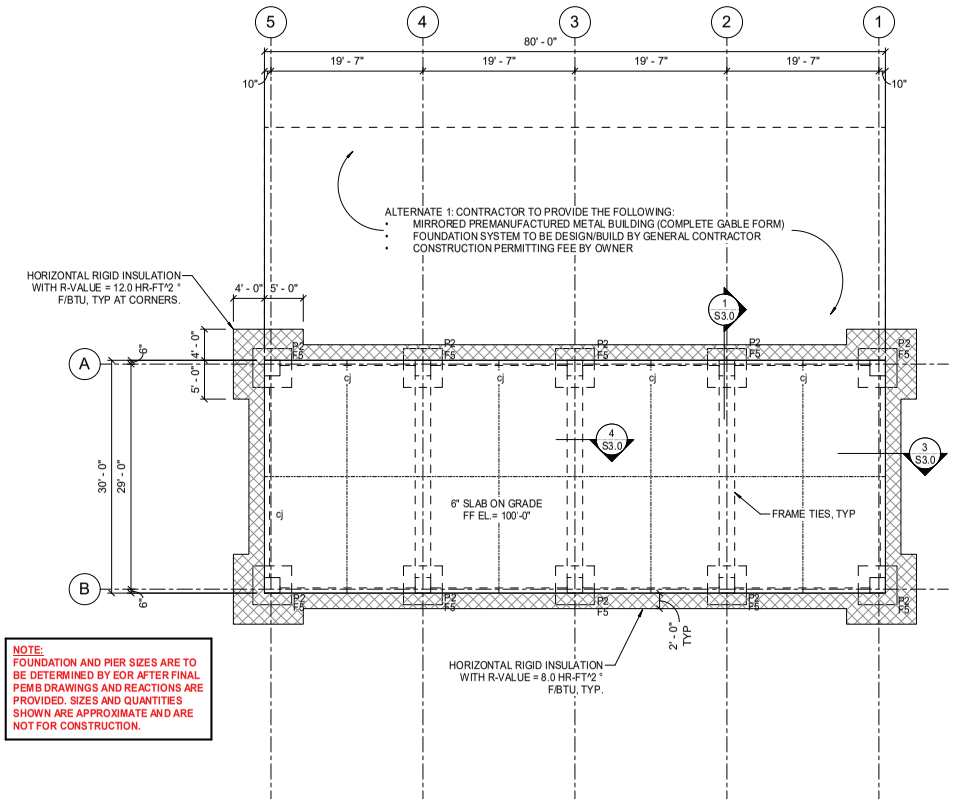
DESIGNED BY:	JL
DRAWN BY:	JL
CHECKED BY:	DB
DATE:	01.26.2022
PROJECT NO.	211164
SHT NO.	S1.1
OF	4

SHEET NOTES

1. REFERENCE ELEVATION - TOP OF CONCRETE SLAB ELEVATION = EL. 100'-0".
2. UNLESS NOTED OTHERWISE, ALL WALLS ARE GB1, SEE S1.1 FOR GRADE BEAM SCHEDULE.
3. UNLESS NOTED OTHERWISE, TOP OF PIER ELEVATION = 100'-0". SEE S1.1 FOR PIER SCHEDULE.
4. INSTALL CONTROL / CONSTRUCTION JOINTS AS INDICATED BY cj, SEE 1/S1.1 FOR DETAILS
5. ALL CONCRETE PIERS AND FOOTINGS ARE APPROXIMATE AND WILL BE UPDATED UPON RECEIVING THE PRE-ENGINEERED METAL BUILDING BASE REACTIONS

LEGEND

P? — PIER TYPE, SEE S1.1
F? — FOUNDATION TYPE, SEE S1.1
[XX'-X"] — INDICATES TOP OF FOOTING ELEVATION
➡ — INDICATES BUILDING BRACES



NOTE:
FOUNDATION AND PIER SIZES ARE TO BE DETERMINED BY EOR AFTER FINAL PEMB DRAWINGS AND REACTIONS ARE PROVIDED. SIZES AND QUANTITIES SHOWN ARE APPROXIMATE AND ARE NOT FOR CONSTRUCTION.

1 FOUNDATION PLAN
1/8" = 1'-0"

PND ENGINEERS, INC.
1506 West 36th Avenue
Anchorage, Alaska 99503
Phone: 907.561.1011
www.pndengineers.com
AK. LIC# AECC250

STATE OF ALASKA 49 TH
David Bertti
David N. Bertti
CE 13838
REGISTERED PROFESSIONAL ENGINEER
DATE 1/26/2022

PROJECT: ACADEMY CHARTER SCHOOL MAINTENANCE/STORAGE FACILITY
801 EAST ARCTIC ROAD
PALMER, ALASKA 99645

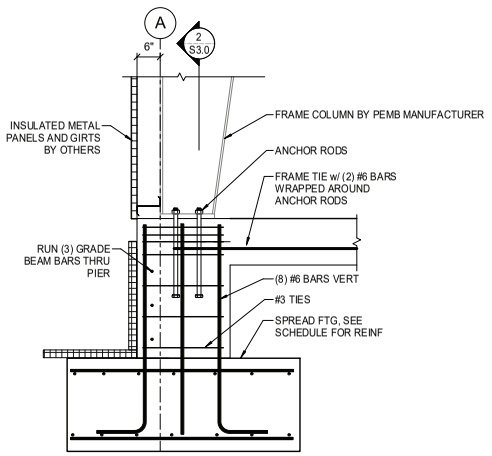
TITLE: FOUNDATION PLAN

PND Engineers, Inc. (PND) is not responsible for safety programs, methods or procedures of operation, or the construction means, methods, techniques, sequences or procedures. Where specifications are general or not called out, the specifications shall conform to standards of industry. Drawings are for use on this project only and are not intended for reuse on any other project without written approval from PND. Drawings are also not to be used in any manner that would constitute a detriment directly or indirectly to PND.

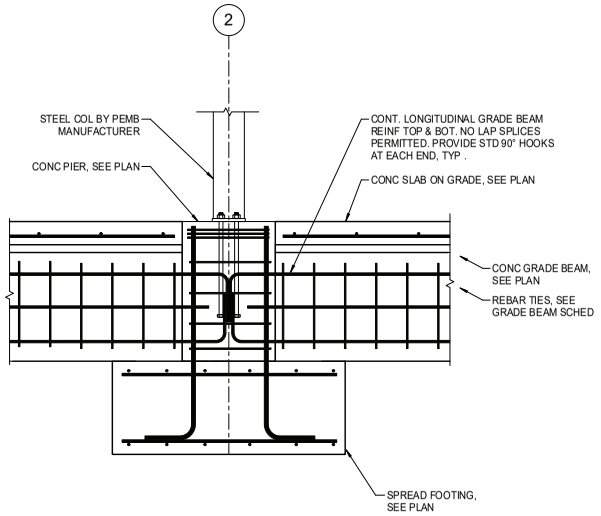
REV.	DATE	DESCRIPTION

DESIGNED BY:	JL
DRAWN BY:	JL
CHECKED BY:	DB
DATE:	01.26.2022
PROJECT NO.	211164
SHT NO.	S2.0
	OF 4

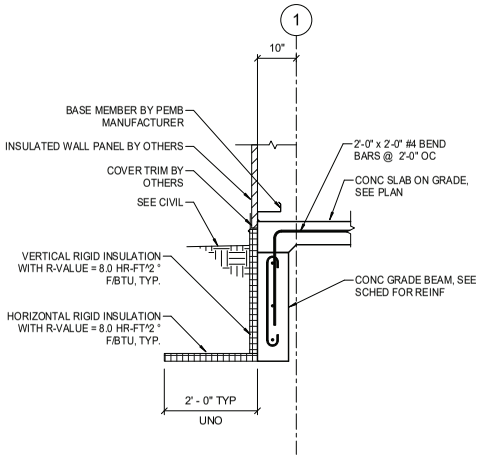
DESIGN/BUILD SOLICITIATION SET



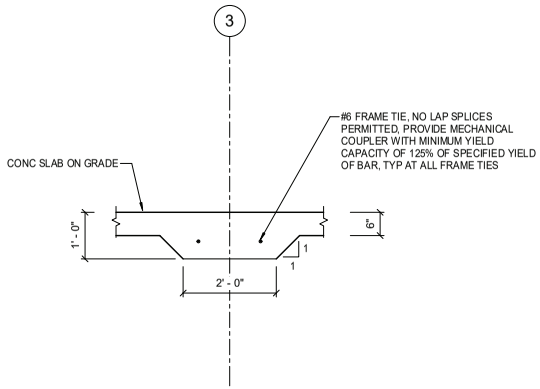
1 DETAIL
3/4" = 1'-0"



2 DETAIL
3/4" = 1'-0"



3 DETAIL
3/4" = 1'-0"



4 DETAIL
3/4" = 1'-0"

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PROJECT: ACADEMY CHARTER SCHOOL MAINTENANCE/STORAGE FACILITY
801 EAST ARCTIC ROAD
PALMER, ALASKA 99645

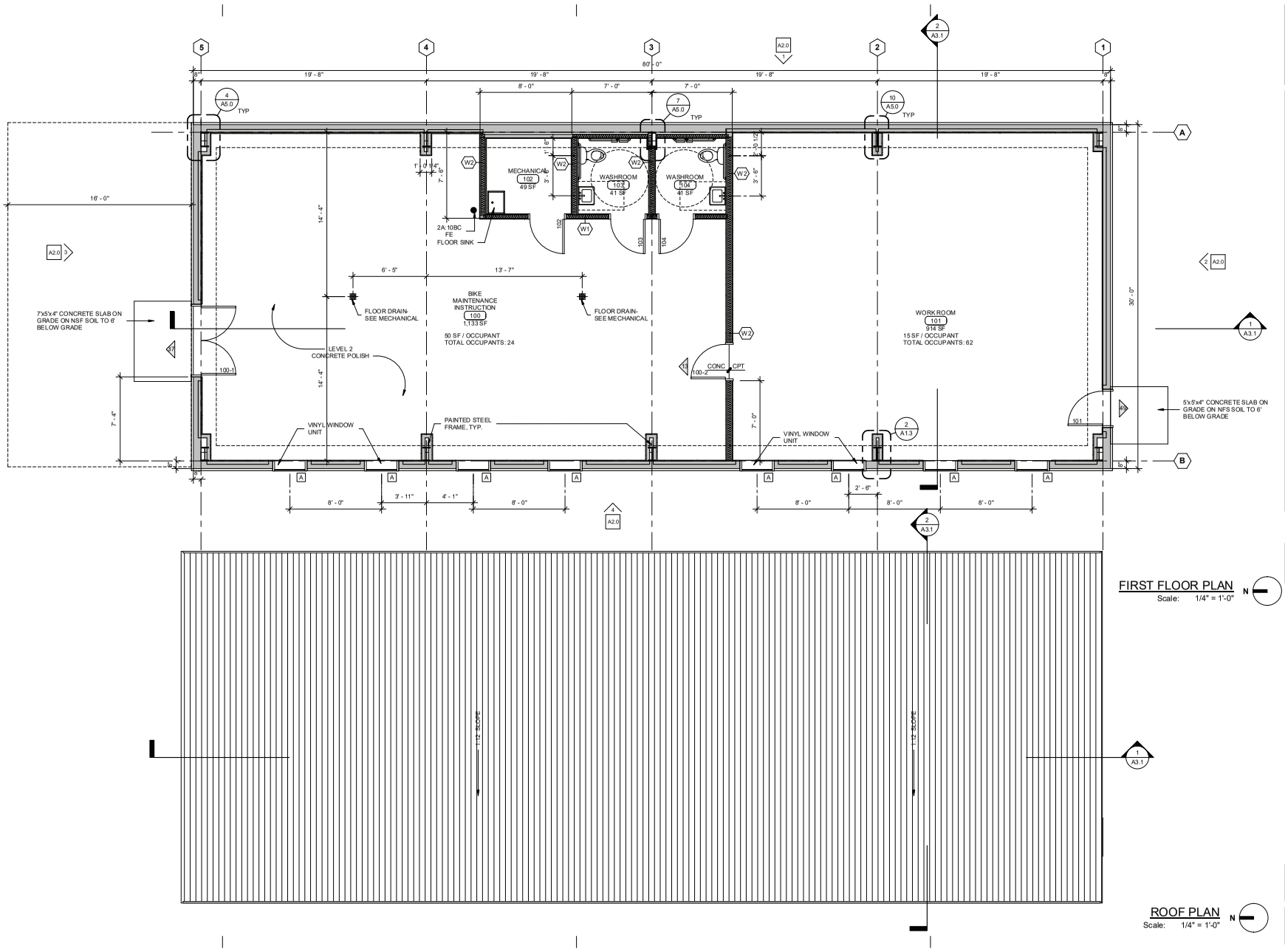
TITLE: FOUNDATION DETAILS

DESIGN/BUILD SOLICITIATION SET

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REV.	DATE	DESCRIPTION

DESIGNED BY:	JL
DRAWN BY:	JL
CHECKED BY:	DB
DATE:	01.26.2022
PROJECT NO.	211164
SHT NO.	S3.0
OF	4



FIRST FLOOR PLAN
Scale: 1/4" = 1'-0"

ROOF PLAN
Scale: 1/4" = 1'-0"

PROJ. NO 2132
DRAWN —
CHECKED —
DATE 6/30/2022
FULL SIZE DRAWINGS: 22" x 34"

DESIGN / BUILD SOLICITATION DOCUMENTS

MAINTENANCE/STORAGE BUILDING
CONSTRUCTION DOCUMENTS
ACADEMY CHARTER SCHOOL
801 EAST ARCTIC AVENUE

6.30.2022

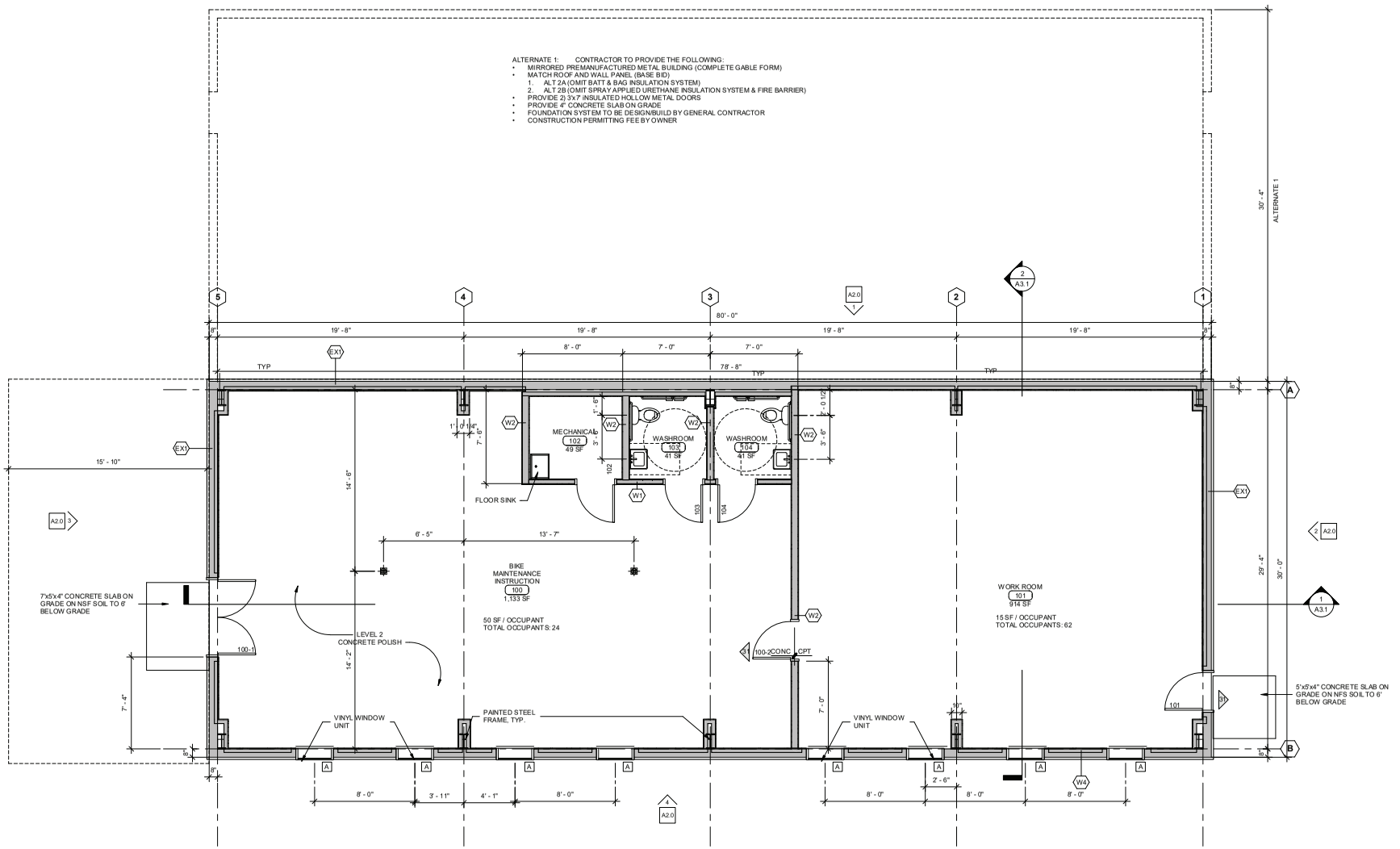
625 S COBB ST
PALMER, AK
T: 907.746.6670
F: 907.746.6680
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Wolf ARCHITECTURE

SHEET CONTENTS
FIRST FLOOR PLAN

A1.1

BID #B23-01



FIRST FLOOR PLAN - Alt 1
Scale: 1/4" = 1'-0"

N

PROJ. NO 2132
DRAWN —
CHECKED —
DATE 6/30/2022
FULL SIZE DRAWINGS: 22" x 34"

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6.30.2022

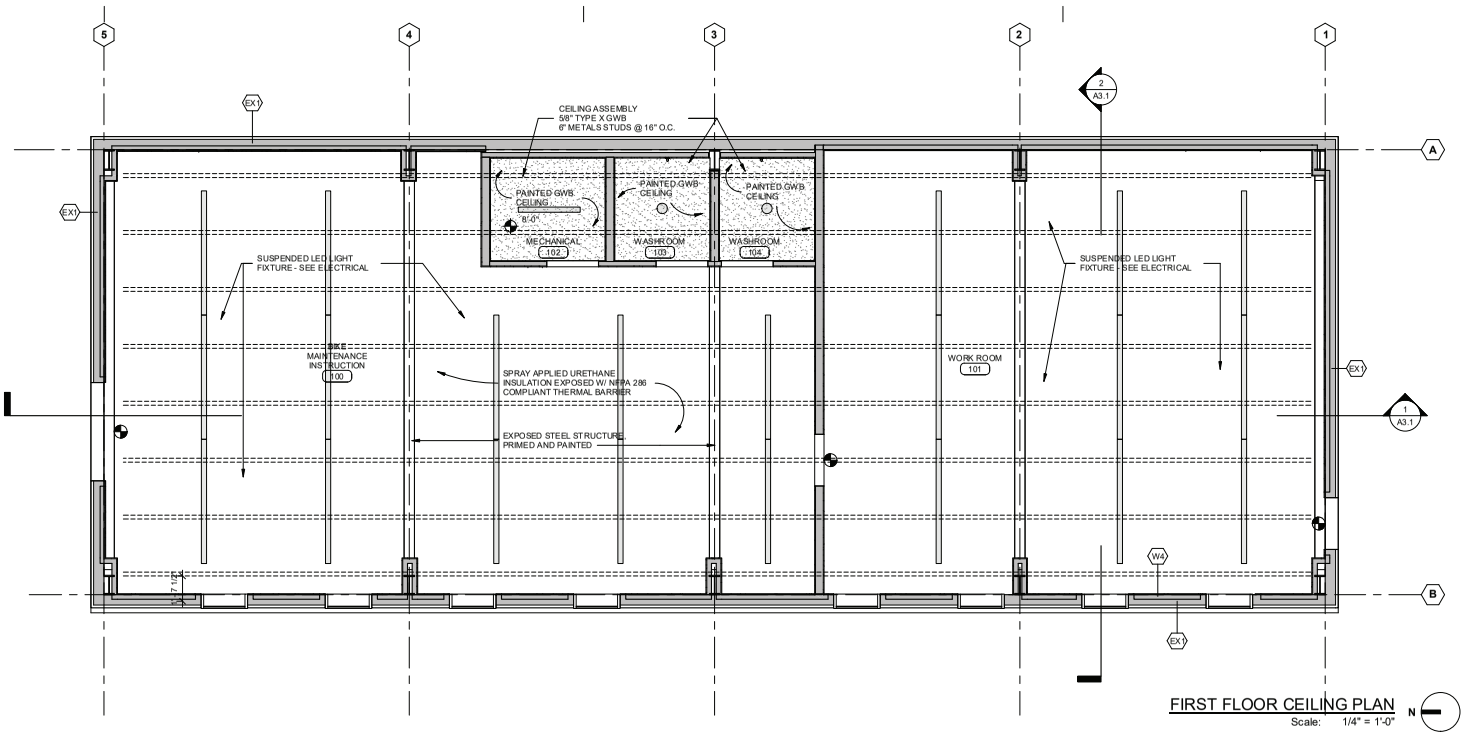
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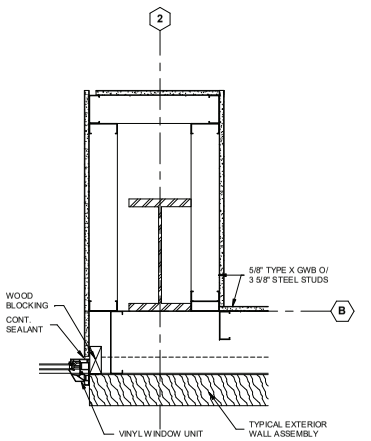
SHEET CONTENTS
FLOOR PLAN ALTERNATE 1

A1.2

BID #B23-01



FIRST FLOOR CEILING PLAN
Scale: 1/4" = 1'-0"



2 PLAN DETAIL
Scale: 1 1/2" = 1'-0"

DETAIL DEPICTS BASE BID CONDITION. ALT CONDITION SIMILAR

PROJ. NO 2132
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807 EAST ARCTIC AVENUE

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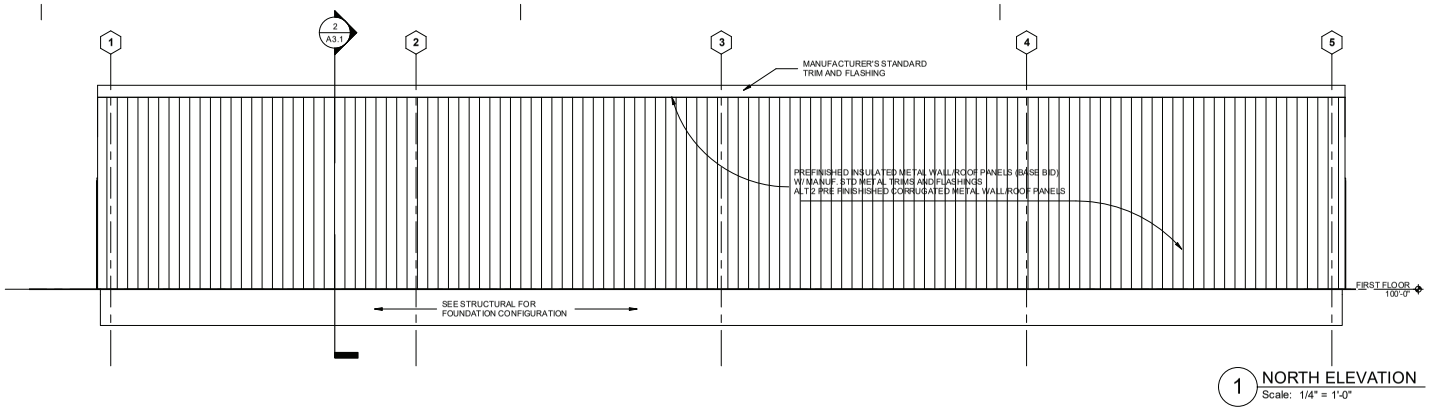
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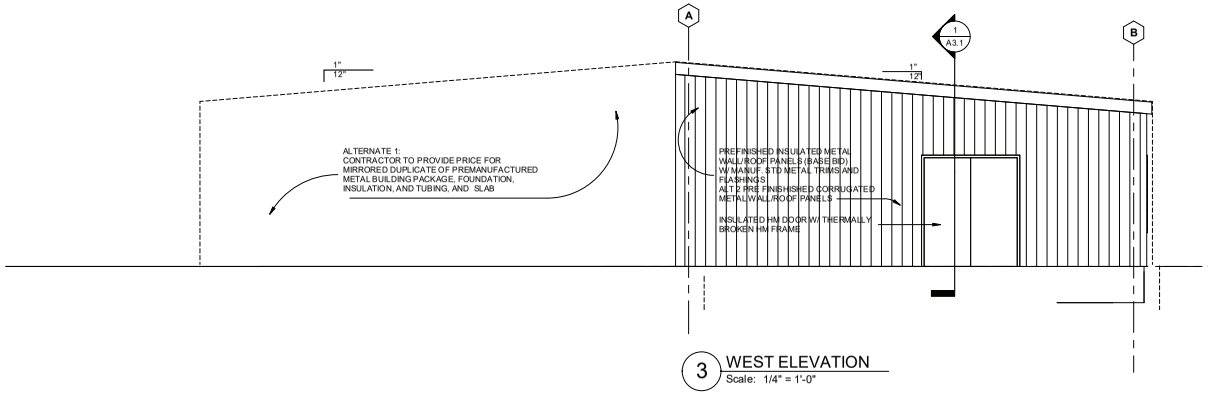
SHEET CONTENTS
FIRST FLOOR REFLECTED CEILING PLAN

A1.3

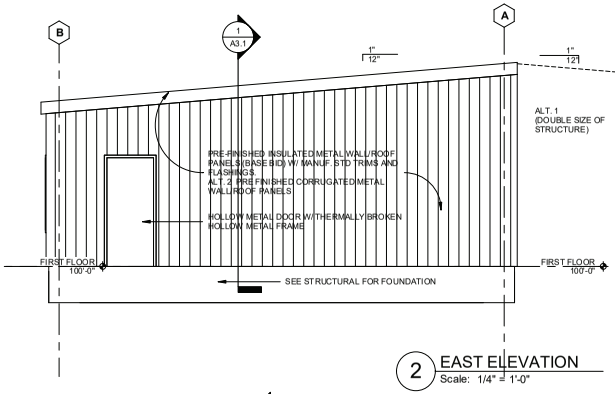
BID #B23-01



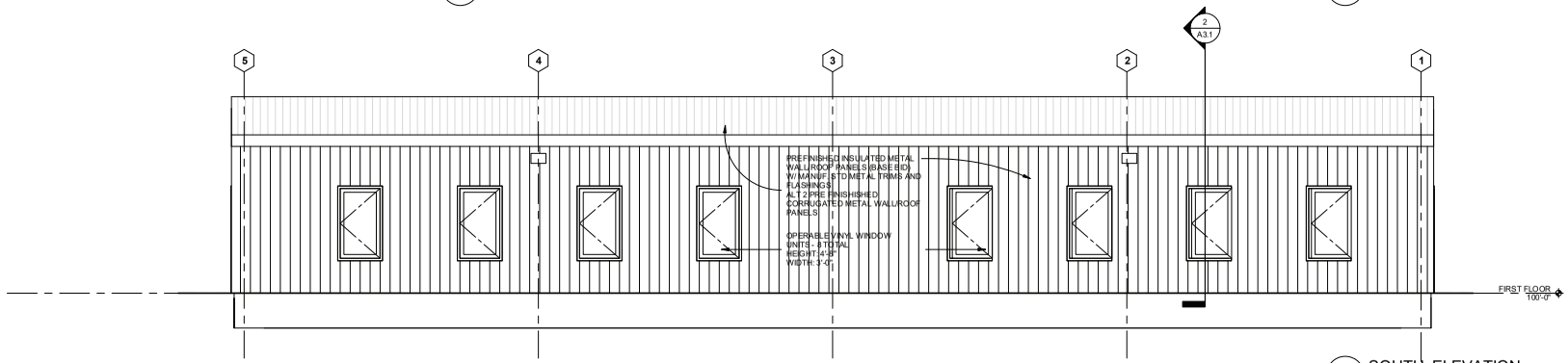
1 NORTH ELEVATION
Scale: 1/4" = 1'-0"



3 WEST ELEVATION
Scale: 1/4" = 1'-0"



2 EAST ELEVATION
Scale: 1/4" = 1'-0"



4 SOUTH ELEVATION
Scale: 1/4" = 1'-0"

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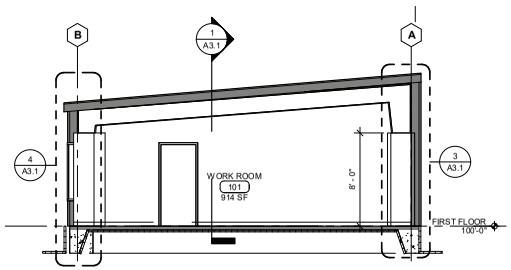
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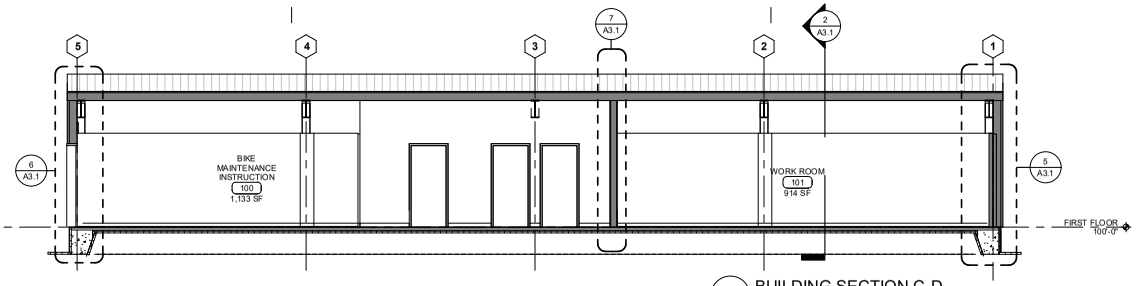
SHEET CONTENTS
EXTERIOR ELEVATIONS

A2.0

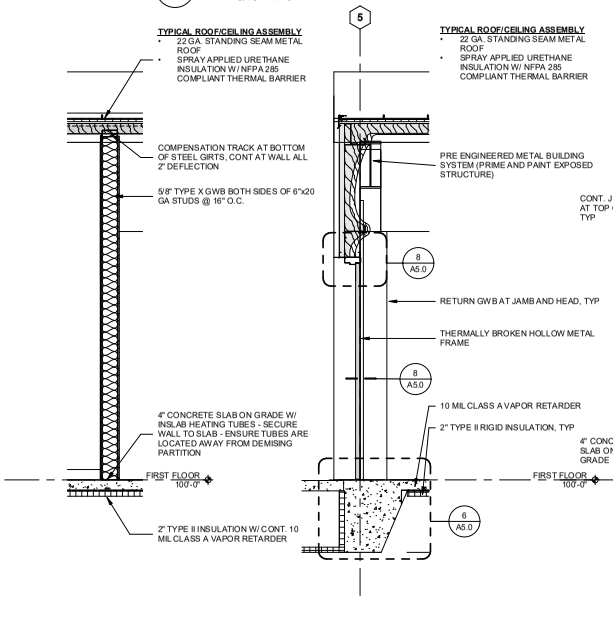
BID #B23-01



2 BUILDING SECTION 4-5
Scale: 3/16" = 1'-0"

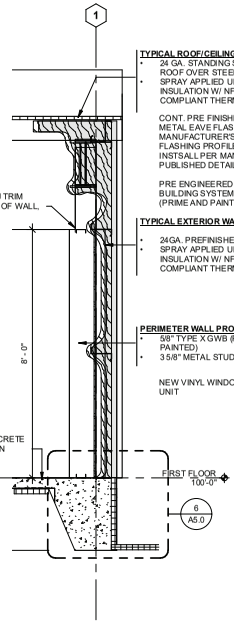


1 BUILDING SECTION C-D
Scale: 3/16" = 1'-0"

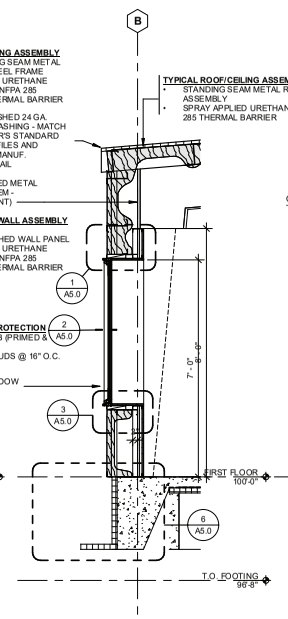


7 WALL SECTION 2
Scale: 1/2" = 1'-0"

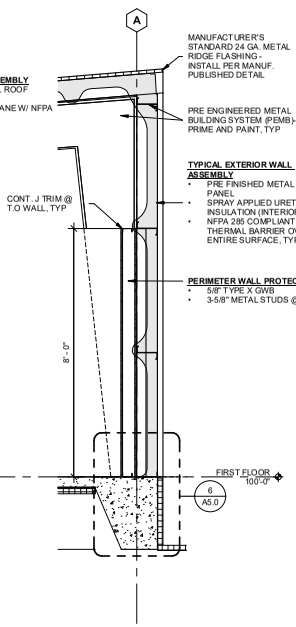
6 WALL SECTION 3
Scale: 1/2" = 1'-0"



5 WALL SECTION
Scale: 1/2" = 1'-0"

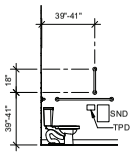


4 WALL SECTION
Scale: 1/2" = 1'-0"

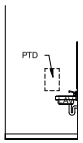


3 WALL SECTION
Scale: 1/2" = 1'-0"

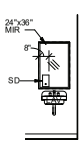
NOTE:
1. BASE BID CONDITION TO BE PRE-FINISHED INSULATED METAL WALL PANELS.
2. REFER TO LISTS OF PROJECT ALTERNATES
   A. ALTERNATE 2A: OMIT INSULATED METAL PANEL AND SUBSTITUTE PRE-FINISHED CORRUGATED METAL ROOF/WALL PANELS AND BAG AND BATT INSULATION SYSTEM.
   B. ALTERNATE 2B:OMIT INSULATED METAL PANEL AND SUBSTITUTE PRE-FINISHED CORRUGATED METAL ROOF/WALL PANELS AND SPRAY APPLIED URETHANE W/ FIRE BARRIER (ILLUSTRATED IN WALL SECTIONS AND DETAILS).
   C. FINAL DESIGN DRAWINGS WILL BE MODIFIED TO REFLECT THE INSULATION METHOD ACCEPTED



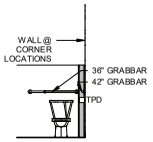
12 WATER CLO. (SIDE)
Scale: 1/4" = 1'-0"



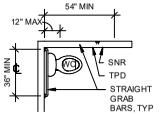
11 LAVATORY - SIDE
Scale: 1/4" = 1'-0"



10 LAVATORY
Scale: 1/4" = 1'-0"



9 WATER CLO. (FRONT)
Scale: 1/4" = 1'-0"



8 WATER CLO. (PLAN)
Scale: 1/4" = 1'-0"

PROJ. NO 2132
DRAWN —
CHECKED —
DATE 6/30/2022
FULL SIZE DRAWINGS: 22" x 34"

DESIGN / BUILD SOLICITATION DOCUMENTS

MAINTENANCE/STORAGE BUILDING
CONSTRUCTION DOCUMENTS
ACADEMY CHARTER SCHOOL
807 EAST ARCTIC AVENUE

6.30.2022

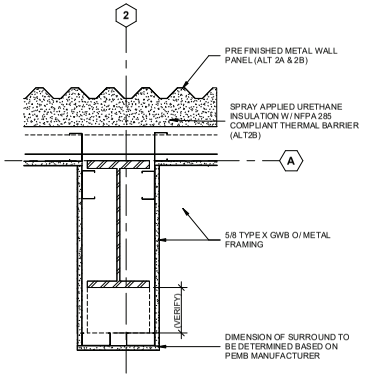
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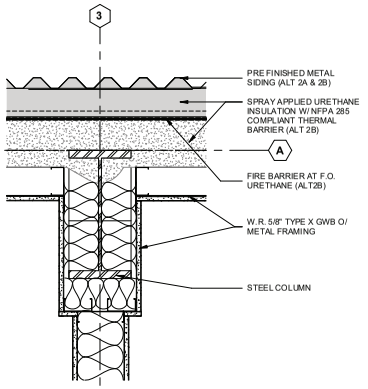
SHEET CONTENTS
BUILDING/WALL SECTIONS

A3.1

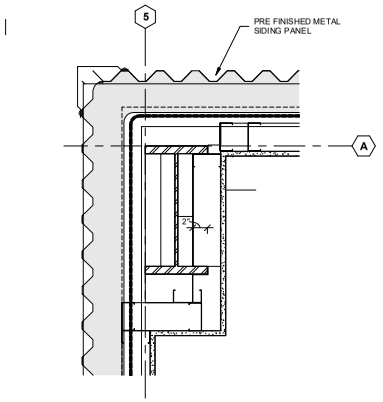
BID #B23-01



10 ENLARGED PLAN DETAIL 3
Scale: 1 1/2" = 1'-0"

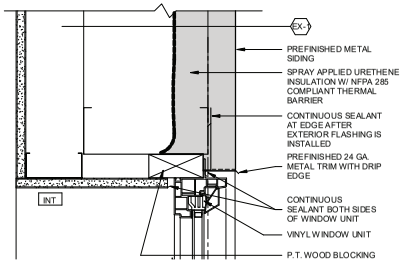


7 ENLARGED PLAN DETAIL 2
Scale: 1 1/2" = 1'-0"

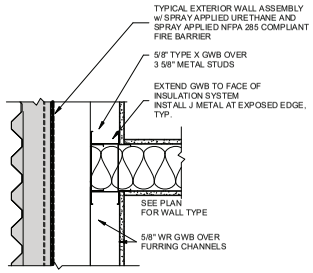


4 ENLARGED PLAN DETAIL 1
Scale: 1 1/2" = 1'-0"

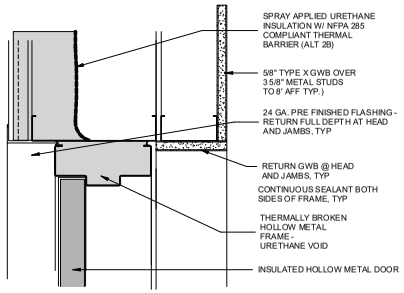
NOTE:
1. BASE BID CONDITION TO BE PRE-FINISHED INSULATED METAL WALL PANELS.
2. REFER TO LISTS OF PROJECT ALTERNATES
   A. ALTERNATE 2A: OMIT INSULATED METAL PANEL AND SUBSTITUTE PRE-FINISHED CORRUGATED METAL ROOF/WALL PANELS AND BAG AND BATT INSULATION SYSTEM.
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   C. FINAL DESIGN DRAWINGS WILL BE MODIFIED TO REFLECT THE INSULATION METHOD ACCEPTED



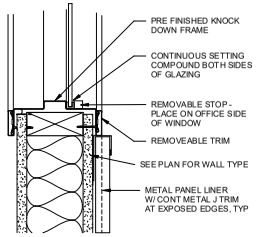
1 TYP VINYL HEAD DETAIL
Scale: 3" = 1'-0"



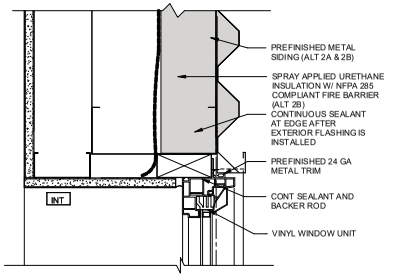
11 WALL INTERSECTION
Scale: 1 1/2" = 1'-0"



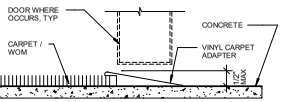
8 IHM FRAME @ EXT
Scale: 3" = 1'-0"



5 TYP KD FRAME AT RELITE
Scale: 3" = 1'-0"

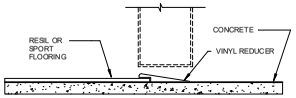


2 VINYL WINDOW JAMB, TYP
Scale: 3" = 1'-0"



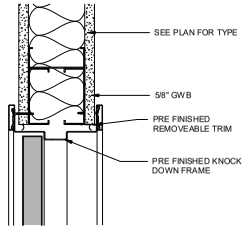
A CARPET / WOM TO CONCRETE

1. REFER TO PLANS FOR FLOOR FINISHES
2. REFER TO DOOR HARDWARE SPECIFICATION FOR OTHER SPECIFIED TRANSITIONS / THRESHOLDS

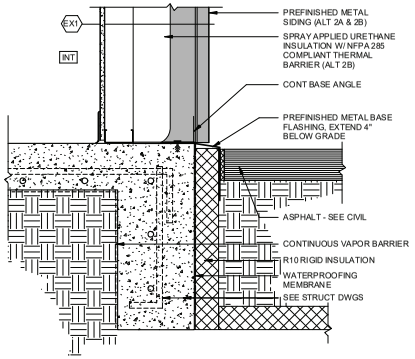


B RESILIENT FLOORING TO CONCRETE

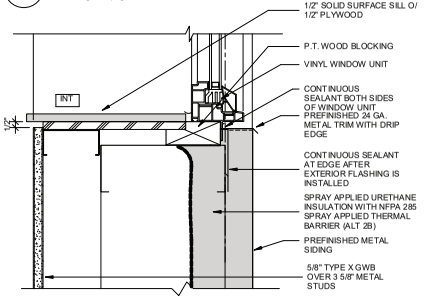
12 TYP FLOOR TRANSITIONS
Scale: 6" = 1'-0"



9 TYP - INT KD FRAME
Scale: 3" = 1'-0"



6 BASE DETAIL AT ASPHALT
Scale: 1 1/2" = 1'-0"



3 VINYL SILL DETAIL
Scale: 3" = 1'-0"

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Wolf ARCHITECTURE

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801 EAST ARCTIC AVENUE

6.30.2022

SHEET CONTENTS
DETAILS

A5.0

BID #B23-01

SHEET SPECIFICATIONS

THESE SPECIFICATIONS ARE INTENDED TO PROVIDE THE DESIGN/BUILD CONTRACTOR WITH INSTALLATION GUIDELINES FOR MAJOR MATERIALS AND GENERAL PRODUCT QUALITY LEVEL. CONTRACTORS ARE TO PROVIDE COMPLETELY INSTALLED PRODUCTS AND SYSTEMS INSTALLED AND DETAILED IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED DETAILS AND INSTRUCTIONS AS REQUIRED TO OBTAIN ANY WARRANTIES AVAILABLE TO THE OWNER. IF DETAILS IN THIS DRAWING SET CONFLICT WITH MANUFACTURER INSTALLATION PROCEDURES CONTACT ARCHITECT IMMEDIATELY TO RESOLVE THE CONFLICT.

DIVISION 2 SITEWORK - SEE CIVIL

DIVISION 3: CONCRETE

03300 CAST IN PLACE CONCRETE: SEE STRUCTURAL DRAWINGS FOR SPECIFICAITONS

SECTION 03365 POLISHED CONCRETE FLOOR SYSTEM

1.1 REFERENCES
A. ASTM C 1028 – STANDARD TEST METHOD FOR DETERMINING THE STATIC COEFFICIENT OF FRICTION OF CERAMIC TILE AND OTHER LIKE SURFACES BY THE HORIZONTAL DYNAMOMETER PULL-METER METHOD.
B. ASTM D 523 – STANDARD TEST METHOD FOR SPECULAR GLOSS.
C. ASTM E 1155 – STANDARD TEST METHOD FOR DETERMINING FF FLOOR FLATNESS AND FL FLOOR LEVELNESS NUMBERS.
1.5 SYSTEM DESCRIPTION
A. INSTALLATION OF POLISHED CONCRETE FLOOR SYSTEM FOR NEW INTERIOR CONCRETE FLOORS BY DRY GRINDING AND POLISHING WITH VARIOUS SIZE GRIT METAL-BONDED AND RESIN-BONDED DIAMONDS AND APPLICATION OF CONCRETE DENSIFIER.
1.7 QUALITY ASSURANCE
A. INSTALLER'S QUALIFICATIONS:
1. INSTALLATION TO BE COMPLETED BY INSTALLER WITH MINIMUM 5 YEARS EXPERIENCE WITH SIMILAR PROJECTS.
C. PREINSTALLATION CONFERENCE: CONDUCT CONFERENCE AT PROJECT SITE BEFORE FIRST CONCRETE POUR AND START OF APPLICATION OF POLISHED CONCRETE FLOOR FINISH SYSTEM.

PART 2 PRODUCTS
2.1 GRINDING AND POLISHING EQUIPMENT
A. FLOOR GRINDER: DRY DIAMOND METHOD
B. VACUUM SYSTEM: DIRECTLY CONNECT TO FLOOR GRINDER

2.3 MATERIALS
A. CONCRETE DENSIFIER: LIQUID LITHIUM SILICATE
B. CONCRETE SEALER
1. TYPE: SOLVENT BASED.
PART 3 EXECUTION
A. INSTALL POLISHED CONCRETE FLOOR SYSTEM IN ACCORDANCE WITH INSTALLER'S INSTRUCTIONS AT LOCATIONS INDICATED ON THE DRAWINGS.
B. AGGREGATE EXPOSURE:
1. SMALL AGGREGATE: MOTTLED SALT-AND-PEPPER COARSE AGGREGATE EXPOSURE.
B. POLISHED CONCRETE FLOOR SYSTEM:
I. POLISHED CONCRETE FLOOR SYSTEM: IPCI SHEEN LEVEL 2 – HONED FINISH.
1. PREPARATION STEP:
A. REMOVE EXISTING FLOOR COATINGS BY GRINDING WITH 16-GRIT METAL-BONDED DIAMONDS.
B. REMOVE EXISTING FLOOR COATINGS AND LEVEL FLOOR BY GRINDING WITH 40-GRIT METAL-BONDED DIAMONDS.
C. OPEN-UP CONCRETE TO ACCEPT CONCRETE DENSIFIER BY GRINDING WITH 80-GRIT METAL-BONDED DIAMONDS.
2. APPLY CONCRETE DENSIFIER TO DEEPLY SATURATE FLOOR.
3. REMOVE RESIDUE OF CONCRETE DENSIFIER DRIED ON FLOOR SURFACE BY GRINDING WITH 150-GRIT METAL-BONDED DIAMONDS.
4. FLOOR CLOSURE POLISHING:
A. REMOVE 150-GRIT METAL-BONDED DIAMOND SCRATCHES BY GRINDING WITH 100-GRIT RESIN-BONDED DIAMONDS.
B. REMOVE 150-GRIT METAL-BONDED AND 100-GRIT RESIN-BONDED DIAMOND SCRATCHES BY GRINDING WITH 200-GRIT RESIN-BONDED DIAMONDS.
5. ACHIEVE LOW-SHEEN FINISH BY GRINDING WITH 400-GRIT RESIN-BONDED DIAMONDS.
6. APPLY CONCRETE SEALER.

3.5 PROTECTION
A. PROTECT COMPLETED POLISHED CONCRETE FLOOR SYSTEM FROM DAMAGE UNTIL SUBSTANTIAL COMPLETION.
1. ALL HYDRAULIC POWERED EQUIPMENT SHALL BE DIAPERED TO AVOID STAINING OF CONCRETE.
2. NO PIPE CUTTING MACHINE SHALL BE USED ON THE FINISHED FLOOR SLAB.
3. STEEL SHALL NOT BE PLACED ON THE FINISH SLAB TO AVOID RUSTING.
4. ACIDS AND ACID DETERGENTS SHALL NOT BE USED NOR COME IN CONTACT WITH THE SLAB.
5. ALL PAINTERS TO USE DROP CLOTHES ON FINISHED SLAB. IF SPILLED, PAINT MUST BE IMMEDIATELY REMOVED.

DIVISION 5 METALS

05120 PRE MANUFACTURED STEEL STRUCTURE- SEE STRUCTURAL DRAWINGS FOR SPECIFICATIONS BASE BID - PRIME AND PAINT STEEL STRUCTURE W / EPOXY PAINT

DIVISION 6 WOODS AND PLASTICS

06615 SOLID SURFACE WINDOW SILLS
SOLID SURFACE COUNTERTOPS
1. MANUFACTURER: LG HAUSYS OR EQUAL
2. THICKNESS: .38"
3. COLOR: IVORY WHITE S029
3. BACKING: 3/4" PLYWOOD
1. NT: 250 G/L

DIVISION 7 THERMAL AND MOISTURE PROTECTION

07190 VAPOR RETARDER
1. UNDERSLAB, CLASS A, 10 MIL VAPOR RETARDER
2. WALLS AND ROOF: ASTM D 4397, 6 MILS, MAX. PERM RATING 0.13. SEAL AGAINST SURROUNDING CONSTRUCTION, ELECTRICAL BOXES, PIPE PENETRATIONS AND MATERIALS WITH VAPOR RETARDER TAPE RECOMMENDED BY MANUFACTURER FOR APPROPRIATE SUBSTRATES.

071900 WATER REPELLENTS
A.) PENETRATING WATER-REPELLENT COATINGS FOR VERTICAL AND HORIZONTAL SURFACES OF CONCRETE MASONRY UNITS.
1. PERFORMANCE REQUIREMENTS:
A. ASTM C 140, MIN. 80% ABSORPTION REDUCTION
B. ASTM E 96, MAX. 10% REDUCTION WATER-VAPOR TRANSMISSION
C. ASTM D 1653, MIN. 80% WATER-VAPOR TRANSMISSION
D. ASTM E 514, MAX. 90% REDUCTION LEAKAGE RATE
E. ASTM G 154, MAX. 5% LOSS WATER REPELLENCY
F. MAXIMUM VOC CONTENT: 250 G/L
2. MANUFACTURER: PROSOCO
A. PRODUCT:
I. SURE KLEAN WEATHER SEAL SILOXANE WB CONCENTRATE
B. WARRANTY PERIOD:
1 YEAR FROM SUBSTANITAL COMPLETION
B.) SHEET APPLIED WATERPROOFING AT FOUNDATION.
1. INSTALL PER MANUFACTURERS WRITTEN INSTALLATION INSTRUCTIONS
A.) SIMILAR TO BITUTHENE 3000. SELF ADHERED RUBBERIZED ASPHALT/POLETHYLENE WATERPROOFING MEMEBRANE BELOW GRADE AT FOUNDATION.

07200 THERMAL INSULATION
INSULATION TYPES AS NOTED ON THE DRAWINGS AND BUILDING ASSEMBLIES:
A. FOUNDATION/UNDERSLAB:
1. TYPE II, 1.5 PSI MOLDED POLYSTYRENE INSULATION BOARD, ASTM C578, TYPE I, 2" THICK OR AS SHOWN ON DRAWINGS
2. ACOUSTICAL INSULATION:
3. UNFACED FIBERGLASS BATT INSULATION, ASTM C 655, TYPE 1, FULL WALL CAVITY

DIVISION 7 THERMAL AND MOISTURE PROTECTION (CONTINUED)

07410 METAL SIDING/ ROOFING
PREFINISHED METAL ROOFING, ATTACHMENT COMPONENTS AND ACCESSORIES FOR A WEATHERTIGHT SYSTEM.
1. PERFORMANCE REQUIREMENTS:
A. WATER PENETRATION - ASTM E 1646
B. HYDROSTATIC HEAD - ASTM E 2140
C. WIND UPLIFT - UL 580
D. STRUCTURAL - ASTM E 1592
E. SURFACE BURNING - ASTM 4 84
F. FIRE RESISTANCE - ASTM E 119
2. PRODUCT MANUFACTURERS:
1. MAGIC METALS, PALMER, AK
2. METAL SPAN
3. AEP SPAN
4. ANY WARRANTIED PRODUCT MEETING THESE SPECIFICATIONS
5. A. TYPE: LAP SEAM METAL ROOF, SIMILAR AND EQUAL TO AEP SPAN PBR PANEL
B. GAUGE:22
C. SLOPE: 1:12
D. FINISH: PVFD (FLUOROPOLYMER - 70%)
E. COLOR: PREMIUM COLOR - W/ METALIC COLOR OPTIONS
F. SPAN: SINGLE SPAN FULL LENGTH OF WALL AND/OR ROOF EACH PANEL.

07190 VAPOR RETARDER
1. UNDERSLAB:
A. REINFORCED, CLASS A, 10 MIL VAPOR RETARDER

072119 FOAMED-IN-PLACE INSULATION (Alternate 2a)
URETHANE INSULATION: 1/2 POUND, LOW DENSITY SPRAY FOAM INSULATION
1. LOCATIONS:
A. ALTERNATE INSULATION METHOD FOR EXTERIOR WALL AND ROOF ASSEMBLIES
B. RIM JOISTS
2. STANDARDS
A. ASTM C518 STANDARD TEST METHOD FOR STEADY-STATE THERMAL TRANSMISSION PROPERTIES BY MEANS OF THE HEAT FLOW METER APPARATUS
B. ASTM E84 STANDARD TEST METHOD FOR SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS
1. PRODUCT
1. SWD URETHANE QUIK-SHIELD 106
2. MANUFACTURER:
1. SWD URETHANE.
2. POLYSEAL
B. PERFORMANCE CRITERIA
1. THERMAL RESISTANCE (R), ASTM C518 AT 180 DAYS AGED: 4.01 DEGREES F. FT.^{2}; H/BTU AT 1 INCH THICKNESS AND 3.7 DEGREES F. FT.^{2}; H/BTU AT 3.5 INCH THICKNESS, MINIMUM.
2. WATER VAPOR PERMEABILITY, ASTM E96: 51 PERMS PER INCH, MAXIMUM.
3. WATER ABSORPTION, PERCENT BY VOLUME, ASTM D2842: 2.9 PERCENT, MAXIMUM.
4. AIR LEAKAGE, ASTM E283: 0.004 L/SECOND/METER^2 AT 1.57 LB./FT.^{2}, MAXIMUM.
5. CORE DENSITY: ASTM D1622: 0.05 LB./FT.^{2}, MAXIMUM.
6. TENSILE STRENGTH, ASTM D1623: 13.5 PSI.
7. FLAME SPREAD, ASTM E84: 25, MAXIMUM.
8. SMOKE DEVELOPED, ASTM E84: 450, MAXIMUM.
2. THERMAL RESISTANT TOP COATING TYPICAL FOR ENTIRE INTERIOR
A.) BASIS OF DESIGN PRODUCT: FLAME GUARD E-84 INTUMESCENT COATING

072120 FIBERGLASS BATT INSULATION AND LINER SYSTEM (Alternate 2b)
1.1 SECTION INCLUDES FIBERGLASS BATT INSULATION, VINYL INTERIOR LINER/SUPPORT SYSTEM, THERMAL BLOCKS, STEEL STRAPPING, FOAM TAPE, AND RELATED ACCESSORIES REQUIRED FOR COMPLETE INSULATION PACKAGE.

1.2 BASIS OF DESIGN PRODUCT: SIMPLE SAVER SYSTEM FOR PRE ENGINEERED METAL BUILDINGS
1. PERFORMANCE REQUIREMENTS:
A. WALL R VALUE: R:21
B. ROOF R VALUE: R:40
2. PERFORMANCE
A. FABRIC TO BE WOVEN REINFORCED HIGH-DENSITY POLYETHYLENE
COLOR: WHITE
B. FLAME SPREAD: 25 OR LESS / ASTM E84
C. CLASS A MATERIAL
D. PERM RATING: < 2 GRAINS/HR/SF BASED ON ASTME96
3. SEALANTS
A. VAPOR RETARDER: G524 HIGH TAK SEALANT
B. PRESSURE SENSITIVE SEALANT:
I.) G220 PRESSURE SENSATIVE SEALANT
II.) GYSEAL STICKY TABLE
4. THERMAL BLOCKS
A. 1"X3" CLOSED CELL POLYSTYRENE FOAM BLOCKS

07421 INSULATED CORE METAL PANELS (BASE BID)
INSULATED -CORE METAL WALL PANELS, ATTACHMENT COMPONENTS, MISCELLANEOUS METAL FRAMING, AND ACCESSORIES FOR A COMPLETE WEATHERTIGHT WALL SYSTEM.
PERFORMANCE REQUIREMENTS:
1. AIR INFILTRATION - ASTM E 283, 1.57 lbf/sf
2. WATER PENETRATION - ASTM E 331, 6.24 lbf/sf
3. WATER LEAKAGE - AAMA 501.1
4. STRUCTURAL - ASTM E 330
5. THERMAL -ASTM C 518
6. TESTING AGENCY - ASTM E 329
7. FIRE RESISTANCE - ASTM E 119
PRODUCT MANUFACTURER, BASIS OF DESIGN: METL SPAN
1. THICKNESS - 3"
2. R-VALUE - R-27
3. FINISH - AS PER ELEVATIONS OR SELECTED BY OWNER/ARCHITECT FROM MANUFACTURER'S FULL RANGE OF COLORS
3. PROFILE - CF MESA

07600 FLASHING, GUTTERS, AND SHEET METAL
ALL SHEET METAL FLASHING, GUTTERS AND TRIM, GALVANIZED SHEET METAL SHALL BE PRE-FINISH AND PROVIDED AS PART OF THE PRE MANUFACTURED BUILDING PACKAGE AND INSTALLED PER MANUFACTURER'S PUBLISHED DETAILS AND SPECIFICATIONS.
1. PERFORMANCE REQUIREMENTS:
A. WIND ZONE 3
B. TEMP. CHANGE:
I. 120 DEG F AMBIENT
II. 180 DEG MATERIAL SURFACES
2. PRODUCT MANUFACTURER:
A. METL SPAN, MAGIC METALS, AEP SPAN, ANY AVAILABLE MANUFACTURER.
I. FINISH - MATCHING ADJACENT WALL PANELS AND/OR TRIM
II. 24 GA PRE-FINISHED METAL ROOF EDGE COPING
III. 24 GA PRE-FINISHED FLASHING
IV. 24 GA PRE-FINISHED BASE FLASHING
3. LOW-SLOPE ROOF SHEET METAL FABRICATIONS
1. COPINGS:
I. MIN. 96" LONG SECTIONS, BUT NOT MORE THAN 12 FT
2. BASE FLASHING:
I. 24 GA
4. COLOR
1. MATCH COLOR OF SIDING

07900 SEALANTS
PROVIDE JOINT SEALANTS, BACKINGS, AND OTHER RELATED MATERIALS THAT ARE COMPATIBLE UNDER CONDITIONS OF SERVICE AND APPLICATION AS DEMONSTRATED BY MANUFACTURER, BASED ON TESTING AND FIELD EXPERIENCE. USE SILICONE OR POLYURETHANE SEALANTS IN COLOR TO MATCH ADJACENT SURFACES.
1. LIQUID APPLIED -ASTM C 920
2. SILICONE - ASTM C 920, TYPE S, GRADE NS, CLASS 100/50
3. LATEX - ASTM C 834, TYPE OP, GRADE NF
4. ACOUSTIC - ASTM C 834, ASTM E 90
5. BACKING - ASTM C 1330, TYPE C, O, B

DIVISION 8 DOORS AND WINDOWS

08100 DOORS AND FRAMES (HOLLOW METAL)
HOLLOW METAL DOORS AND FRAMES AS INDICATED ON THE FLOOR PLAN.
1. STANDARD HOLLOW METAL WORK - ANSI/SDI A250.8/ANSI 250.11
2. THERMAL-RATED - ASTM C 1363
3. COLD-ROLLED STEEL - ASTM A 1008/A 1008M, CS, TYPE B
4. HOT-ROLLED STEEL - ASTM A 1011/A 1011M, CS, TYPE B
5. FRAME ANCHORS - ASTM A 591/A 591M, CS, 40Z
6. DOOR FRAMES PRODUCTS:
A. EXTERIOR: MANUFACTURER;
I. CURRIES- 18 GA. FULLY WELDED THERMALLY BROKEN FRAMES
B. INTERIOR:
I. MANUFACTURER: CURRIES / TIMELY – INTERIOR KNOCK DOWN

EXTERIOR DOORS
1. FLUSH GLAZED INSULATED HOLLOW METAL DOOR:
A. INSULATED GLASS UNIT GLAZING IN EXTERIOR DOORS
2. 1 3/4" THICK PANEL, SEAMLESS HOLLOW METAL DOOR, 18 GA. FACE SHEETS, FACTORY PRIMED
INTERIOR DOORS
1. INTERIOR PLASTIC LAMINATE DOOR:
A. 1 3/4" THICK PANEL, SOLID CORE WOOD DOOR, ADHERED PLASTIC LAMINATE FACE SHEETS
HARDWARE DOOR HARDWARE GROUPS TO BE PROVIDED BY GENERAL CONTRACTOR
1. LOCKSETS AND LATCHSETS: AS SCHEDULED.
2. THRESHOLD: PEMKO 252X3AFG AT ALL EXTERIOR DOORS
3. DOOR GASKETS AND WEATHERSTRIPPING: DOOR MANUFACTURER'S STANDARD INTEGRAL
4. WEATHERSTRIPPING OR GASKETS.

08100 DOORS AND FRAMES (FIBERGLASS AND WOOD)
DOORS AND FRAMES AS INDICATED ON THE FLOOR PLAN.

EXTERIOR DOORS
1. FLUSH GLAZED INSULATED FIBERGLASS DOOR:
2. 1 3/4" THICK PANEL, SEAMLESS FIBERGLASS DOOR, R-10, FACTORY FINISHED
INTERIOR DOORS
1. INTERIOR SOLID-CORE WOOD DOOR WITH WOOD VENEER FACE
A. 1 3/4" THICK PANEL, SOLID CORE WOOD DOOR
B. COMPOSITE WOOD - NO UREA-FORMALDEHYDE
C. PARTICLE-CORE - ANSI A208.1, GRADE LD-1 OR 2
D. PRODUCT MANUFACTURER:
E. VENEER: ROTARY CUT, WHITE BIRCH
F. PREFINISHED
HARDWARE DOOR HARDWARE GROUPS TO BE PROVIDED BY GENERAL CONTRACTOR
1. LOCKSETS AND LATCHSETS: AS SCHEDULED.
2. THRESHOLD: PEMKO 252X3AFG AT ALL EXTERIOR DOORS
3. DOOR GASKETS AND WEATHERSTRIPPING: DOOR MANUFACTURER'S STANDARD INTEGRAL
4. WEATHERSTRIPPING OR GASKETS.

07900 SEALANTS
PROVIDE JOINT SEALANTS, BACKINGS, AND OTHER RELATED MATERIALS THAT ARE COMPATIBLE UNDER CONDITIONS OF SERVICE AND APPLICATION AS DEMONSTRATED BY MANUFACTURER, BASED ON TESTING AND FIELD EXPERIENCE. USE SILICONE OR POLYURETHANE SEALANTS IN COLOR TO MATCH ADJACENT SURFACES.
1. LIQUID APPLIED -ASTM C 920
2. SILICONE - ASTM C 920, TYPE S, GRADE NS, CLASS 100/50
3. LATEX - ASTM C 834, TYPE OP, GRADE NF
4. ACOUSTIC - ASTM C 834, ASTM E 90

08510 VINYL WINDOWS (BASIS OF DESIGN)
FIXED AND OPERABLE VINYL WINDOW UNITS.
PERFORMANCE REQUIREMENTS: STANDARDS: WINDOWS SHALL CONFORM TO AAMA/NWWDA 101/I.S. 2-97 AND REQUIREMENTS FOR CLASS AP-AW/65 OR C-AW65
1. TESTING PERFORMANCE AND PROCEDURES
A. AIR INFILTRATION TEST: TEST UNIT IN ACCORDANCE WITH ASTM E 283-91 WITH AN AIR PRESSURE DIFFERENCE OF 6.24 PSF. AIR INFILTRATION SHALL NOT EXCEED .10 CFM PER FOOT OF PERIMETER CRACK LENGTH
B. WATER RESISTANCE TEST: TEST UNIT IN ACCORDANCE WITH ASTM E 331-96 AT STATIC PRESSURE DIFFERENCE OF 12.00 PSF WITH NO WATER LEAKAGE.
C. UNIFORM LOAD DEFLECTION TEST: TEST UNIT IN ACCORDANCE WITH ASTM E 330-97 AT 65 PSF.
D. CONDENSATION RESISTANCE TEST (CRF): TEST UNIT FOR THERMAL PERFORMANCE IN ACCORDANCE WITH AAMA 1503- 98 WITH CONDENSATION RESISTANCE FACTOR OF AT LEAST 54.
E. THERMAL TRANSMITTANCE TEST (CONDUCTIVE U-VALUE): TEST UNIT IN ACCORDANCE WITH AAMA 1503-98.
F. WARRANTY - 10 YEARS FROM DATE OF SUBSTANTIAL COMPLETION -PROVIDE OWNER WITH MANUFACTURERS AVAILABLE WARRANTY INFORMATION
G. SEALANT - ASTM C 719
H. HARDWARE - BHMA A156.4, GRADE 1
2. PRODUCT MANUFACTURER: PLYGEM
A. PRODUCT – PRO SERIES, 700 CASEMENT (FIXED AND/OR OPERABLE OUT SWING)
B. CONSTRUCTION – VINYL
C. WARRANTY: FROM DATE OF SUBSTANTIAL COMPLETION
i. WINDOW: MANUFACTURERS STANDARD WARRANTY
II. GLAZING: 10 YEARS
III. INSECT SCREENS AT OPERABLE UNITS
1. ALUMINUM FRAME SCREENS
2. GLASS FIBER MESH FABRIC - CHARCOAL GRAY
3. WEATHER STRIPPING - MANUFACTURER'S STANDARD
4. WEEP HOLES

08710 DOOR HARDWARE
COMMERCIAL DOOR HARDWARE FOR SWINGING DOORS.
1. QUALITY ASSURANCE:
A. INSTALLER QUALIFICATIONS: TRAINED AND APPROVED BY LOCK MANUFACTURER.
B. HARDWARE CONSULTANT QUALIFICATIONS: CERTIFIED BY DHI AS AN ARCHITECTURAL HARDWARE CONSULTANT.
C. SOURCE LIMITATIONS: OBTAIN EACH TYPE FROM A SINGLE MANUFACTURER UNLESS INDICATED OTHERWISE.
D. WARRANTY: FROM DATE OF SUBSTANTIAL COMPLETION
I. EXIT DEVICES: 2 YEARS
II. MANUAL CLOSERS: 10 YEARS
2. PRODUCTS: BHMA STANDARDS
A. HINGES: BHMA STANDARDS, STANDARD 2 BALL BEARING BUTT HINGES
I. MANUFACTURER: STANLEY, HAGER, LAWRENCE
II. 4 1/2" X 4 1/2"
3. LOCKSETS: SIMILAR TO SCHLAGE "L" SERIES DESIGN: 6L
4. CLOSERS: 4041 X 3077 MANUFACTURER: VON DUPRIN OR PRECISION
5. KICK PLATES: QUALITY, TRIMCO, SIGNATURE BRASS
6. STOPS: TRIMCO, SIGNATURE BRASS
7. KEYING: KEYING OF LOCKSETS WILL BE COORDINATED W/ OWNER

08800 GLAZING
1. SOUTH AND WEST FACING GLAZING:
a. PROVIDE SEALED TRIPLE GLAZED WINDOW UNITS
b. SOLARBAN 70 COATING
2. NORTH AND EAST GLAZING
a. PROVIDE DOUBLE GLAZED WINDOW UNITS
SOLARBAN 60 GLAZING

DIVISION 9 FINISHES

09911 EXTERIOR PAINTING
1. SURFACE PREPARATION AND PAINTING ON EXPOSED STEEL
2. PERFORMANCE DATA:
1. MPI STANDARDS: APPROVED PRODUCT LIST
2. TEMPERATURE: 50-95 DEG F, NO RAIN, FOG, MIST OR SNOW
3. EXTRA MATERIALS: 5%, BUT NOT LESS THAN 1 GAL.
3. EXTERIOR PAINT
a. MANUFACTURERS: SHERWIN WILLIAMS, RODDA, OR EQUALPRODUCT:
1. METAL PRIMER: MPI #26, VOC CONTENT E RANGE OF E1
2. ALUMINUM PRIMER: MPI #95, VOC CONTENT E RANGE OF E1
3. LATEX PAINTS: MPI #1 1, VOC CONTENT E RANGE OF E1
4. ALKYD PAINTS: MPI #94, VOC CONTENT E RANGE OF E1

09912 INTERIOR PAINTING
1. SURFACE PREPARATION AND PAINTING ON INTERIOR SUBSTRATES
a. PERFORMANCE DATA:
1. MPI STANDARDS: APPROVED PRODUCT LIST
b. TEMPERATURE: 50-95 DEG F
c. AROMATIC COMPONENTS: < 1% TOTAL WEIGHT
d. RESTRICTED COMPONENTS: ACROLEIN, ACRYLONITRILE, ANTIMONY, ENZENE, BUTYL BENZYL PTHALATE, CADMIUM, DIPTHALATE, DI-N- BUTYL PTHALATE, DI-N-OCTYL PTHALATE, 1,2-DICHLOROBENZENE, DIETHYL PTHALATE, DIMETHYL PTHALATE, ETHYLBENZENE, FORMALDEHYDE, HEXAVALENT CHROMIUM, ISOPHORONE, LEAD, MERCURY, METHYL ETHYL KETONE, METHYL ISOBUTYL KETONE, METHYLENE CHLORIDE, NAPTHENE, TOLUENE, TRICHLOROETHANE, VYNIL CHLORIDE
e. EXTRA MATERIALS: 5%, BUT NOT LESS THAN 1 GAL.
2. INTERIOR PAINT
a. MANUFACTURERS: SHERWIN WILLIAMS OR EQUAL
1. PRODUCT:
1. FLAT PAINTS, PRIMERS: VOC CONTENT < 50G/L
2. NONFLAT PAINTS: VOC CONTENT < 150G/L
3. NON-FLAT TOPCOAT PAINTS: VOC CONTENT < 150G/L
4. ANTI-CORROSIVE TO METALS: VOC CONTENT < 250G/L
2. PAINTS:
1. PRIMERS: INTERIOR LATEX PRIMER/SEALER MPI #50, VOC CONTENT E RANGE OF E1
2. METAL PRIMERS: MPI #76, 79, VOC CONTENT E RANGE OF E1
3. LATEX: SATIN, MPI #140, (MPI GLOSS LEVEL 4) VOC CONTENT E RANGE OF E1
4. LATEX: SEMIGLOSS, MPI #141, (MPI GLOSS LEVEL 5) VOC CONTENT E RANGE OF E1
5. ALKYD: EGGSHELL, MPI #51, (MPI GLOSS LEVEL 3) VOC CONTENT E RANGE OF E1
6. ALKYD: SEMIGLOSS, MPI #47,(MPI GLOSS LEVEL 5) VOC CONTENT E RANGE OF E1 (DOORS AND FRAMES)
7. EPOXY:: SEMIGLOSS, MPI #177,(MPI GLOSS LEVEL 5) VOC CONTENT RANGE - EXPOSED STRUCTURAL STEEL
8. COLORS TO BE SELECTED BY OWNER

09290 GYPSUM BOARD
INTERIOR GYPSUM BOARD
1. PERFORMANCE DATA:
A. FIRE-RESISTANCE ASSEMBLIES: ASTM E 119
B. STC-RATED ASSEMBLIES: ASTM E 90, ASTM E 413
C. ENVIRONMENTAL LIMITATIONS: ASTM C 840
D. GENERAL: ASTM C 36/C 36M, ASTM C 1396/C 1396M
2. INTERIOR GYPSUM BOARD
A. MANUFACTURER: G-P GYPSUM, NATIONAL, USG CORP. OR EQUAL
B. PRODUCT: TYPE X, 5/8", TAPERED LONG EDGES
C. PRODUCT: MOISTURE AND MOLD-RESISTANT, TYPE X, 5/8", TAPERED LONG EDGES
D. RECYCLED CONTANT: POSTCONSUMER + 1/2 PRECONSUMER = 25%
3. AUXILARY MATERIALS
A. JOINT TAPE: AS RECOMMENDED BY MANUFACTURER
B. JOINT COMPOUND FOR INTERIOR GYPSUM WALLBOARD
C. STEEL SCREWS: ASTM C 1002, ASTM C 954
D. SOUND ATTENUATION BLANKETS: ASTM C 665, TYPE 1
E. ACOUSTICAL SEALANT: VOC CONTENT OF 250 G/L OR LESS
F. TEXTURED FINISHES: LEVEL 4 (VERY LIGHT TEXTURE) – SUBMIT SAMPLE TO ARCHITECT OR OWNER FOR APPROVAL
G. CONTROL JOINTS: ASTM C 840

09651 RESILIENT BASE AND ACCESSORIES
RESILIENT WALL BASE AND ACCESSORIES
1. MANUFACTURER: JOHNSONITE OR EQUAL
A. PRODUCT: RESILIENT RUBBER AND VINYL WALL BASE
B. TECHNICAL DATA: ASTM D 2240, ASTM E684/ NFPA 255
C. COLOR: SELECTED BY OWNER
D. SIZE: 4" HIGH
E. WARRANTY: 1 YEAR
2. ADHESIVE
A. MANUFACTURER: JOHNSONITE OR EQUAL
B. PRODUCT: 960 ACRYLIC COVE BASE ADHESIVE
C. MAXIMUM VOC CONTENT: 50 G/L

09960 FLOOR SEALER
1. CONCRETE FLOOR SEALER
a. MANUFACTURER: DAYTON SUPERIOR
1. PRODUCT: DAY-CHEM TUF SEAL (J-35)
2. TECHNICAL DATA: MAXIMUM VOC CONTENT: 250 G/L

09680 TILE CARPETING

1. BASIS OF DESIGN ENTRYWAY CARPET TILE PRODUCT: SHAW CONTRACT OR EQUAL
a. STYLE: WELCOME II TILE 5T031
b. COLOR: TO BE SELECTED BY OWNER
c. SIZE: 24 IN X 24 IN
d. BACKING: ECOWORX® TILE
e. FIBER: PET POLYESTER
f. TUFTED WEIGHT: 49.0 OZ/YD²
g. INDOOR AIR QUALITY: CRI GREEL LABEL PLUS GLP0520
h. DECLARE LABEL: DECLARED RED LIST FREE
i. FLAMMABILITY: ASTM E 648 CLASS I (GLUE DOWN)
j. WARRANTY(S): LIFETIME COMMERCIAL LIMITED WARRANTY
2. ACCESSORIES:
a. TROWELABLE LEVELING AND PATCHING COMPOUNDS AS RECOMMENDED BY THE CARPET MANUFACTURER.
b. ADHESIVES: WATER-RESISTANT, MILDEW-RESISTANT, NON-STAINING WITH VOC LIMITS OF 50G/L.
c. TRANSITION STRIPS: EXTRUDED ALUMINUM WITH MILL FINISH AND HEIGHT TO PROTECT EDGE OF CARPET.
3. INSTALLATION: COMPLY WITH CRI 104, AND AS RECOMMENDED BY CARPET MANUFACTURER

DIVISION 10 SPECIALTIES

10520 FIRE PROTECTION SPECIALTIES

1. PRODUCTS:
a. FIRE EXTINGUISHER
1. 2A:10BC
b. WALL MOUNTED (MECHANICAL ROOM)
1. PROVIDE WALL MOUNTED HANGER

10801 TOILET AND BATH ACCESSORIES
CONTRACTOR TO PROVIDE TOILET ROOM ACCESSORIES:
1. TOILET PAPER DISPENSERS
A. 2 ROLL TOILET PAPER DISPENSER, BOBRICK B4288
B. ROLL AUTOMATIC PAPER TOWEL DISPENSERS, GEORGIA PACIFIC ENMOTION 59462
2. ADHESIVE MOUNTED LIQUID SOAP DISPENSERS
3. STAINLESS STEEL GRAB BARS, BOBRICK B5806X36, B5806X42
4. MIRRORS,24X36 MIRROR, WELDED FRAME, SIM. AND/OR EQUAL TO BOBRICK B-290 SERIES

PROJ. NO. 2132
DRAWN Author
CHECKED Checker
DATE 6/30/2022
FULL SIZE DRAWINGS: 22" x 34"

DESIGN / BUILD SOLICITATION DOCUMENTS

MAINTENANCE/STORAGE BUILDING
CONSTRUCTION DOCUMENTS
ACADEMY CHARTER SCHOOL
801 EAST ARCTIC AVENUE

6.30.2022

625 S COBB ST
PALMER, AK
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Wolf ARCHITECTURE

SHEET CONTENTS
SHEET SPECIFICATION

A7.0

BID #B23-01

SHEET SPECIFICATIONS FOR PREENGINEERED STEEL STRUCTURE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

Retain or delete this article in all Sections of Project Manual.

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Structural-steel framing.
2. Accessories.

1.3 DEFINITIONS

A. Terminology Standard: See MBMA's "Metal Building Systems Manual" for definitions of terms for metal building system construction not otherwise defined in this Section or in referenced standards.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: A qualified manufacturer and member of MBMA.

1. AISC Certification for Category MB: An AISC-Certified Manufacturer that designs and produces metal building systems and components in an AISC-Certified Facility.
2. Engineering Responsibility: Preparation of Shop Drawings and comprehensive engineering analysis by a qualified professional engineer.

B. Erector Qualifications: An experienced erector who specializes in erecting and installing work similar in material, design, and extent to that indicated for this Project and who is acceptable to manufacturer.

Metal building system manufacturers frequently obtain secondary components and accessories from other manufacturers.

C. Source Limitations: Obtain metal building system components, including primary and secondary framing and metal panel assemblies, from single source from single manufacturer. Retain "Welding Qualifications" Paragraph below if shop or field welding is required. If retaining, also retain "Welding certificates" Paragraph in "Submittals" Article.

D. Welding Qualifications: Qualify procedures and personnel according to the following:

1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."
2. AWS D1.3, "Structural Welding Code - Sheet Steel."

E. Structural Steel: Comply with AISC 360, "Specification for Structural Steel Buildings," for design requirements and allowable stresses.

F. Cold-Formed Steel: Comply with AISI's "North American Specification for the Design of Cold-Formed Steel Structural Members" for design requirements and allowable stresses.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver components, sheets, panels, and other manufactured items so as not to be damaged or deformed. Package metal panels for protection during transportation and handling.

B. Unload, store, and erect metal panels in a manner to prevent bending, warping, twisting, and surface damage. Cover and protect panels from wind, rain, and snow.

C. Stack metal panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal panels to ensure dryness, with positive slope for drainage of water. Do not store metal panels in contact with other materials that might cause staining, denting, or other surface damage.

1.6 PROJECT CONDITIONS

A. Weather Limitations: Proceed with installation only when weather conditions permit metal panels to be installed according to manufacturers' written instructions and warranty requirements.

B. Field Measurements:

Retain subparagraphs below if required.

1. Established Dimensions for Foundations: Comply with established dimensions on approved anchor-bolt plans, establishing foundation dimensions and proceeding with fabricating structural framing without field measurements. Coordinate anchor-bolt installation to ensure that actual anchorage dimensions correspond to established dimensions.
2. Established Dimensions for Metal Panels: Where field measurements cannot be made without delaying the Work, either establish framing and opening dimensions and proceed with fabricating metal panels without field measurements, or allow for field trimming metal panels. Coordinate construction to ensure that actual building dimensions, locations of structural members, and openings correspond to established dimensions.

1.7 COORDINATION

A. Coordinate sizes and locations of concrete foundations and casting of anchor-bolt inserts into foundation walls and footings. Concrete, reinforcement, and formwork requirements are specified in Division 03 Section "Cast-in-Place Concrete."

B. Coordinate installation of equipment supports and roof penetrations.

C. Coordinate metal panel assemblies with rain drainage work, flashing, trim, and construction of supports and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

See Editing Instruction No. 1 in the Evaluations for cautions about naming manufacturers. Retain one of two paragraphs and list of manufacturers in this article. See Division 01 Section "Product Requirements."

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

Manufacturers in list below are a sampling of those offering a complete line of metal building systems and components, not an exhaustive list. Insert other manufacturers whose systems are also acceptable.

1. American Steel Building Co., Inc.
2. Butler Manufacturing Company; a BlueScope Steel company.
3. Garco Building Systems; Division of NCI Building Systems, L.P.
4. Metallic Building Company; Division of NCI Building Systems, L.P.
5. Star Building Systems; an NCI company.
6. VP Buildings; a United Dominion company.

2.2 METAL BUILDING SYSTEMS

Retain this article if a description of the building is required. Delete if information is adequately shown on Drawings.

Option in first paragraph below allows manufacturers to use their own standard fabrications. See Editing in the Evaluations for a basic list of manufacturers' products.

A. Description: Provide a complete, integrated set of metal building system manufacturer's standard mutually dependent components and assemblies that form a metal building system capable of withstanding structural and other loads, thermally induced movement, and exposure to weather without failure or infiltration of water into building interior.

1. Provide metal building system of size and with bay spacings, roof slopes, and spans indicated.

Revise first paragraph below to coordinate with design information indicated on Drawings.

B. Primary-Frame Type:

Retain one of five subparagraphs below.

1. Rigid Clear Span: Solid-member, structural-framing system without interior columns.
2. Rigid Modular: Solid-member, structural-framing system with interior columns.

Retain one of first two paragraphs below. Load-bearing end walls (columns and rafters) in first paragraph are generally more economical than frames. Second paragraph allows future expansion of building without replacing end frame.

C. End-Wall Framing: Manufacturer's standard, for buildings not required to be expandable, consisting of load-bearing end-wall and corner columns and rafters.

Retain one of three options in first paragraph below. Girts are attached to primary framing in one of three relationships: flush framed, with the exterior face of the girt at the exterior face of the column; partially inset framed, with the girt partially extending past the exterior face of the column; and exterior framed (bypass), with the girt attached to the exterior flange of columns. See Evaluations for diagram illustrating three relationships.

D. Secondary-Frame Type: Manufacturer's standard purlins and joists and partially inset-framed or exterior-framed (bypass) girts.

Manufacturers can custom design metal buildings to almost any eave height to suit Project. Dimensions in first paragraph below are common. Use of manufacturer's standard height usually results in lowest cost.

E. Eave Height: As indicated by nominal height on Drawings. Final height must allow for minimum interior clearances as indicated.

Manufacturers can custom design metal buildings to almost any bay spacing to suit Project. Dimensions in first paragraph below are common. Allowing manufacturers to determine most efficient bay spacing usually results in lowest cost, but may limit design flexibility.

F. Bay Spacing: As indicated on Drawings.

Manufacturers can custom design metal buildings to almost any roof slope to suit Project. Slopes in first paragraph below are common. Use of manufacturer's standard roof slope usually results in lowest cost.

G. Roof Slope: As indicated on the drawings.

Revise first paragraph below if roof system uses metal panels from Division 07 Sections.

H. Roof System: Foam-insulation-core metal roof panels in accordance with Section 07421 (Base Bid only)

Retain one of two paragraphs below. Revise if wall system uses metal panels from Division 07 Sections.

I. Exterior Wall System: Foam-insulation-core metal wall panels in accordance with Section 07421. (Base Bid only)

2.3 METAL BUILDING SYSTEM PERFORMANCE

Retain first paragraph below if Contractor is required to assume responsibility for design.

A. Delegated Design: Design metal building system, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.

Retain first paragraph below or indicate structural-performance requirements on Drawings. If requirements in MBMA's "Metal Building Systems Manual" are used as design criteria, verify that they meet local building code requirements.

B. Structural Performance: Metal building systems shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated according to procedures in MBMA's "Metal Building Systems Manual."

Retain one of first two subparagraphs below. If retaining first subparagraph, indicate minimum live, dead, snow, collateral, seismic, wind, and uplift loads and load combinations on Drawings as applicable.

1. Design Loads: As required by ASCE/SEI 7.

Retain first subparagraph below if required.

2. Deflection Limits: Design metal building system assemblies to withstand design loads with deflections no greater than the following:

Deflections in first four subparagraphs below are examples only. Masonry walls may require deflection limits of 1/600 or 1/720. Verify limits with authorities having jurisdiction; manufacturers' standards are typically less stringent.

a. Purlins and Rafters: Vertical deflection of 1/240 of the span.
b. Girts: Horizontal deflection of 1/180 of the span.

Retain first subparagraph below with one or more of four subparagraphs above.

c. Design secondary-framing system to accommodate deflection of primary framing and construction tolerances, and to maintain clearances at openings.

Retain first subparagraph below if required.

3. Drift Limits: Engineer building structure to withstand design loads with drift limits no greater than the following:

Lateral drifts in first subparagraph below are examples only. See Evaluations for discussion.

a. Lateral Drift: Maximum of 1/200 of the building height.

Although ASTM E 1592 in subparagraph below applies to all types of single-sheet metal roof panels, from most manufacturers only the standing-seam metal roof panels can meet requirement below. The test is also used for single-sheet metal wall panels.

4. Metal panel assemblies shall withstand the effects of gravity loads and loads and stresses within limits and under conditions indicated according to ASTM E 1592.

Revise first paragraph below to indicate specific loads determined by Project's structural engineer or see loads indicated on Drawings. Model building codes and ASCE/SEI 7 establish criteria for buildings subject to earthquake motions. Verify requirements of authorities having jurisdiction.

C. Seismic Performance: Metal building systems shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.

D. Thermal Movements: Allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base engineering calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

Differential values in subparagraph below are suitable for most of the U.S. Revise to suit local conditions.

1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

2.4 STRUCTURAL-STEEL FRAMING

See the tables for metal building structural systems in the Evaluations for a list of manufacturers' products. Use these tables in combination with manufacturers' catalogs or product data to insert series, type, model, and designations of other characteristics.

Review this article for compliance with design concept and revise to suit Project. Consult manufacturers for standard framing details.

A. Primary Framing: Manufacturer's standard primary-framing system, designed to withstand required loads and specified requirements. Primary framing includes transverse and lean-to frames; rafter, rake, and canopy beams; sidewall, intermediate, end-wall, and corner columns; and wind bracing.

1. General: Provide frames with attachment plates, bearing plates, and splice members. Factory drill for field-bolted assembly. Provide frame span and spacing indicated.

Retain first subparagraph below if allowed.

a. Slight variations in span and spacing may be acceptable if necessary to comply with manufacturer's standard, as approved by Architect.

2. Rigid Clear-Span Frames: I-shaped frame sections fabricated from shop-welded, built-up steel plates or structural-steel shapes.
3. Frame Configuration: As indicated on the drawings.

Retain first subparagraph below if required or delete if using half-load primary frames.

B. End-Wall Framing: Manufacturer's standard primary end-wall framing fabricated for field-bolted assembly to comply with the following:

Retain first subparagraph below and delete second subparagraph if using full-load frames.

1. End-Wall and Corner Columns: I-shaped sections fabricated from structural-steel shapes; shop-welded, built-up steel plates; or C-shaped, cold-formed, structural-steel sheet.

C. Secondary Framing: Manufacturer's standard secondary framing, including purlins, girts, eave struts, flange bracing, base members, gable angles, clips, headers, jambs, and other miscellaneous structural members. Unless otherwise indicated, fabricate framing from either cold-formed, structural-steel sheet or roll-formed, metallic-coated steel sheet, prepainted with coil coating, to comply with the following:

1. Purlins: C- or Z-shaped sections; fabricated from built-up steel plates, steel sheet, or structural-steel shapes; minimum 2-1/2-inch- wide flanges.

Retain depths in first subparagraph below if manufacturer does not determine depths. Insert manufacturer's proprietary size if required.

a. Depth: As needed to comply with system performance requirements.

2. Girts: C- or Z-shaped sections; fabricated from built-up steel plates, steel sheet, or structural-steel shapes. Form ends of Z-sections with stiffening lips angled 40 to 50 degrees from flange, with minimum 2-1/2-inch- wide flanges.

Retain depths in first subparagraph below if manufacturer does not determine depths. Insert manufacturer's proprietary size if required.

a. Depth: As required to comply with system performance requirements.

3. Eave Struts: Unequal-flange, C-shaped sections; fabricated from built-up steel plates, steel sheet, or structural-steel shapes; to provide adequate backup for metal panels.
4. Flange Bracing: Minimum 2-by-2-by-1/8-inch structural-steel angles or 1-inch diameter, cold-formed structural tubing to stiffen primary-frame flanges.
5. Sag Bracing: Minimum 1-by-1-by-1/8-inch structural-steel angles.

Revise first subparagraph below if channel shape is required instead of base angles.

6. Base or Sill Angles: Minimum 3-by-2-inch zinc-coated (galvanized) steel sheet.
7. Purlin and Girt Clips: Manufacturer's standard clips fabricated from steel sheet. Provide galvanized clips where clips are connected to galvanized framing members.
8. Secondary End-Wall Framing: Manufacturer's standard sections fabricated from zinc-coated (galvanized) steel sheet.
9. Framing for Openings: Channel shapes; fabricated from cold-formed, structural-steel sheet or structural-steel shapes. Frame head and jamb of door openings and head, jamb, and sill of other openings.
10. Miscellaneous Structural Members: Manufacturer's standard sections fabricated from cold-formed, structural-steel sheet; built-up steel plates; or zinc-coated (galvanized) steel sheet; designed to withstand required loads.

Retain one of four options in subparagraph below. First option is a continuation of roof at eave; second is a continuation of roof over end wall; third is attached at sidewall or end wall, at or below eave.

D. Bracing: Provide adjustable wind bracing as follows:

Retain one of first six subparagraphs below, or retain more than one and seventh subparagraph if type of bracing is manufacturer's option.

1. Rods: ASTM A 36/A 36M; ASTM A 572/A 572M, Grade 50 ; or ASTM A 529/A 529M, Grade 50; minimum 1/2-inch- diameter steel; threaded full length or threaded a minimum of 6 inches at each end.
2. Angles: Fabricated from structural-steel shapes to match primary framing, of size required to withstand design loads.

Retain subparagraph below if retaining two or more subparagraphs above. Bracing below costs less but transfers design control to manufacturer.

3. Bracing: Provide wind bracing using any method specified above, at manufacturer's option.

E. Bolts: Provide plain-finish bolts for structural-framing components that are primed or finish painted. Provide hot-dip galvanized bolts for structural-framing components that are galvanized.

Retain and revise first paragraph below to suit Project.

F. Materials:

1. W-Shapes: ASTM A 992/A 992M; ASTM A 572/A 572M, Grade 50 or 55 or ASTM A 529/A 529M, Grade 50 or 55
2. Channels, Angles, M-Shapes, and S-Shapes: ASTM A 36/A 36M; ASTM A 572/A 572M, Grade 50 or 55; or ASTM A 529/A 529M, Grade 50 or 55
3. Plate and Bar: ASTM A 36/A 36M; ASTM A 572/A 572M, Grade 50 or 55 or ASTM A 529/A 529M, Grade 50 or 55

Usually retain first two subparagraphs below only for interior columns of rigid modular or truss-frame modular framing systems.

4. Steel Pipe: ASTM A 53/A 53M, Type E or S, Grade B.
5. Cold-Formed Hollow Structural Sections: ASTM A 500, Grade B or C, structural tubing.
6. Structural-Steel Sheet: Hot-rolled, ASTM A 1011/A 1011M, Structural Steel (SS), Grades 30 through 55 or High-Strength Low-Alloy Steel (HSLAS), Grades 45 through 70 or cold-rolled, ASTM A 1008/A 1008M, Structural Steel (SS), Grades 25 through 80or High-Strength Low-Alloy Steel (HSLAS), Grades 45 through 70.
7. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Structural Steel (SS), Grades 33 through 80, or High-Strength Low-Alloy Steel (HSLAS), Grades 50 through 80 ; with G60 coating designation; mill phosphatized.

Retain first subparagraph below for secondary framing if required.

8. Metallic-Coated Steel Sheet: Prepainted with Coil Coating: Steel sheet, metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A 755/A 755M.

Retain one or both of first two subparagraphs below. Coordinate with products specified.

a. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653/A 653M, Structural Steel (SS), Grades 33 through 80, or High-Strength Low-Alloy Steel (HSLAS), Grades 50 through 80; with G90 coating designation.
b. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M, Structural Steel (SS), Grade 50 or 80; with Class AZ50 coating.

Retain first subparagraph below instead of built-up steel plates or structural-steel shapes if required for primary framing. Retain first subparagraph below instead of cold-formed steel sheet if required for rafters or purlins.

9. Steel Joists: Manufactured according to "Standard Specifications for Open Web Steel Joists, K-Series," in SJI's "Standard Specifications and Load Tables for Steel Joists and Joist Girders"; with steel-angle, top- and bottom-chord members, and end- and top-chord arrangement as indicated and required for secondary framing.
10. Non-High-Strength Bolts, Nuts, and Washers: ASTM A 307, Grade A carbon-steel, hex-head bolts; ASTM A 563) carbon-steel hex nuts; and ASTM F 844 plain (flat) steel washers.

a. Finish: Plain or mechanically deposited zinc coating, ASTM B 695, Class 50.

11. High-Strength Bolts, Nuts, and Washers: ASTM A 325, Type 1, heavy-hex steel structural bolts; ASTM A 563 heavy-hex carbon-steel nuts; and ASTM F 436 hardened carbon-steel washers.

a. Finish: Plain or mechanically deposited zinc coating, ASTM B 695, Class 50.

Retain option in first subparagraph below if applicable. Indicate locations if using bolts below for some connections and ASTM A 325 (ASTM A 325M) bolts in subparagraph above for others.

12. High-Strength Bolts, Nuts, and Washers: ASTM A 490, Type 1, heavy-hex steel structural bolts or tension-control, bolt-nut-washer assemblies with spline ends; ASTM A 563 heavy-hex carbon-steel nuts; and ASTM F 436 hardened carbon-steel washers, plain.

Retain first subparagraph below if required. Tension-control (twist-off) bolt assemblies correspond to strength of ASTM A 325 (ASTM A 325M) bolts.

13. Tension-Control, High-Strength Bolt-Nut-Washer Assemblies: ASTM F 1852, Type 1, heavy-hex steel structural bolts with spline ends.

a. Finish: Plain or mechanically deposited zinc coating, ASTM B 695, Class 50.

Retain appropriate materials in first subparagraph below or revise if other materials are required. AISC uses the generic term "anchor rods" to include unheaded rods and headed bolts. Plate washers are used with oversized baseplate holes to resist nut pull-through and to transfer shear from baseplate to anchor rod.

14. Unheaded Anchor Rods: ASTM F 1554, Grade 36 ASTM A 36/A 36M ASTM A 307, Grade A
    a. Configuration: Straight.
    b. Nuts: ASTM A 563 heavy-hex carbon steel.
    c. Plate Washers: ASTM A 36/A 36M carbon steel.
    d. Washers: ASTM F 436 hardened carbon steel.
    e. Finish: Hot-dip zinc coating, ASTM A 153/A 153M, Class C.

Retain appropriate materials in first subparagraph below or revise if other materials are required. AISC uses the generic term "anchor rods" to include unheaded rods and headed bolts. Plate washers are used with oversized baseplate holes to resist nut pull-through and to transfer shear from baseplate to anchor rod.

15. Headed Anchor Rods: ASTM F 1554, Grade 36 ASTM A 307, Grade A
    a. Configuration: Straight.
    b. Nuts: ASTM A 563 heavy-hex carbon steel.
    c. Plate Washers: ASTM A 36/A 36M carbon steel.
    d. Washers: ASTM F 436 hardened carbon steel.
    e. Finish: Hot-dip zinc coating, ASTM A 153/A 153M, Class C.
16. Threaded Rods: ASTM A 193/A 193M ASTM A 36/A 36M ASTM A 307, Grade A
    a. Nuts: ASTM A 563 heavy-hex carbon steel.
    b. Washers: ASTM F 436 hardened carbon steel.
    c. Finish: Plain.

G. Finish: Factory primed . Apply specified primer immediately after cleaning and pretreating.

1. Apply primer to primary and secondary framing to a minimum dry film thickness of 1 mil
    a. Prime secondary framing formed from uncoated steel sheet to a minimum dry film thickness of 0.5 mil on each side.
2. Prime galvanized members with specified primer after phosphoric acid pretreatment.

Verify that primer in subparagraph below is compatible with fireproofing if required. See Evaluations.

3. Primer: SSPC-Paint 15, Type I, red oxide.

If required, insert requirements for crane runway beams, supports, and bracing; mezzanine framing and decking; and floor framing for multistory applications.

2.5 ACCESSORIES

This article includes metal building system manufacturers' standard accessories. Retain accessories required to suit Project. If more stringent requirements are needed for some accessories, revise descriptions.

A. General: Provide accessories as standard with metal building system manufacturer and as specified. Fabricate and finish accessories at the factory to the greatest extent possible, by manufacturer's standard procedures and processes. Comply with indicated profiles and with dimensional and structural requirements.

1. Form exposed sheet metal accessories that are without excessive oil-canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.
2. Provide flashing and trim as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, eaves, rakes, corners, bases, framed openings, ridges, fascias, and fillers.

Retain second option in subparagraph below if head and jambs of doors are subject to excessive impact. Painted subframing is often more durable. Metal thickness options correspond to obsolete 26 and 22 gage, respectively.

B. Materials:

1. Fasteners: Self-tapping screws, bolts, nuts, self-locking rivets and bolts, end-welded studs, and other suitable fasteners designed to withstand design loads. Provide fasteners with heads matching color of materials being fastened by means of plastic caps or factory-applied coating.

Retain one of first two subparagraphs below. Stainless-steel fasteners in second subparagraph provide additional corrosion resistance. Retain washers if required; washers are usually omitted from wall panels.

2. Corrosion-Resistant Coating: Cold-applied asphalt mastic, compounded for 15-mil dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

Retain first subparagraph below if rated wall construction, units requiring internal boards for structural stability or acoustical ratings, or thermal barrier for board insulation is required.

3. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive, nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.
4. Metal Panel Sealants: see Section 07421 – Insulated Metal Panels (Base Bid Only)
5. Provide Owner with options for available snow/ice clips

2.6 FABRICATION

A. General: Design components and field connections required for erection to permit easy assembly.

1. Mark each piece and part of the assembly to correspond with previously prepared erection drawings, diagrams, and instruction manuals.
2. Fabricate structural framing to produce clean, smooth cuts and bends. Punch holes of proper size, shape, and location. Members shall be free of cracks, tears, and ruptures.

B. Tolerances: Comply with MBMA's "Metal Building Systems Manual" for fabrication and erection tolerances.

C. Primary Framing: Shop fabricate framing components to indicated size and section, with baseplates, bearing plates, stiffeners, and other items required for erection welded into place. Cut, form, punch, drill, and weld framing for bolted field assembly.

1. Make shop connections by welding or by using high-strength bolts.
2. Join flanges to webs of built-up members by a continuous, submerged arc-welding process.
3. Brace compression flange of primary framing with steel angles or cold-formed structural tubing between frame web and purlin web or girt web, so flange compressive strength is within allowable limits for any combination of loadings.

Revise first subparagraph below if other types of attachment are permitted. Welded clips on roof rafters may not be allowed by authorities having jurisdiction.

4. Weld clips to frames for attaching secondary framing.
5. Shop Priming: Prepare surfaces for shop priming according to SSPC-SP 2. Shop prime primary framing with specified primer after fabrication.

D. Secondary Framing: Shop fabricate framing components to indicated size and section by roll-forming or break-forming, with baseplates, bearing plates, stiffeners, and other plates required for erection welded into place. Cut, form, punch, drill, and weld secondary framing for bolted field connections to primary framing.

1. Make shop connections by welding or by using non-high-strength bolts.
2. Shop Priming: Prepare uncoated surfaces for shop priming according to SSPC-SP 2. Shop prime uncoated secondary framing with specified primer after fabrication.

E. Metal Panels: Fabricate and finish metal panels at the factory to greatest extent possible, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements. Comply with indicated profiles and with dimensional and structural requirements.

1. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of metal panel.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with erector present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Before erection proceeds, survey elevations and locations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments to receive structural framing, with erector present, for compliance with requirements and metal building system manufacturer's tolerances.

C. Proceed with erection only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition.

B. Provide temporary shores, guys, braces, and other supports during erection to keep structural framing secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads. Remove temporary supports when permanent structural framing, connections, and bracing are in place unless otherwise indicated.

3.3 ERECTION OF STRUCTURAL FRAMING

A. Erect metal building system according to manufacturer's written erection instructions and erection drawings.

B. Do not field cut, drill, or alter structural members without written approval from metal building system manufacturer's professional engineer.

C. Set structural framing accurately in locations and to elevations indicated, according to AISC specifications referenced in this Section. Maintain structural stability of frame during erection.

Insert leveling plates in first paragraph below if required.

D. Base Plates: Clean concrete- and masonry-bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting plates. Clean bottom surface of plates.

1. Set plates for structural members on wedges, shims, or setting nuts as required.
2. Tighten anchor rods after supported members have been positioned and plumbed. Do not remove wedges or shims but, if protruding, cut off flush with edge of plate before packing with grout.
3. Promptly pack grout solidly between bearing surfaces and plates so no voids remain. Neatly finish exposed surfaces; protect grout and allow to cure. Comply with manufacturer's written installation instructions for shrinkage-resistant grouts.

E. Align and adjust structural framing before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that will be in permanent contact with framing. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.

1. Level and plumb individual members of structure.
    1. Review subparagraph below with structural engineer and revise to suit Project. Dele

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PROJ NO. 2132
DRAWN Author
CHECKED Checker
DATE 6/30/2022
FULL SIZE DRAWINGS: 22" x 34"

DESIGN / BUILD SOLICITATION DOCUMENTS

MAINTENANCE/STORAGE BUILDING
CONSTRUCTION DOCUMENTS
ACADEMY CHARTER SCHOOL
801 EAST ARCTIC AVENUE

6.30.2022

SHEET CONTENTS
SHEET SPECIFICATIONS

A7.1

BID #B23-01

MECHANICAL LEGEND AND ABBREVIATIONS

ABBREVIATIONS

ADA	AMERICAN W/DISABILITIES ACT
APPROX.	APPROXIMATE
ARCH	ARCHITECT, ARCHITECTURAL
AVG.	AVERAGE
BHP	BRAKE HORSEPOWER
BMS	BUILDING AUTOMATION SYSTEM
BTU	BRITISH THERMAL UNIT
BTUH	BTU PER HOUR
CFM	CUBIC FEET PER MINUTE
CFOI	CONTRACTOR FURNISHED OWNER INSTALL
CO	CARBON MONOXIDE
CO2	CARBON DIOXIDE
CU.FT.	CUBIC FEET
CU.IN.	CUBIC INCHES
dB	DECIBEL
DB	DRY BULB (AIR)
DDC	DIRECT DIGITAL CONTROL
DEG.	DEGREE
DMPR	DAMPER
DN	DOWN
DPS	DIFFERENTIAL PRESSURE SENSOR
DWV	DRAIN WASTE AND VENT
EA.	EACH
EAT	ENTERING AIR TEMPERATURE
EGT	ENTERING GLYCOL TEMPERATURE
ELEC	ELECTRICAL
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
F	FAHRENHEIT
FDC	FIRE DEPARTMENT CONNECTION
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FEET
FT W.C.	FEET WATER COLUMN
FU	FIXTURE UNIT
GAL	GALLON
GALV.	GALVANIZED
GPH	GALLON PER HOUR
GPM	GALLON PER MINUTE
HEPA	HIGH EFFICIENCY PARTICULATE ARREST (FILTER)
HP	HORSEPOWER (ELEC.)
Hz	HERTZ (ELEC.)
IAQ	INDOOR AIR QUALITY
IN.W.C.	INCH WATER COLUMN
KW	KILOWATT
KWH	KILOWATT HOUR
LAT	LEAVING AIR TEMPERATURE
LB	POUND
LGT	LEAVING GLYCOL TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MAT	MIXED AIR TEMPERATURE
MAX.	MAXIMUM
MBH	1,000 BTU PER HOUR
MECH	MECHANICAL
MIN.	MINIMUM
MISC.	MISCELLANEOUS
MMBH	1,000,000 BTU PER HOUR
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OAT	OUTSIDE AIR TEMPERATURE
OFCI	OWNER FURNISHED CONTRACTOR INSTALL
OFOI	OWNER FURNISHED OWNER INSTALL
PD	PRESSURE DROP
PG	PROPYLENE GLYCOL
PH	PHASE (ELEC)
PRES	PRESSURE
PSI	POUND PER SQUARE INCH
PSIA	PSI ABSOLUTE
PSIG	PSI GAUGE
RH	RELATIVE HUMIDITY
RPM	REVOLUTION PER MINUTE
S	SWITCH (SYMBOLIC)
SEC.	SECOND
SSTL	STAINLESS STEEL
T	THERMOSTAT (SYMBOLIC)
TEMP.	TEMPERATURE
TYP.	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VOLT (ELEC.)
VFD	VARIABLE FREQUENCY DRIVE
WB	WET BULB (AIR)

ADDITIONAL ABBREVIATIONS NOTED BY EQUIPMENT TAGS, SYSTEM SYMBOLS, AND ACRONYMS GENERALLY ACCEPTED BY THE INDUSTRY SHALL BE APPLICABLE.

GRAPHICAL REFERENCE

AFF	ABOVE FINISHED FLOOR
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
CL	CENTER LINE
ELEV.	ELEVATION
FFL	FINISHED FLOOR LEVEL
INV.	INVERT
TOD	TOP OF DUCT
TOP	TOP OF PIPE
OC	ON CENTER
POC	POINT OF CONNECTION
POD	POINT OF DISCONNECTION

DUCT SYSTEMS

SA	SUPPLY AIR
RA	RETURN AIR
EA	EXHAUST AIR
OA	OUTSIDE AIR
CA	COMBUSTION AIR
FV	FLUE VENT
TA	TRANSFER AIR

HYDRONIC SYSTEMS

HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
CWS	CHILLED WATER SUPPLY
CWR	CHILLED WATER RETURN
HGS	HEATING GLYCOL SUPPLY
HGR	HEATING GLYCOL RETURN

DUCT WORK ACCESSORIES

FD	FIRE DAMPER
FSD	FIRE-SMOKE DAMPER
BD	BALANCING DAMPER
BDD	BACK DRAFT DAMPER
CD	CONTROL DAMPER

SERVICE SYSTEMS

CW	DOMESTIC COLD WATER
HW	DOMESTIC HOT WATER
HWC	DOMESTIC HOT WATER CIRCULATION
NP	NON-POTABLE

WASTE SYSTEMS

W	SANITARY WASTE
SS	SANITARY SEWER
V	SANITARY VENT

RAIN WATER SYSTEMS

SD	STORM DRAIN
RL	RAIN LEADER

PROCESS WATER SYSTEMS

CD	CONDENSATE, WATER
CDX	CONDENSATE, FLUE GAS

FUEL GAS SYSTEMS

NG	NATURAL GAS
PG	PROPANE

FUEL OIL SYSTEMS

FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOV	FUEL OIL VENT

REFRIGERANT SYSTEM

RFL	REFRIGERANT, LIQUID
RFS	REFRIGERANT, SUCTION
RFG	REFRIGERANT, GENERAL

FIRE PROTECTION SYSTEMS

FPO	FIRE PROTECTION - OTHER
FPW	FIRE PROTECTION - WET PIPE SYSTEM
FPD	FIRE PROTECTION - DRY PIPE SYSTEM
FFFA	FIRE PROTECTION - PRE-ACTION SYSTEM

SYSTEM ABBREVIATION/COLOR LEGEND

SA	SUPPLY AIR SYSTEM	CW	DOMESTIC COLD WATER
RA	RETURN AIR SYSTEM	HW	DOMESTIC HOT WATER
EA	EXHAUST AIR SYSTEM	HWC	DOMESTIC HOT WATER CIRCULATION
OA	OUTSIDE AIR SYSTEM	NP	NON-POTABLE WATER
CA	COMBUSITION AIR SYSTEM	W	SANITARY WASTE, SANITARY SEWER
FV	FLUE VENT SYSTEM	V	SANTIARY VENT
HWS	HEATING WATER SUPPLY	SD	STORM DRAIN
HWR	HEATING WATER RETURN	RL	RAIN LEADER
CWS	CHILLED WATER SUPPLY	CD	CONDENSATE, WATER
CWR	CHILLED WATER RETURN	CDX	CONDENSATE, FLUE GAS
RFG	REFRIGERANT, GENERAL	FOS	FUEL OIL SUPPLY
RS	REFRIGERANT, SUCTION	FOR	FUEL OIL RETURN
RL	REFRIGERANT, LIQUID	FOV	FUEL OIL VENT
		NG	NATURAL GAS
		PG	PROPANE
		FP	FIRE PROECTION

CERTAIN PIPING AND EQUIPMENT CONNECTIONS MAY VARY. INTERPRET DRAWINGS FOR INTENDED INSTALLATION OR REQUEST ASSISTANCE FOR ADDITIONAL CLARIFICATION.

MECHANICAL DESIGN PARAMETERS

BUILDING DOMESTIC WATER SYSTEM

TOTAL BUILDING WATER SERVICE LOAD:	23.5 FIXTURE UNITS (INCLUDING ADDITIVE ALTERNATE 1)
BUILDING WATER SERVICE PRESSURE:	45-60 PSI
BUILDING WATER METER/SERVICE ENTRANCE:	3/4 INCH
DESIGN SYSTEM LENGTH (UPC, TABLE 6-6):	80 FEET

SIZING OF THE DOMESTIC WATER PIPING SYSTEM SHALL CONFORM TO UNIFORM PLUMBING CODE, 2018 ED., SECTION 610.8,

PIPE SIZE	FIXTURE UNIT LOAD
1/2"	FIXTURE CONNECTION ONLY
3/4"	19
1"	36
1-1/4"	39

DRAIN, WASTE, AND VENT SYSTEMS

TOTAL BUILDING SEWER SERVICE LOAD:	33 FIXTURE UNITS (INCLUDING ADDITIVE ALTERNATE 1)
BUILDING SEWER SERVICE ENTRANCE:	4 INCH

SIZING OF THE BUILDING SANITARY DRAIN, WASTE, AND VENT PIPING SYSTEMS SHALL CONFORM TO UNIFORM PLUMBING CODE, 2018 ED., CHAPTER 7,

FUEL GAS PIPING SYSTEMS

TOTAL BUILDING GAS LOAD:	199 CUBIC FEET PER HOUR
FUEL TYPE:	NATURAL GAS
APPLIANCE GAS SERVICE PRESSURE:	LESS THAN 2 PSI (PER TABLE 402.4(1))
DESIGN SYSTEM PRESSURE DROP:	0.3 INCH W.C. (PER TABLE 402.4(1))
DESIGN PIPE LENGTH:	50 FEET

THE SIZING OF THE BUILDING FUEL GAS PIPING SYSTEM SHALL CONFORM TO INTERNATIONAL FUEL GAS CODE (IFGC), 2012 ED., CHAPTER 4,

PIPE SIZE	GAS CAPACITY (CUBIC FEET PER HOUR)
1/2"	55
3/4"	114
1"	215

AIR-CONDITIONING AND HEATING SYSTEMS

DESIGN CONDITION (WINTER/SUMMER):	ASHRAE 99% / 2%, WASILLA, ALASKA
WINTER DESIGN OUTDOOR AMBIENT:	-9.3 DEGREES F DRY BULB
SUMMER DESIGN OUTDOOR AMBIENT:	67.8 DEGREES F DRY BULB 56.3 DEGREES F WET BULB

HYDRONIC PIPING SYSTEMS

MAXIMUM FLUID VELOCITY:	5 FEET PER SECOND
HYDRONIC FLUID:	HOT WATER

UNLESS OTHERWISE NOTED IN DRAWINGS, USE THE FOLLOWING TABLE AS GUIDE TO SELECT PIPING SIZES BASED ON THE FLOW RATE LIMITATIONS,

PIPE SIZE	FLOW RATE LIMITATION (MAX GPM)
3/4"	3.0
1"	6.0
1-1/4"	12.0
1-1/2"	18.0

VENTILATION SYSTEMS

VENTILATION SHALL BE PROVIDED THROUGH COMBINATION OF OPERABLE OPENINGS AND EXHAUST VENTILATION SYSTEM WITH EXHAUST FANS AND PASSIBLE OUTSIDE AIR INTAKES.

GENERAL MECHANICAL INFORMATION

APPLICABLE CODES AND STANDARDS

APPLICABLE CODES AND STANDARDS AS ADOPTED AND REVISED BY STATE AND LOCAL AUTHORITIES HAVING JURISDICTION.

INTERNATIONAL BUILDING CODE, 2012 ED, AS ADOPTED BY 13 AAC 50.020 AND AS REVISED
INTERNATIONAL MECHANICAL CODE, 2012 ED, AS ADOPTED BY 13 AAC 50.023, AND AS REVISED
UNIFORM PLUMBING CODE, 2018 ED, AS ADOPTED BY 8 AAC 63.010 AND AS REVISED
NATIONAL ELECTRICAL CODE, 2017 ED, AS ADOPTED BY 8 AAC 70.025 AND AS REVISED
INTERNATIONAL FIRE CODE, 2012 ED, AS ADOPTED BY 13 AAC 50.025; AND AS REVISED
INTERNATIONAL FUEL AND GAS CODE, 2012 ED, AS ADOPTED BY 13 AAC 50.024 AND AS REVISED

* AAC: ALASKA ADMINISTRATIVE CODE

SEISMIC/WIND RESTRAINT DESIGN FOR MAJOR EQUIPMENT INSTALLATIONS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SEISMIC AND WIND LOAD DESIGNS FOR THE INSTALLATION OF THE LISTED EQUIPMENT,

- WATER HEATER

PROJ NO: P21010
DRAWN: JTC/RJW
CHECKED: JTC
DATE: 6/30/2022
FULL SIZE DRAWINGS: 22" x 34"

MAINTENANCE/STORAGE FACILITY
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SHEET CONTENTS
MECHANICAL LEGEND AND NOTES

M1.0

BID #B23-01

6/30/2022 CONSTRUCTION DOCUMENTS

PLUMBING FIXTURE SCHEDULE

EQ. ID	DESCRIPTION	SERVICE CONNECTIONS (INCH)				BASIS OF DESIGN		COMMENTS
		CW	HW	W	V	MANUFACTURER	MODEL	
HB-1	HYDRANT, EXTERIOR, ANTI-SIPHON, FREEZE-PROOF	3/4"				ZURN	Z1321XL	
HB-2	BACKFLOW PREVENTED WALL FAUCET	3/4"				WOODFORD	B26	
P-1	WATER CLOSET, ADA COMPLIANT, ELONGATED BOWL, OPEN-FRONT SEAT, FLUSH TANK, FLOOR-MOUNTED, BOTTOM OULET	1/2"		3"	2"	KOHLER	HIGHLINE K-3519	
P-2	LAVATORY, WALL-HUNG, ADA-COMPLIANT	1/2"	1/2"	2"	12 1/2"	KOHLER	KINGSTON K-2007	
P-3	UTILITY SINK, 23"X23"	1/2"	1/2"	2"	2"	MUSTEE	14CP	
TP-1	TRAP PRIMER	1/2"				PRECISION PLUMBING PRODUCTS	P1-500 WITH DISTRIBUTION UNIT	

FLOOR DRAIN SCHEDULE

EQ. ID	DESCRIPTION	SERVICE CONNECTIONS (INCH)		BASIS OF DESIGN		COMMENTS
		W	V	MANUFACTURER	MODEL	
FD-1	ROUND FLOOR DRAIN, 2" OUTLET WITH 5" STRAINER	2"	2"	WATTS	FD100A	WITH TRAP PRIMER CONNECTION

STORAGE WATER HEATER SCHEDULE

EQ. ID	DESCRIPTION	FUEL INPUT	STORAGE (GAL)		BASIS OF DESIGN		COMMENT(S)
		FUEL TYPE		ELECTRICAL LOAD/VOLTAGE/PHASE	MANUFACTURER	MODEL	
WH-1	40-GAL STORAGE WATER HEATER	ELECTRIC	40	12.0KW, 240V/1PH	AO SMITH	DEL-40	

BOILER SCHEDULE

EQ. ID	DESCRIPTION	FUEL INPUT		OUTPUT (MBH)	ELECTRICAL LOAD / VOLTAGE / PHASE	BASIS OF DESIGN:		COMMENT(S)
		FUEL TYPE	GAS (CFH)			MANUFACTURER	MODEL	
BLR-1	BOILER, HIGH EFFICIENCY, CONDENSING	NATURAL GAS	199	185	SEE COMMENT	LOCHINVAR	WH-199	PROVIDE DEDICATED 15AMP CIRCUIT FOR BOILER

EXPANSION TANK SCHEDULE

EQ. ID	DESCRIPTION	TANK INFORMATION		BASIS OF DESIGN		COMMENT(S)
		TANK VOLUME (GAL)	ACCEPT. VOLUME (GAL)	MANUFACTURER	MODEL	
ET-1	EXPANSION TANK, GLYCOL SYSTEM	6.4	3.2	AMTROL	AX-10	
ET-2	EXPANSION TANK, DOMESTIC HOT WATER SYSTEM	2.0	0.5	AMTROL	ST-5	

AIR TERMINAL SCHEDULE

EQ. ID	DESCRIPTION	BASIS OF DESIGN		COMMENT(S
		MANUFACTURER	MODEL	
EA-1	EXHAUST AIR INTAKE WALL GRILLE	SEIHO	RHV 08	
OA-1	MAKE-UP AIR VENT	ALDES	AIRLET 700	

FAN SCHEDULE

EQ. ID	DESCRIPTION	PERFORMANCE		ELECTRICAL	BASIS OF DESIGN		ACCESSORIES	COMMENT(S)
		FLOW (CFM)	ESP (INCH WC)	LOAD / VOLTAGE / PHASE	MANUFACTURER	MODEL		
CF-1	CEILING FAN			1/10 HP, 115V/1PH	GREENHECK	AMPLIFY DC-5		
EF-1	EXHAUST FAN, RESTROOM	50	0.3	6.2 WATTS, 115V/1PH	PANASONIC	WHISPER GREEN SELECT FV-05-11 VK2		
EF-2	SIDEWALL EXHAUST FAN	368	0.3	115W, 120V/1PH	SOLER-PALAU	SWF 200		

PUMP SCHEDULE

EQ. ID	DESCRIPTION	FLUID	FLUID SIDE PERFORMANCE		ELECTRICAL	BASIS OF DESIGN		COMMENT(S)
			FLOW (GPM)	HEAD (FT WC)	LOAD / VOLTAGE / PHASE	MANUFACTURER	MODEL	
CP-1	BOILER CIRCULATOR	HEATING GLYCOL	15.0	20.0	1/6 HP, 115V/1PH	TACO	0013	
RMB-1	RADIANT MIXING BLOCK, RADIANT ZONE 1	HEATING GLYCOL	4.3	10.0	2.0 AMP, 120V/1PH	TACO	RMB-1	
RMB-2	RADIANT MIXING BLOCK, RADIANT ZONE 2	HEATING GLYCOL	3.7	10.0	2.0 AMP, 120V/1PH	TACO	RMB-1	

MISCELLANEOUS MECHANICAL EQUIPMENT SCHEDULE

EQ. ID	DESCRIPTION	ELECTRICAL	BASIS OF DESIGN		COMMENT(S)
		LOAD / VOLTAGE / PHASE	MANUFACTURER	MODEL	
AS-1	AIR SEPARATOR		SPROTHERM	VJR SERIES, 1" SIZE	
GT-1	GLYCOL MAKE-UP TANK	50W, 120V, 1PH	AXIOM INDUSTRY	MF200	
NT-1	CONDENSATE NEUTRALIZATION KIT		AXIOM INDUSTRIES	NC-1	
RMF-1	RADIANT SYSTEM MANIFOLD, ZONE 1		UPONOR	TRUFLOW SERIES, 12-LOOP, WITH LOOP FLOW BALANCING VALVES, AIR VENTS, LOOP FLOW INDICATORS	
RMF-2	RADIANT SYSTEM MANIFOLD, ZONE 2		UPONOR	TRUFLOW SERIES, 12-LOOP, WITH LOOP FLOW BALANCING VALVES, AIR VENTS, LOOP FLOW INDICATORS	

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SHEET CONTENTS
MECHANICAL EQUIPMENT SCHEDULES

M1.1

BID #B23-01

6/30/2022 CONSTRUCTION DOCUMENTS

MECHANICAL AND PLUMBING SPECIFICATIONS

Z1020 - ADMINISTRATIVE REQUIREMENTS

1. GENERAL REQUIREMENTS FOR MECHANICAL AND PLUMBING SYSTEMS: ALL WORK SHALL CONFORM TO THE CURRENTLY ADOPTED CODES AND STANDARDS AND AS AMENDED AND/OR REFERENCED.

2. BASIS OF DESIGN: "BASIS OF DESIGN EQUIPMENT IS IDENTIFIED FOR THE PURPOSE OF ESTABLISHING SIGNIFICANT QUALITY, PERFORMANCE, FUNCTION, DIMENSIONS, PHYSICAL PROPERTIES, APPEARANCE, AND OTHER RELEVANT MATERIAL AND PERFORMANCE CHARACTERISTICS. UNLESS OTHERWISE NOTED, THE IDENTIFICATION OF THE "BASIS OF DESIGN" EQUIPMENT IS NOT INTENDED TO PRECLUDE ALTERNATIVE MATERIAL AND EQUIPMENT SELECTIONS. HOWEVER, THE OWNER RETAINS THE RIGHT TO REJECT MATERIAL AND EQUIPMENT DEVIATING FROM THE BASIS OF DESIGN. WHERE MATERIAL AND EQUIPMENT DEVIATION IS ALLOWED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MODIFICATIONS NECESSARY TO INCORPORATE THE EQUIPMENT INTO THE PROJECT.

3. DRAWINGS: DRAWINGS ARE INTENDED TO BE DIAGRAMMATIC AND DO NOT NECESSARILY SHOW THE COMPLETE INSTALLATION. INFORMATION HEREIN MAY BE PARTIALLY BASED ON EXISTING BUILDING RECORDS, THE EXTENT OF WHICH MAY NOT REFLECT CURRENT BUILDING CONDITIONS. CONTRACTOR SHALL VERIFY ACTUAL CONDITIONS AND ADJUST AS APPROPRIATE TO COMPLETE THE PROJECT.

4. EQUIPMENT START-UP SERVICES: PROVIDE EQUIPMENT START-UP SERVICES BY THE MANUFACTURER'S QUALIFIED PERSONNEL FOR THE FOLLOWING:

   - BOILERS
   - WATER HEATERS
   - HEAT PUMP SYSTEMS

5. OPERATION AND MAINTENANCE DOCUMENT AND TRAINING: SUBMIT OPERATION AND MAINTENANCE MANUALS FOR THE MECHANICAL EQUIPMENT AND SYSTEMS. PROVIDE TRAINING OF OWNER IN OPERATION AND MAINTENANCE OF BUILDING SYSTEMS:

   NUMBER OF O&M MANUALS: 2 (TWO) COPIES
   NUMBER OF SESSION(S): 1 (ONE) SESSION
   TIME DURATION ANTICIPATED: 2 (TWO) HOURS PER SESSION

D2000 - PLUMBING SYSTEMS

1. GENERAL REQUIREMENTS

   A. HANGERS AND SUPPORTS: HANGERS AND SUPPORTS SHALL CONFORM TO THE REQUIREMENTS OF UNIFORM PLUMBING CODE, APPLICABLE CODES AND STANDARDS, OR MANUFACTURERS' GUIDELINES.
   B. SEISMIC AND VIBRATION CONTROLS: PROVIDE SEISMIC AND VIBRATION CONTROLS IN ACCORDANCE WITH THE REQUIREMENTS OF AMERICAN SOCIETY OF CIVIL ENGINEERS, STANDARD 7-10, CHAPTER 13.
   C. INSULATION: UNLESS OTHERWISE NOTED IN THE INSULATION SCHEDULE, PROVIDE INSULATION ON PIPING SYSTEMS IN ACCORDANCE WITH THE REQUIREMENTS OF INTERNATIONAL ENERGY CONSERVATION CODE.
   D. IDENTIFICATION: PROVIDE COMMERCIALLY AVAILABLE PIPING AND EQUIPMENT LABELING SYSTEMS. PAINT STENCILING NOT ALLOWED.
   E. FIRESTOP AND SEALANT SYSTEMS: PENETRATIONS OF PIPING THROUGH RATED ASSEMBLIES SHALL BE PROTECTED BY LISTED FIRESTOP AND SEALANT SYSTEMS.

2. SUBMITTAL REQUIREMENTS

   A. PROVIDE PRODUCT SUBMITTALS FOR ALL EQUIPMENT IDENTIFIED IN THE DRAWING EQUIPMENT SCHEDULES AND PRODUCTS IDENTIFIED IN THESE SPECIFICATIONS.
   B. SUBMIT FIRESTOP ASSEMBLY SCHEDULE AND MANUFACTURER'S LISTING AND INSTALLATION INFORMATION FOR FIRESTOP SYSTEMS TO BE USED FOR THIS PROJECT.

D2010 - DOMESTIC WATER SYSTEMS

1. GENERAL REQUIREMENTS

   A. THIS SECTION INCLUDES THE DOMESTIC WATER SYSTEMS AND ACCESSORIES.
   B. SPECIAL REQUIREMENTS FOR COMPLIANCE WITH NSF 61: DOMESTIC WATER SYSTEM PIPING AND EQUIPMENT SHALL CONFORM TO THE REQUIREMENTS OF NSF 61 FOR POTABLE WATER SERVICE.
   C. SPECIAL PROVISION FOR STEEL PIPING SYSTEMS: UNLESS OTHERWISE NOTED, STEEL PIPING SYSTEMS SHALL BE LIMITED TO BUILDING WATER SERVICE ENTRANCE.
   D. SPECIAL PROVISION FOR NON-METALLIC PIPING SYSTEMS: UNLESS OTHERWISE NOTED, USE OF NON-METALLIC PIPING SYSTEMS SHALL BE SUBJECT TO APPROVAL BY THE OWNER.

2. PRODUCTS

   A. DOMESTIC WATER PIPING SYSTEMS

      1. ABOVEGROUND PIPING SYSTEMS: HARD COPPER TUBE: ASTM B 88, TYPE L, WATER TUBE, DRAWN TEMPER. COPPER PRESSURE FITTINGS: ASME B16.18, CAST-COPPER ALLOY OR ASME B16.22, WROUGHT-COPPER, SOLDER-JOINTS.
      2. UNDERGROUND PIPING SYSTEMS: SOFT COPPER TUBE: ASTM B 88, TYPE K, WATER TUBE, DRAWN TEMPER. COPPER PRESSURE FITTINGS: ASME B16.18, CAST-COPPER ALLOY OR ASME B16.22, WROUGHT-COPPER, SOLDER-JOINTS.
      3. NON-METALLIC PIPING SYSTEMS: POLYETHYLENE CROSS-LINK (PEX) PIPING: ASTM F 877, SDR 9 TUBING LISTED FOR POTABLE WATER SERVICES ((IDENTIFIED WITH "-PW" MARK AND NSF-61). FITTINGS FOR PEX TUBE: ASTM F 1807, METAL-INSERT TYPE WITH COPPER OR STAINLESS-STEEL CRIMP RINGS AND MATCHING PEX TUBE DIMENSIONS.

   B. DOMESTIC WATER SYSTEM VALVES AND SPECIALTIES

      1. VALVES: VALVE PRESSURE AND TEMPERATURE RATINGS SHALL MEET THE REQUIRED SERVICE CONDITIONS.
      2. WATER HAMMER ARRESTORS: MECHANICAL BELLOW OR PISTON WATER HAMMER ARRESTORS ONLY. AIR CHAMBER NOT ALLOWED.

3. EXECUTION

   A. WATER HAMMER ARRESTORS: PROVIDE MECHANICAL WATER HAMMER ARRESTORS WHERE SHOWN IN THE DRAWINGS OR AT INDIVIDUAL FIXTURE SERVICES.
   B. CLEANING, DISINFECTING, AND TESTING: CLEAN AND DISINFECT DOMESTIC WATER SYSTEM IN ACCORDANCE WITH EITHER AWWA C651 OR AWWA C652 OR FOLLOW PROCEDURES DESCRIBED BELOW:

      1. FLUSH PIPING SYSTEM WITH CLEAN, POTABLE WATER UNTIL DIRTY WATER DOES NOT APPEAR AT OUTLETS.
      2. FILL SYSTEM OR PART THEREOF WITH WATER/CHLORINE SOLUTION WITH AT LEAST 50 PPM OF CHLORINE, ISOLATE WITH VALVES AND ALLOW TO STAND FOR 24 HOURS, OR, FILL SYSTEM OR PART THEREOF WITH WATER/CHLORINE SOLUTION WITH AT LEAST 200 PPM OF CHLORINE, ISOLATE AND ALLOW TO STAND FOR THREE HOURS.
      3. FLUSH SYSTEM WITH CLEAN, POTABLE WATER UNTIL NO CHLORINE IS IN WATER COMING FROM SYSTEM AFTER THE STANDING TIME.
      4. REPEAT PROCEDURES IF BIOLOGICAL EXAMINATION SHOWS CONTAMINATION.

   C. SUBMIT WATER QUALITY TEST REPORT TO THE OWNER FOR DOCUMENTATION AND AUTHORITIES HAVING JURISDICTION.

D2020 - SANITARY DRAINAGE AND VENT SYSTEMS

1. GENERAL REQUIREMENTS

   A. THIS SECTION INCLUDES THE SANITARY DRAINAGE AND VENT SYSTEMS AND ACCESSORIES.

2. PRODUCTS

   A. SANITARY WASTE AND VENT PIPING SYSTEMS

      1. ABOVEGROUND PIPING SYSTEMS: ASTM A 888 OR CISPI 301. COUPLINGS: ASTM C 1277 ASSEMBLY OF METAL HOUSING, CORROSION-RESISTANT FASTENERS, AND ASTM C 564 RUBBER SLEEVE WITH INTEGRAL, CENTER PIPE STOP.
      2. UNDERGROUND PIPING SYSTEMS: HEAVY-DUTY, TYPE 304, STAINLESS-STEEL COUPLINGS: ASTM A 666, TYPE 304, STAINLESS-STEEL SHIELD; STAINLESS-STEEL BANDS; AND SLEEVE. NPS 1-1/2 TO NPS 4: 3-INCH (W) SHIELD WITH BANDS.
      3. NON-METALLIC PIPING SYSTEMS: PLASTIC (ABS) PIPING SYSTEM SHALL BE LIMITED TO NON-PRESSURIZED WASTE AND VENT PIPING ONLY. ABS SOCKET FITTINGS: ASTM D 2661, MADE TO ASTM D 3311 DRAIN, WASTE, AND VENT PATTERNS.

3. EXECUTION

   A. TESTING: TEST SANITARY DRAINAGE AND VENT PIPING SYSTEMS AS FOLLOWS:

      1. GENERAL TEST PROCEDURE. CLOSE OPENINGS IN PIPING SYSTEM AND FILL WITH WATER TO POINT OF OVERFLOW, BUT NOT LESS THAN 10-FOOT HEAD OF WATER. FROM 15 MINUTES BEFORE INSPECTION STARTS TO COMPLETION OF INSPECTION, WATER LEVEL MUST NOT DROP. INSPECT JOINTS FOR LEAKS AND REPAIR ACCORDINGLY.

D2040 - FUEL GAS PIPING SYSTEMS

1. GENERAL REQUIREMENTS

   A. THIS SECTION INCLUDES THE FUEL GAS SYSTEMS AND ACCESSORIES.
   B. UNDERGROUND FUEL GAS PIPING INSIDE BUILDING NOT ALLOWED UNLESS OTHERWISE DIRECTED.
   C. FUEL GAS PIPING IN VENTILATION SYSTEM PLENUM SHALL BE WELDED THROUGHOUT.

2. PRODUCTS

   A. FUEL GAS PIPING SYSTEMS:
      1. ABOVEGROUND PIPING SYSTEMS: STEEL PIPE, ASTM A 53/A 53M, BLACK STEEL, SCHEDULE 40, TYPE E OR S, GRADE B. MALLEABLE-IRON THREADED FITTINGS: ASME B16.3, CLASS 150, STANDARD PATTERN WELDED FITTINGS: ASTM A 234/A 234M FOR BUTT WELDING AND SOCKET WELDING.
      2. UNDERGROUND PIPING SYSTEMS (OUTDOOR, DOWNSTREAM OF GAS METER/REGULATOR): STEEL PIPE, ASTM A 53/A 53M, BLACK STEEL, SCHEDULE 40, TYPE E OR S, GRADE B, WROUGHT-STEEL FITTINGS AND WELDED JOINTS. COAT PIPE AND FITTINGS WITH PROTECTIVE COATING FOR STEEL PIPING.
   B. UNDERGROUND PIPING SYSTEMS (OUTDOOR ONLY, ANNEALED OR DRAWN-TEMPER COPPER TUBE WITH WROUGHT-COPPER FITTINGS AND BRAZED JOINTS. COAT PIPE AND FITTINGS WITH PROTECTIVE COATING FOR COPPER TUBING.
   C. FUEL GAS SYSTEM VALVES AND SPECIALTIES:

      1. VALVES: VALVE PRESSURE AND TEMPERATURE RATINGS SHALL MEET THE REQUIRED SERVICE CONDITIONS.

3. EXECUTION

   A. TESTING: TEST, INSPECT, AND PURGE NATURAL GAS ACCORDING TO THE INTERNATIONAL FUEL GAS CODE, SECTION 406, AND APPLICABLE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.

D3000 - HEATING, VENTILATION, AND AIR-CONDITIONING SYSTEMS

1. GENERAL REQUIREMENTS

   A. HANGERS AND SUPPORTS: HANGERS AND SUPPORTS FOR PIPING AND DUCTWORK SHALL CONFORM TO THE REQUIREMENTS OF INTERNATIONAL MECHANICAL CODE, OTHER APPLICABLE CODES AND STANDARDS, OR MANUFACTURERS' GUIDELINES.
   B. SEISMIC AND VIBRATION CONTROLS: PROVIDE SEISMIC AND VIBRATION CONTROLS IN ACCORDANCE WITH THE REQUIREMENTS OF AMERICAN SOCIETY OF CIVIL ENGINEERS, STANDARD 7-10, CHAPTER 13.
   C. INSULATION: UNLESS OTHERWISE NOTED IN INSULATION SCHEDULE, PROVIDE INSULATION ON PIPING AND DUCTWORK SYSTEMS IN ACCORDANCE WITH THE REQUIREMENTS OF INTERNATIONAL ENERGY CONSERVATION CODE.
   D. IDENTIFICATION: PROVIDE COMMERCIALLY AVAILABLE PIPING, DUCTWORK, AND EQUIPMENT LABELING SYSTEMS. PAINT STENCILING NOT ALLOWED.
   E. FIRESTOP AND SEALANT SYSTEMS: PENETRATIONS OF PIPING AND DUCTWORK THROUGH RATED ASSEMBLIES SHALL BE PROTECTED BY LISTED FIRESTOP AND SEALANT SYSTEMS.

2. SUBMITTAL REQUIREMENTS:

   A. PROVIDE PRODUCT SUBMITTALS FOR ALL EQUIPMENT IDENTIFIED IN THE DRAWING EQUIPMENT SCHEDULES AND PRODUCTS IDENTIFIED IN THESE SPECIFICATIONS.
   B. SUBMIT FIRESTOP ASSEMBLY SCHEDULE AND MANUFACTURER'S LISTING AND INSTALLATION INFORMATION FOR FIRESTOP SYSTEMS TO BE USED FOR THIS PROJECT.

D3050 - HYDRONIC SYSTEMS

A. GENERAL REQUIREMENTS

   A. THIS SECTION INCLUDES THE HYDRONIC SYSTEMS AND ACCESSORIES.

B. PRODUCTS

   A. HYDRONIC PIPING SYSTEMS

      1. ABOVEGROUND PIPING SYSTEMS: HARD COPPER TUBE: ASTM B 88, TYPE L, WATER TUBE, DRAWN TEMPER. COPPER PRESSURE FITTINGS: ASME B16.18, CAST-COPPER ALLOY OR ASME B16.22, WROUGHT-COPPER, SOLDER/BRAZED-JOINTS.
      2. UNDERGROUND PIPING SYSTEMS: SOFT COPPER TUBE: ASTM B 88, TYPE K, WATER TUBE, DRAWN TEMPER. COPPER PRESSURE FITTINGS: ASME B16.18, CAST-COPPER ALLOY OR ASME B16.22, WROUGHT-COPPER, SOLDER/BRAZED-JOINTS.

   B. HYDRONIC SYSTEM VALVES AND SPECIALTIES

      1. VALVES: VALVE PRESSURE AND TEMPERATURE RATINGS SHALL MEET THE REQUIRED SERVICE CONDITIONS.
      2. BALANCING VALVES: FIELD ADJUSTABLE CALIBRATED BALANCING VALVE FOR THE FLOW RATE INDICATED. BASIS OF DESIGN: BELL AND GOSSETT, WATTS, TACO, OR EQUAL.
      3. FLOW CONTROL VALVE: FACTORY PRESET-CALIBRATED FLOW CONTROL VALVES FOR THE FLOW RATE INDICATED. BASIS OF DESIGN: GRISWOLD CONTROLS, FLOW DESIGN, INC., OR EQUAL.
      4. AIR VENTS: UNLESS OTHERWISE DIRECTED, TERMINAL AIR VENTS SHALL BE MANUAL TYPE. AUTOMATIC AIR VENTS SHALL BE LIMITED TO MECHANICAL EQUIPMENT SPACES WHERE DRAIN RECEPTOR IS NEARBY TO RECEIVE AIR VENT DISCHARGE.
      5. DRAIN VALVES: DRAIN VALVES SHALL INCLUDE HOSE-END THREADS AT DISCHARGE.

   C. PROPYLENE GLYCOL: PRE-MIXED, CONCENTRATION BY WEIGHT PER SCHEDULE INFORMATION OR AS DIRECTED, PROPYLENE GLYCOL WITH CORROSION INHIBITOR ADDITIVES FOR HYDRONIC HEATING SERVICE.

3. EXECUTION

   A. AIR VENTS: PROVIDE AIR VENTS AT SYSTEM HIGH POINTS AND AT TERMINAL EQUIPMENT SERVICES.
   B. DRAIN VALVES: PROVIDE DRAIN VALVES TO ALLOW TERMINAL EQUIPMENT SERVICE AND FOR DRAINING SECTIONS OF THE DISTRIBUTION PIPING.
   C. CLEANING AND FLUSHING OF HYDRONIC PIPING SYSTEMS: CLEAN AND FLUSH HYDRONIC PIPING SYSTEMS AS FOLLOWS,

      1. FILL SYSTEM WITH FRESH WATER AND ADD LIQUID ALKALINE COMPOUND WITH EMULSIFYING AGENTS AND DETERGENTS TO REMOVE GREASE AND PETROLEUM PRODUCTS FROM PIPING. CIRCULATE SOLUTION FOR A MINIMUM OF 24 HOURS, DRAIN, CLEAN STRAINER SCREENS, AND REFILL WITH SERVICE HYDRONIC FLUID.

   D. TESTING: TEST THE HYDRONIC SYSTEM AS FOLLOWS,

      1. ISOLATE EQUIPMENT DURING TESTING AS APPROPRIATE TO PREVENT DAMAGE.
      2. SUBJECT PIPING SYSTEM TO HYDROSTATIC TEST PRESSURE THAT IS NOT LESS THAN 1.5 TIMES THE SYSTEM'S WORKING PRESSURE. TEST PRESSURE SHALL NOT EXCEED MAXIMUM PRESSURE FOR ANY VESSEL, PUMP, VALVE, OR OTHER COMPONENT IN SYSTEM UNDER TEST. VERIFY THAT STRESS DUE TO PRESSURE AT BOTTOM OF VERTICAL RUNS DOES NOT EXCEED 90 PERCENT OF SPECIFIED MINIMUM YIELD STRENGTH OR 1.7 TIMES THE "SE" VALUE IN APPENDIX A IN ASME B31.9, "BUILDING SERVICES PIPING."
      3. AFTER HYDROSTATIC TEST PRESSURE HAS BEEN APPLIED FOR AT LEAST 10 MINUTES, EXAMINE PIPING, JOINTS, AND CONNECTIONS FOR LEAKAGE. ELIMINATE LEAKS BY TIGHTENING, REPAIRING, OR REPLACING COMPONENTS, AND REPEAT HYDROSTATIC TEST UNTIL NO FURTHER LEAK IS OBSERVED.

D3060 - DUCTWORK SYSTEMS

1. GENERAL REQUIREMENTS

   A. THIS SECTION INCLUDES THE DUCTWORK SYSTEMS AND ACCESSORIES.

      1. DUCTS SHALL CONFORM TO THE REQUIREMENTS OF SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE" FOR ACCEPTABLE MATERIALS, MATERIAL THICKNESS, AND DUCT CONSTRUCTION METHODS.

2. PRODUCTS

   A. DUCTWORK SYSTEMS:

      1. SHEETMETAL DUCT MATERIAL SHALL BE GALVANIZED SHEET STEEL, COMPLYING WITH ASTM A 653/A 653M AND HAVING G90 COATING DESIGNATION.
      2. FLEXIBLE DUCTS SHALL BE THERMAFLEX SERIES GKM (R4.2) FLEXIBLE DUCT OR EQUAL.

   B. DUCTWORK SYSTEMS ACCESSORIES:

      1. DUCTWORK ACCESSORIES INCLUDING BALANCING DAMPERS, CONTROL DAMPERS, EQUIPMENT FLEXIBLE CONNECTORS, ETC. SHALL CONFORM TO APPLICABLE SMACNA DUCTWORK CONSTRUCTION STANDARDS.

3. EXECUTION

   A. FLEXIBLE DUCT CONNECTORS TO AIR INTAKE AND OUTLET DIFFUSERS: DIFFUSER FLEXIBLE DUCT CONNECTORS LENGTH SHALL BE LIMITED TO MAXIMUM OF 5 FEET WITH NO MORE THAN 90 DEGREES COMBINED CHANGED OF DIRECTION.
   B. CLEANING: CLEAN DUCTWORK SYSTEMS THROUGHOUT IN PREPARATION FOR LEAKAGE TESTING AND TESTING, ADJUSTING, AND BALANCING.
   C. TESTING: LEAKAGE TESTS: COMPLY WITH SMACNA'S "HVAC AIR DUCT LEAKAGE TEST MANUAL"

D3090 - TESTING, ADJUSTING, AND BALANCING

1. GENERAL REQUIREMENTS

   A. THIS SECTION INCLUDES TESTING, ADJUSTING, AND BALANCING OF THE MECHANICAL SYSTEMS.
   B. PROVIDE SERVICES OF AN AABC OR NEBB CERTIFIED TESTING, ADJUSTING, AND BALANCING AGENT TO PERFORM THE TESTING, ADJUSTING, AND BALANCING OF THE FOLLOWING SYSTEMS:

      1. HYDRONIC SYSTEMS
      2. VENTILATION SYSTEMS

2. PRODUCT (NOT USED)

3. EXECUTION

   A. SUBMIT PRELIMINARY TAB REPORT TO THE OWNER FOR REVIEW AS PART OF THE SUBSTANTIAL COMPLETION PROCESS. SUBMIT FINAL TAB REPORT AFTER THE CORRECTION OF ANY DEFICIENCIES DISCOVERED DURING THE PREPARATION OF THE PRELIMINARY TAB REPORT, IF ANY, AS PART OF THE OPERATION AND MAINTENANCE DOCUMENTATION.

D8000 - CONTROLS AND INSTRUMENTATIONS

1. GENERAL REQUIREMENTS

   A. THIS SECTION INCLUDES REQUIREMENTS FOR THE CONTROL SYSTEMS.
   B. SUBMITTAL REQUIREMENTS: PROVIDE SYSTEM CONTROL AND WIRING DIAGRAMS, SEQUENCE OF OPERATIONS, AND PRODUCT DATA FOR COMPONENTS FOR SYSTEMS IDENTIFIED IN THESE SPECIFICATIONS.

2. PRODUCTS (NOT USED)

3. EXECUTION

   A. COORDINATE WITH ELECTRICAL TO PROVIDE ALL POWER AND CONTROL CIRCUITS AND CONDUITS TO COMPLETE THE SYSTEM.
   B. COORDINATE WITH ALL INTEGRAL EQUIPMENT CONTROLLERS FOR CONTROL INTERFACE REQUIREMENTS.

INSULATION APPLICATIONS SCHEDULE

DUCT INSULATION/FINISH APPLICATIONS:

1. GENERAL DUCT INSULATION REQUIREMENTS:
   - SUPPLY AIR DUCT: NONE
   - RETURN AIR DUCT: NONE
   - OUTSIDE AIR DUCT/PLENUM: 2" INSULATION WITH VAPOR BARRIER
   - EXHAUST AIR DUCT: 1" INSULATION WITH VAPOR BARRIER WITHIN 5 FEET OF EXTERIOR WALL

PIPING INSULATION/FINISH APPLICATIONS:

1. GENERAL PIPE INSULATION REQUIREMENTS:

   SEE INTERNATIONAL CONSERVATION CONSERVATION CODE (IECC), 2018 ED., TABLE C403.11.3 FOR MINIMUM PIPE INSULATION REQUIREMENTS.

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Mat-Su Borough School District | | Purchasing Department | | 690 Cope Industrial Way | | Palmer, Alaska 99645 | | P. 49

PROJ NO P21010
DRAWN Author
CHECKED Checker
DATE 6/30/2022
FULL SIZE DRAWINGS: 22" x 34"

MAINTENANCE/STORAGE FACILITY
CONSTRUCTION DOCUMENTS
ACADEMY CHARTER SCHOOL
801 EAST ARCTIC AVENUE

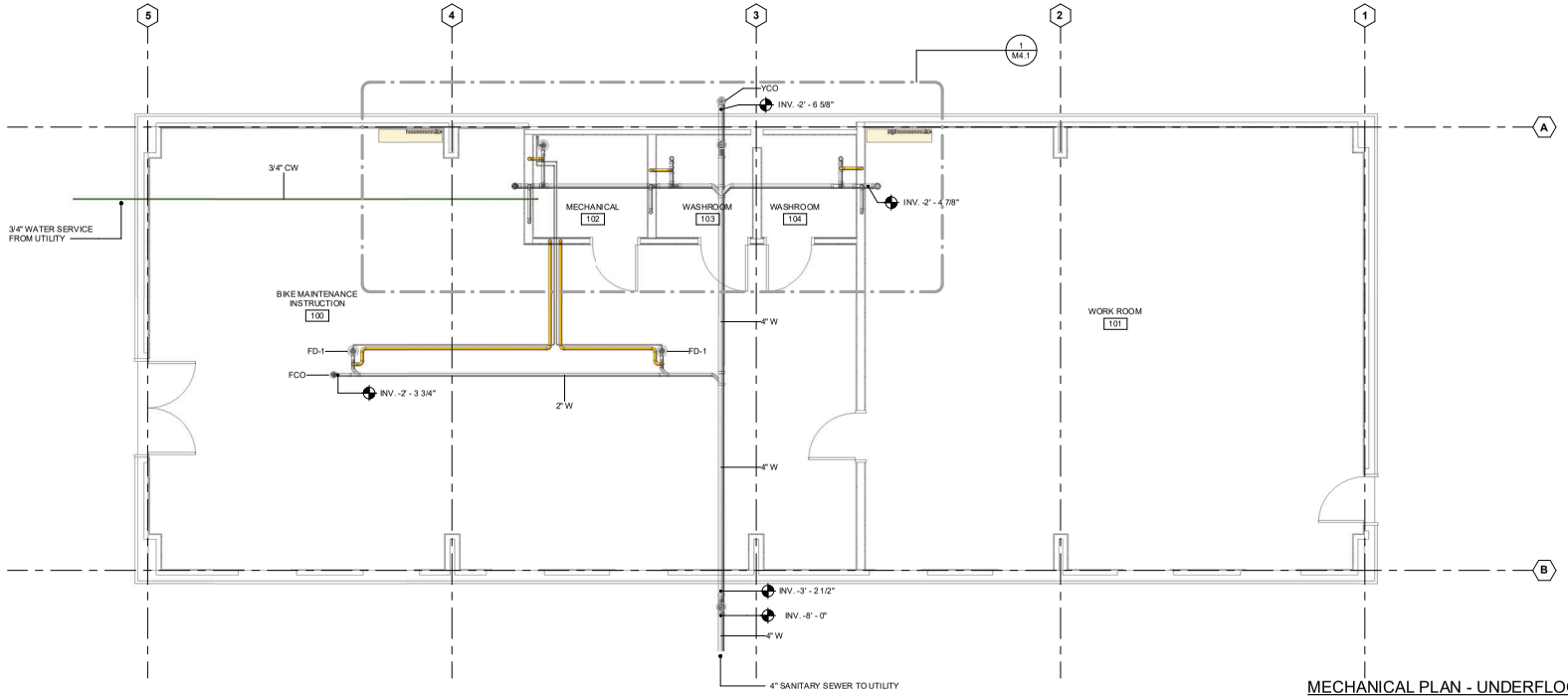
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SHEET CONTENTS
MECHANICAL AND PLUMBING SPECIFICATIONS

M1.2

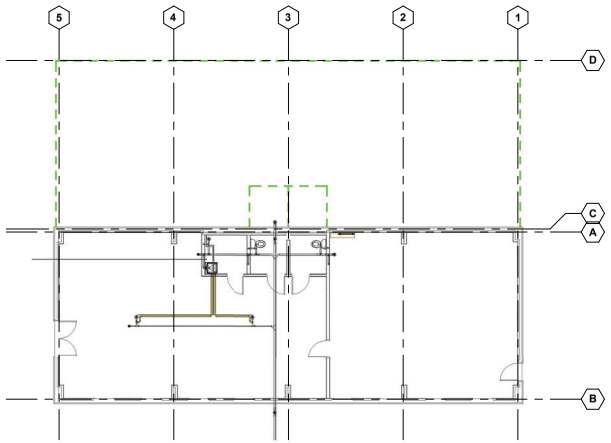
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MECHANICAL PLAN - UNDERFLOOR (BASE BID)

Scale: 1/4" = 1'-0"

N



ADDITIVE ALTERNATE 1 - CONTRACTOR TO PROVIDE THE FOLLOWING,

- MIRROR MECHANICAL SYSTEMS EXCEPT;
  1. EXTEND CW, HW, GHS, GHR, WASTE SERVICES FROM EXISTING MECHANICAL ROOM.
- COORDINATE WITH ARCHITECTURAL FOR SPACE CONFIGURATIONS AND PERMITING REQUIREMENTS.

MECHANICAL PLAN - UNDERFLOOR (ADDITIVE ALT. 1)

Scale: 3/32" = 1'-0"

N

PROJ.NO P21010
DRAWN JTC/RJW
CHECKED JTC
DATE 6/30/2022
FULL SIZE DRAWINGS: 22" x 34"

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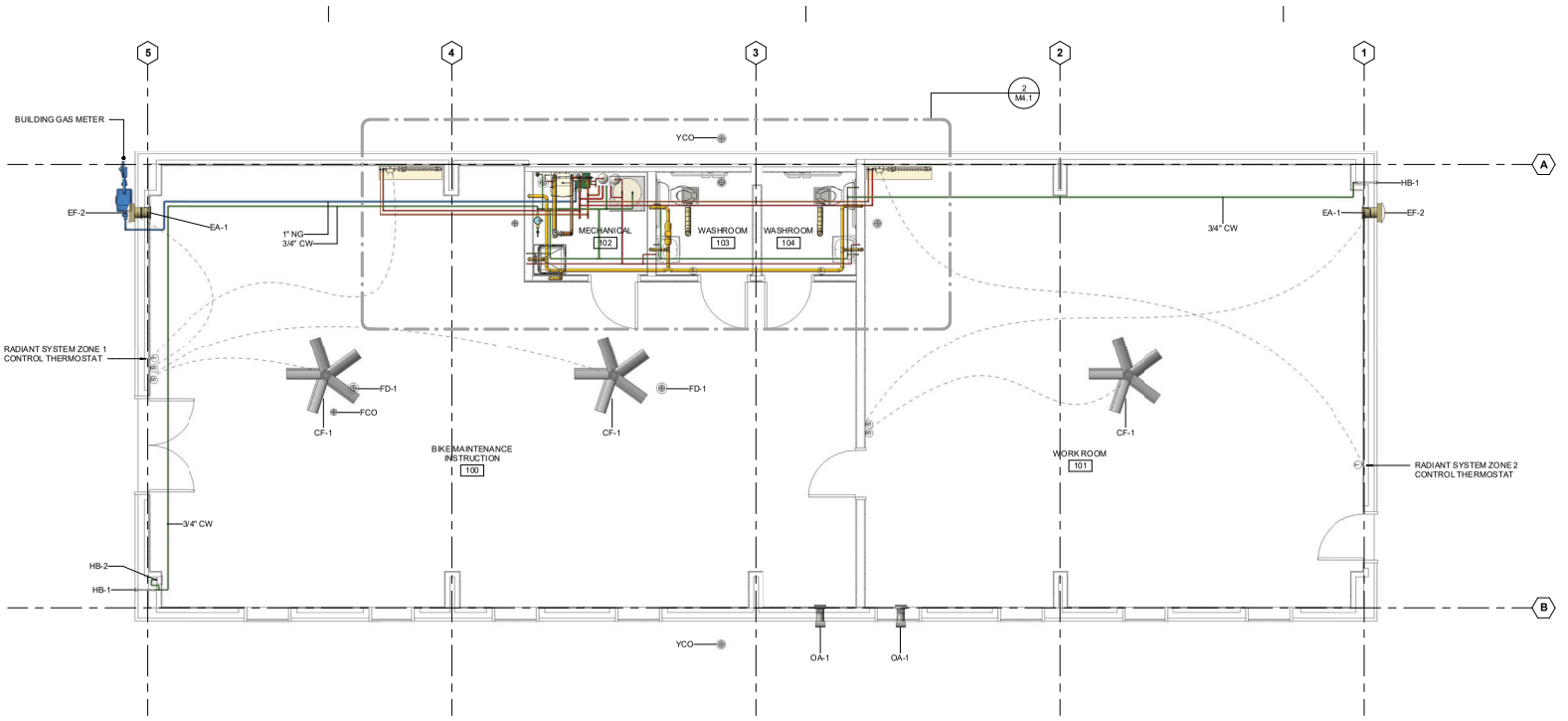
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SHEET CONTENTS
MECHANICAL PLAN - UNDERGROUND

M2.0

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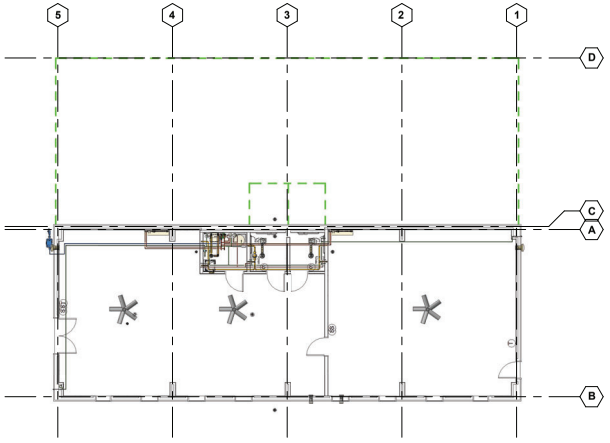
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MECHANICAL PLAN - FIRST FLOOR (BASE BID)

Scale: 1/4" = 1'-0"

N



ADDITIVE ALTERNATE 1 - CONTRACTOR TO PROVIDE THE FOLLOWING.

- MIRROR MECHANICAL SYSTEMS EXCEPT,
  1. EXTEND CW, HW, GHS, GHR, WASTE SERVICES FROM EXISTING MECHANICAL ROOM.
- COORDINATE WITH ARCHITECTURAL FOR SPACE CONFIGURATIONS AND PERMITING REQUIREMENTS.

MECHANICAL PLAN - FIRST FLOOR (ADDITIVE ALT. 1)

Scale: 3/32" = 1'-0"

N

PROJ.NO P21010
DRAWN JTC/RJW
CHECKED JTC
DATE 6/30/2022
FULL SIZE DRAWINGS: 22" x 34"

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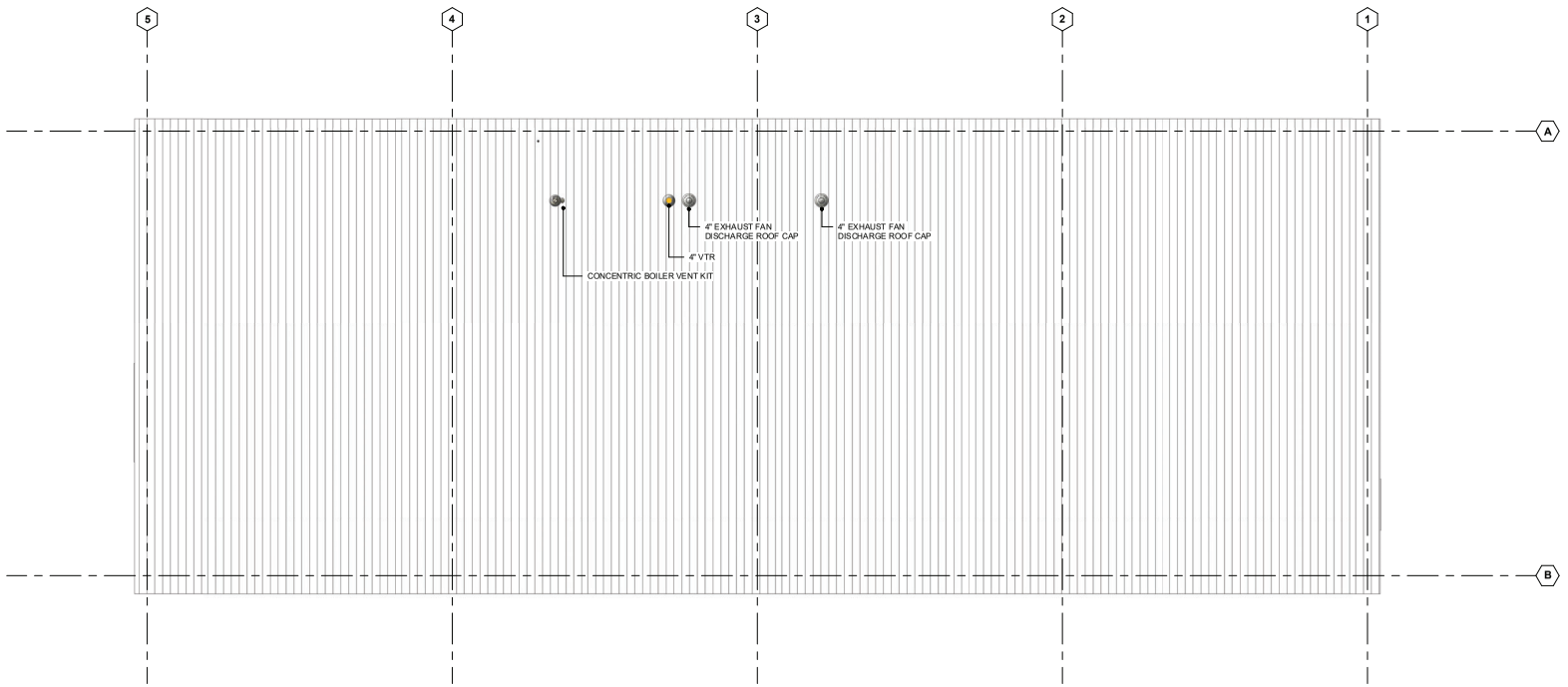
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SHEET CONTENTS
MECHANICAL PLAN - FIRST FLOOR

M2.1

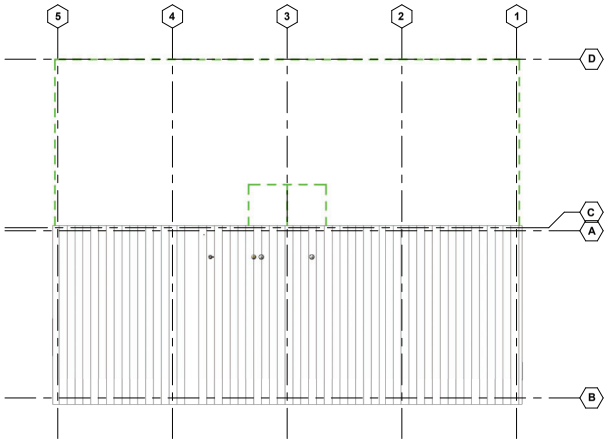
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MECHANICAL PLAN - ROOF (BASE BID)
Scale: 1/4" = 1'-0"

N



ADDITIVE ALTERNATE 1 - CONTRACTOR TO PROVIDE THE FOLLOWING,

- MIRROR MECHANICAL SYSTEMS EXCEPT,
  1. EXTEND CW, HW, GHS, GHR, WASTE SERVICES FROM EXISTING MECHANICAL ROOM.
- COORDINATE WITH ARCHITECTURAL FOR SPACE CONFIGURATIONS AND PERMITTING REQUIREMENTS.

MECHANICAL PLAN - ROOF (ADDITIVE ALT. 1)
Scale: 3/32" = 1'-0"

N

PROJ NO P21010
DRAWN JTC/RJW
CHECKED JTC
DATE 6/30/2022
FULL SIZE DRAWINGS: 22" x 34"

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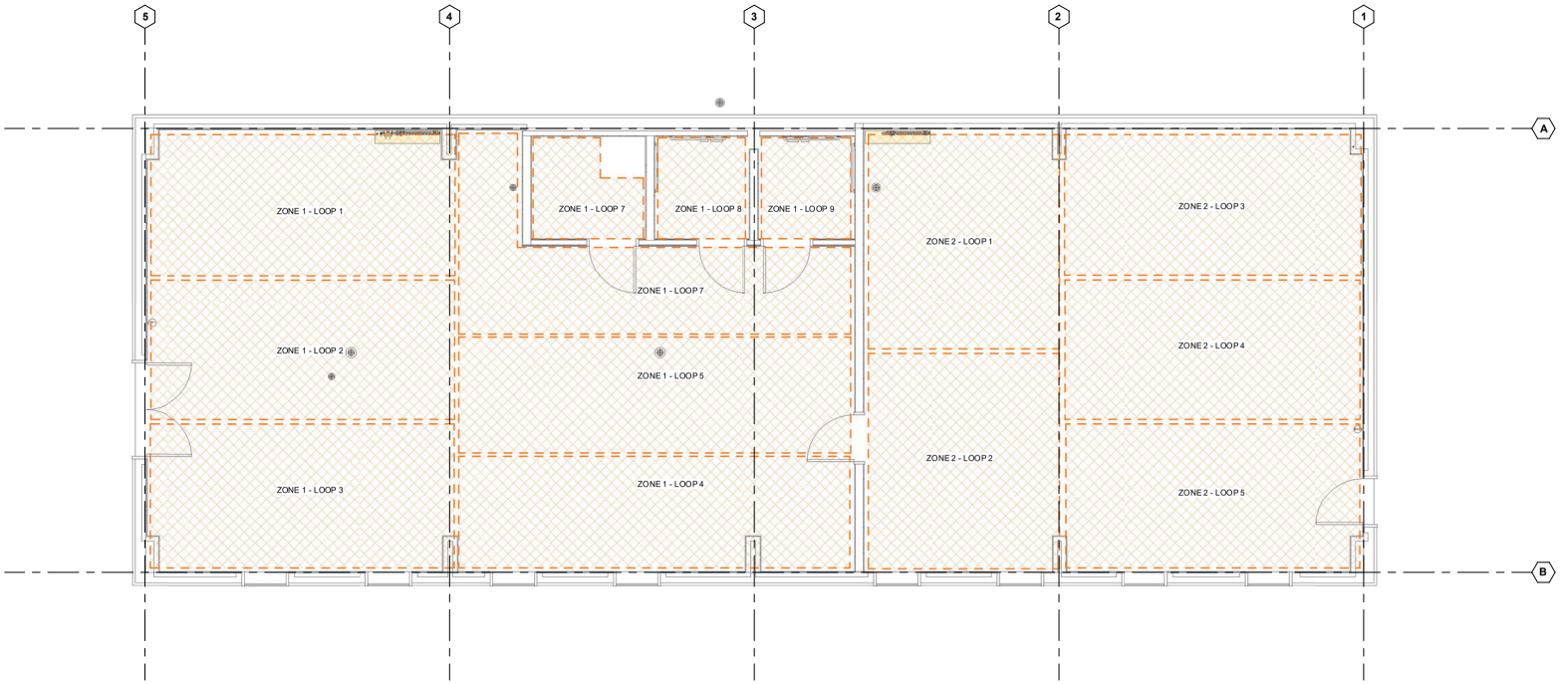
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SHEET CONTENTS
MECHANICAL PLAN - ROOF

M2.2

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MECHANICAL PLAN - RADIANT SYSTEM (BASE BID)

Scale: 1/4" = 1'-0"

N

RADIANT FLOOR SYSTEM SCHEDULE (BASE BID)

ZONE 1:

LOOP:	ZONE TYPE:	AREA:	SIZE:	SPACING:	LENGTH:	FLOW RATE:	PRESSURE DROP:
1	INTERIOR	180 SF	1/2"	12" O.C.	200 FT	0.7 GPM	6.2 FT W.C.
2	INTERIOR	180 SF	1/2"	12" O.C.	200 FT	0.7 GPM	6.2 FT W.C.
3	INTERIOR	180 SF	1/2"	12" O.C.	200 FT	0.7 GPM	6.2 FT W.C.
4	INTERIOR	180 SF	1/2"	12" O.C.	200 FT	0.7 GPM	6.2 FT W.C.
5	INTERIOR	180 SF	1/2"	12" O.C.	200 FT	0.7 GPM	6.2 FT W.C.
6	INTERIOR	180 SF	1/2"	12" O.C.	200 FT	0.7 GPM	6.2 FT W.C.
7	INTERIOR	180 SF	1/2"	12" O.C.	200 FT	0.7 GPM	6.2 FT W.C.
8	INTERIOR	40 SF	1/2"	12" O.C.	60 FT	0.1 GPM	0.1 FT W.C.
9	INTERIOR	35 SF	1/2"	12" O.C.	50 FT	0.1 GPM	0.1 FT W.C.
10	INTERIOR	35 SF	1/2"	12" O.C.	50 FT	0.1 GPM	0.1 FT W.C.
					TOTAL:	4.3 GPM	6.2 FT W.C.

HEATING LOAD: 36 MBH
MEAN WATER TEMPERATURE: 99 DEG F
TEMPERATURE DIFFERENTIAL: 20 DEG F

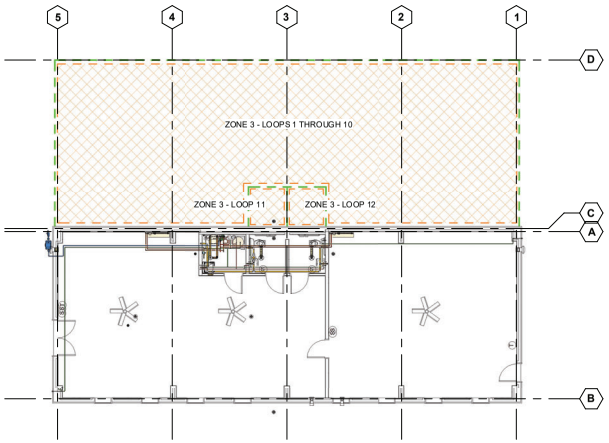
NOTE: PROVIDE ADDITIONAL RUN OUT TAIL PIECE LENGTH TO MATCH LOOP LAYOUT AS APPROPRIATE.

ZONE 2:

LOOP:	ZONE TYPE:	AREA:	SIZE:	SPACING:	LENGTH:	FLOW RATE:	PRESSURE DROP:
1	INTERIOR	175 SF	1/2"	12" O.C.	210 FT	0.7 GPM	7.3 FT W.C.
2	INTERIOR	175 SF	1/2"	12" O.C.	210 FT	0.7 GPM	7.3 FT W.C.
3	INTERIOR	175 SF	1/2"	12" O.C.	210 FT	0.7 GPM	7.3 FT W.C.
4	INTERIOR	175 SF	1/2"	12" O.C.	210 FT	0.7 GPM	7.3 FT W.C.
5	INTERIOR	175 SF	1/2"	12" O.C.	210 FT	0.7 GPM	7.3 FT W.C.
					TOTAL:	3.7 GPM	7.3 FT W.C.

HEATING LOAD: 31 MBH
MEAN WATER TEMPERATURE: 99 DEG F
TEMPERATURE DIFFERENTIAL: 20 DEG F

NOTE: PROVIDE ADDITIONAL RUN OUT TAIL PIECE LENGTH TO MATCH LOOP LAYOUT AS APPROPRIATE.



ADDITIVE ALTERNATE 1 - CONTRACTOR TO PROVIDE THE FOLLOWING,

- MIRROR MECHANICAL SYSTEMS EXCEPT,
  1. EXTEND CW, HW, GHS, GHR, WASTE SERVICES FROM EXISTING MECHANICAL ROOM.
- COORDINATE WITH ARCHITECTURAL FOR SPACE CONFIGURATIONS AND PERMITING REQUIREMENTS.

RADIANT FLOOR SYSTEM SCHEDULE (ADDITIVE ALTERNATE 1)

ZONE 3:

LOOP:	ZONE TYPE:	AREA:	SIZE:	SPACING:	LENGTH:	FLOW RATE:	PRESSURE DROP:
1	INTERIOR	210 SF	1/2"	12" O.C.	240 FT	0.7 GPM	8.1 FT W.C.
2	INTERIOR	210 SF	1/2"	12" O.C.	240 FT	0.7 GPM	8.1 FT W.C.
3	INTERIOR	210 SF	1/2"	12" O.C.	240 FT	0.7 GPM	8.1 FT W.C.
4	INTERIOR	210 SF	1/2"	12" O.C.	240 FT	0.7 GPM	8.1 FT W.C.
5	INTERIOR	210 SF	1/2"	12" O.C.	240 FT	0.7 GPM	8.1 FT W.C.
6	INTERIOR	210 SF	1/2"	12" O.C.	240 FT	0.7 GPM	8.1 FT W.C.
7	INTERIOR	210 SF	1/2"	12" O.C.	240 FT	0.7 GPM	8.1 FT W.C.
8	INTERIOR	210 SF	1/2"	12" O.C.	240 FT	0.7 GPM	8.1 FT W.C.
9	INTERIOR	210 SF	1/2"	12" O.C.	240 FT	0.7 GPM	8.1 FT W.C.
10	INTERIOR	210 SF	1/2"	12" O.C.	240 FT	0.7 GPM	8.1 FT W.C.
11	INTERIOR	35 SF	1/2"	12" O.C.	50 FT	0.1 GPM	0.0 FT W.C.
12	INTERIOR	35 SF	1/2"	12" O.C.	50 FT	0.1 GPM	0.0 FT W.C.
					TOTAL:	8.1 GPM	8.1 FT W.C.

HEATING LOAD: 60 MBH
MEAN WATER TEMPERATURE: 99 DEG F
TEMPERATURE DIFFERENTIAL: 20 DEG F

NOTE: PROVIDE ADDITIONAL RUN OUT TAIL PIECE LENGTH TO MATCH LOOP LAYOUT AS APPROPRIATE.

MECHANICAL PLAN - RADIANT SYSTEM (ADDITIVE ALT. 1)

Scale: 3/32" = 1'-0"

N

PROJ.NO: P21010
DRAWN: JTC/RJW
CHECKED: JTC
DATE: 6/30/2022
FULL SIZE DRAWINGS: 22" x 34"

MAINTENANCE/STORAGE FACILITY
CONSTRUCTION DOCUMENTS
ACADEMY CHARTER SCHOOL
801 EAST ARCTIC AVENUE

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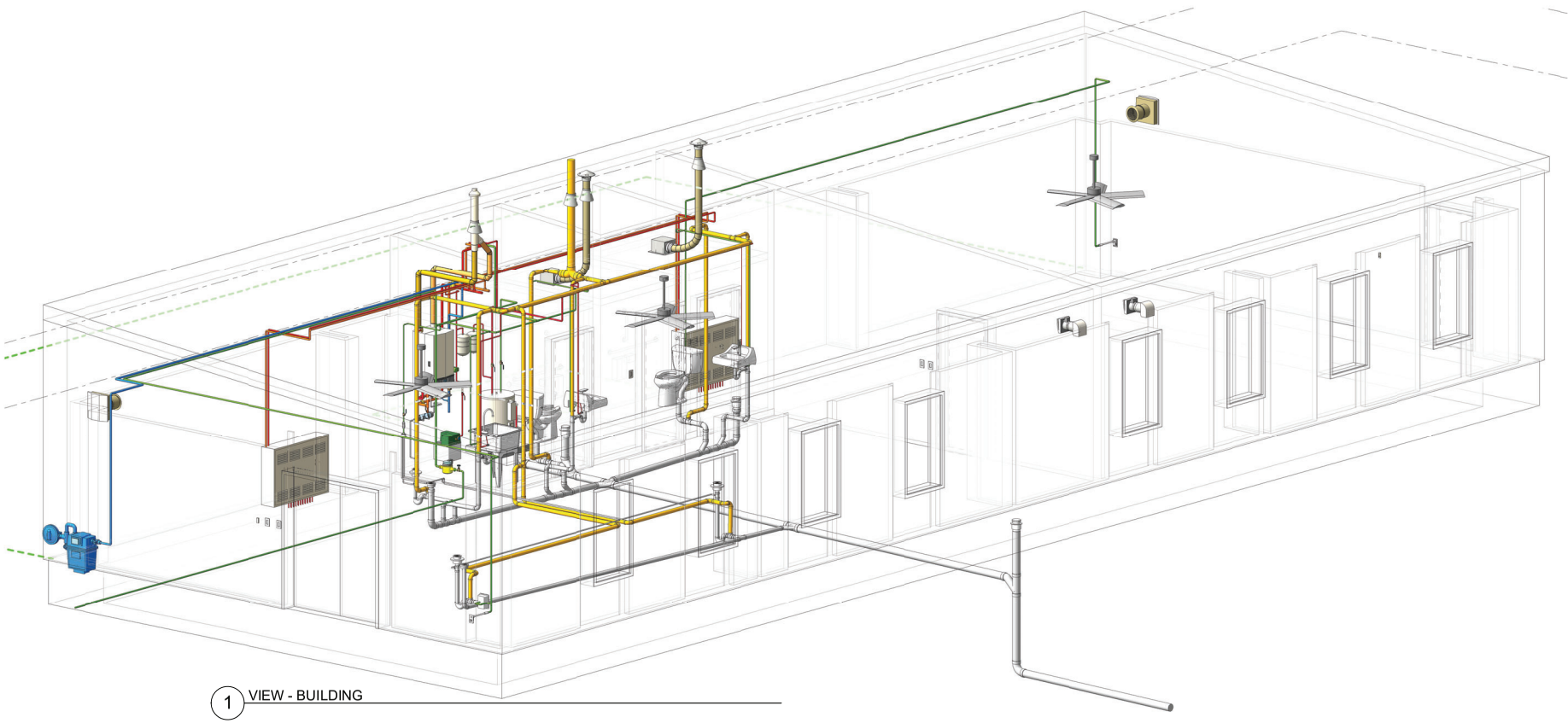
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SHEET CONTENTS
MECHANICAL PLAN - RADIANT SYSTEM PLAN

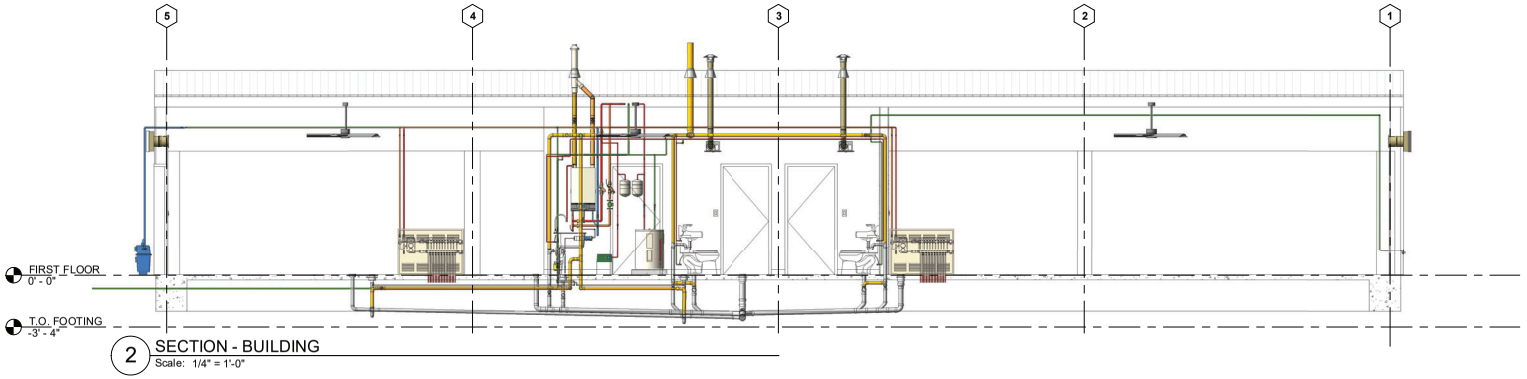
M2.3

BID #B23-01

6/30/2022 CONSTRUCTION DOCUMENTS



1 VIEW - BUILDING



2 SECTION - BUILDING
Scale: 1/4" = 1'-0"

PROJ NO P21010
DRAWN JTC/RJW
CHECKED JTC
DATE 6/30/2022
FULL SIZE DRAWINGS: 22" x 34"

MAINTENANCE/STORAGE FACILITY
CONSTRUCTION DOCUMENTS
ACADEMY CHARTER SCHOOL
801 EAST ARCTIC AVENUE

STATE OF ALASKA
49 TH
JENNIE T. CHER
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REGISTERED PROFESSIONAL ENGINEER

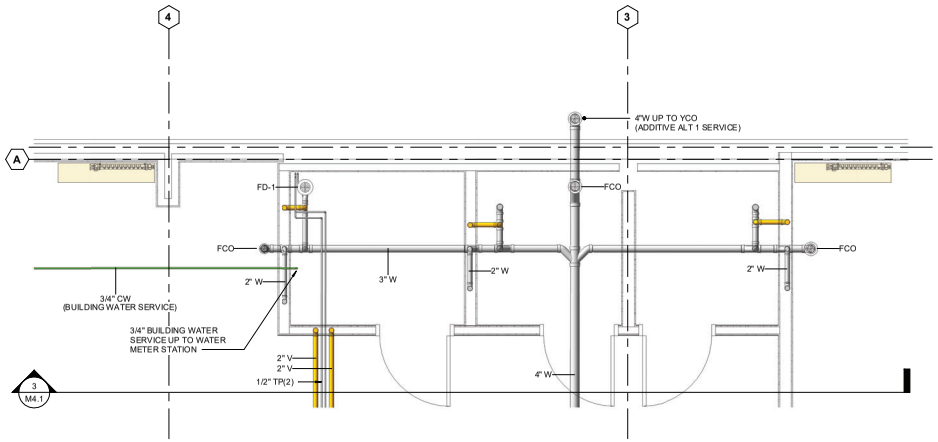
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Wolf ARCHITECTURE

SHEET CONTENTS
MECHANICAL BUILDING VIEWS AND SECTIONS

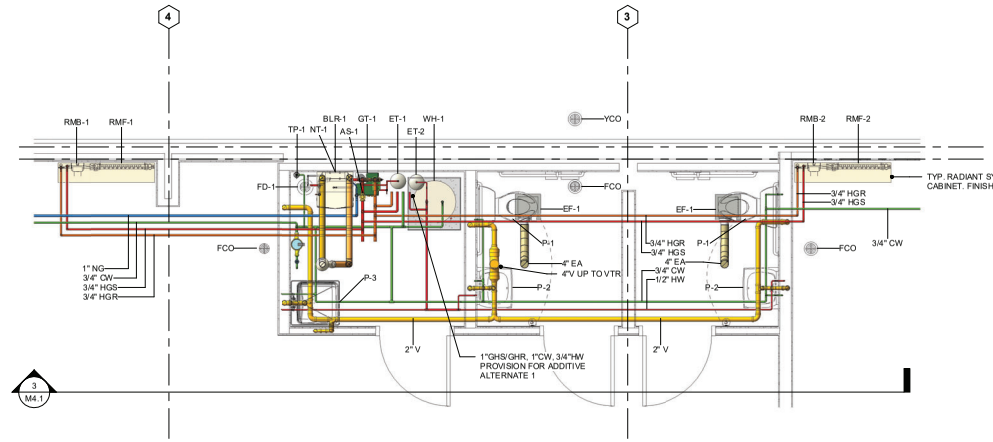
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BID #B23-01

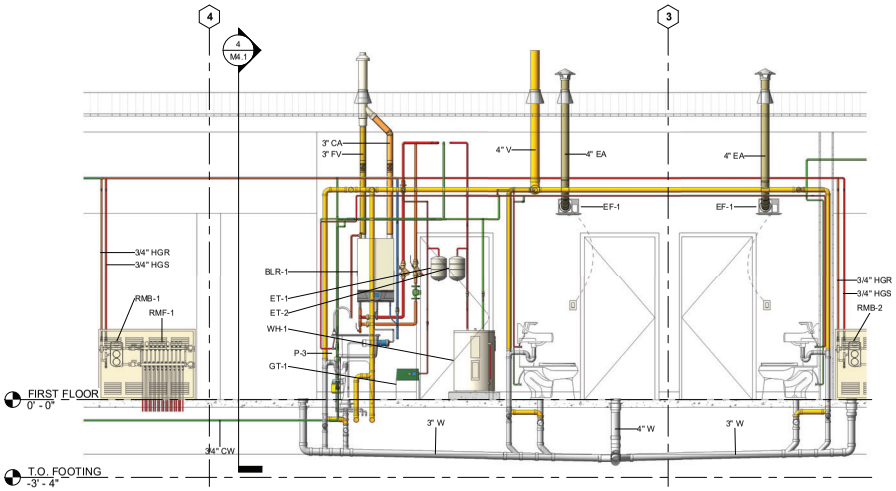
6/30/2022 CONSTRUCTION DOCUMENTS



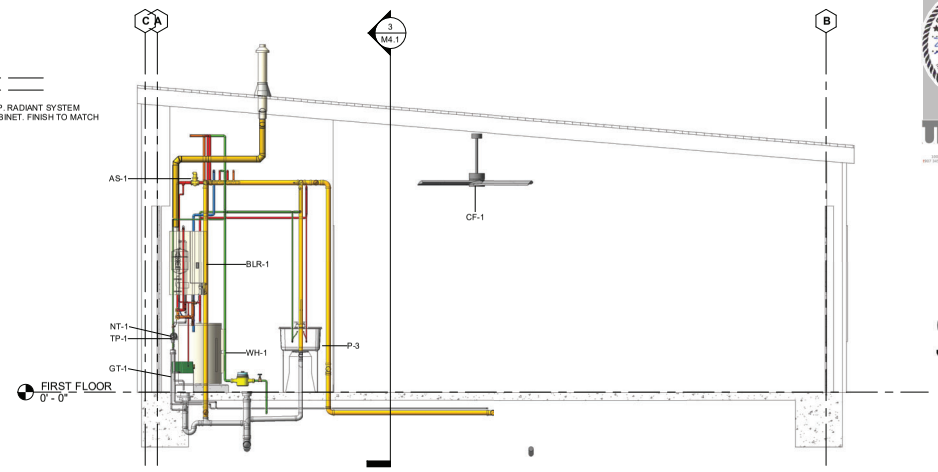
1 MECHANICAL AREA PLAN - UNDERFLOOR
Scale: 3/8" = 1'-0"



2 MECHANICAL AREA PLAN
Scale: 3/8" = 1'-0"



3 MECHANICAL SECTION 1
Scale: 3/8" = 1'-0"



4 MECHANICAL SECTION 2
Scale: 3/8" = 1'-0"

PROJ.NO P21010
DRAWN JTC/RJW
CHECKED JTC
DATE 6/30/2022
FULL SIZE DRAWINGS: 22" x 34"

MAINTENANCE/STORAGE FACILITY
CONSTRUCTION DOCUMENTS
ACADEMY CHARTER SCHOOL
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SHEET CONTENTS
MECHANICAL AREA PLAN, SECTIONS, AND ELEVATIONS

M4.1

BID #B23-01

6/30/2022 CONSTRUCTION DOCUMENTS

IDENTIFICATION

SYMBOL	DESCRIPTION
1	REFERENCED SHEET NOTE
2	GENERAL SHEET NOTE
XXX	FEEDER IDENTIFICATION
	NORTH ARROW
SCC: 7kA	SHORT CIRCUIT RATING
A-2	CIRCUIT / PANEL
200/3	BREAKER SIZE / CONNECTION POINT

DETAIL REFERENCE	SECTION/ELEVATION REFERENCE
X / X-XXX	DETAIL # / PAGE #

LIGHTING

SYMBOL	DESCRIPTION
$	SINGLE POLE SWITCH
$3	THREE-WAY SWITCH
$4	FOUR-WAY SWITCH
$D	DIMMER SWITCH
$C	DOOR JAMB SWITCH
	EMERGENCY PUSH BUTTON

SEE LIGHTING FLOOR PLANS AND LIGHTING FIXTURE SCHEDULE FOR SYMBOLS AND SPECIFICATIONS

DATA

SYMBOL	DESCRIPTION
	TELECOMMUNICATION OUTLET - WALL MOUNTED 3 DROPS OF CAT 6 UNLESS OTHERWISE NOTED
	TELECOMMUNICATION OUTLET - CEILING MOUNTED
	RG6 COAXIAL CABLE - WALL MOUNTED 1 DROP UNLESS OTHERWISE NOTED

ARCHITECTURAL MODEL RECEIVED: 6/30/2022

POWER

SYMBOL	DESCRIPTION
	SINGLE RECEPTACLE
	DUPLEX RECEPTACLE
	QUADRUPLEX RECEPTACLE
	SPECIAL RECEPTACLE
	JUNCTION BOX OR CONNECTION TO EQUIPMENT
	GROUND-FAULT CIRCUIT INTERRUPTER
	TAMPER RESISTANT
	GFCI AND TAMPER RESISTANT
	GFCI AT BREAKER
	FLOOR MOUNTED
	CEILING MOUNTED
	MOTOR
	DISCONNECT
	FUSED DISCONNECT
	COMBINATION STARTER/FUSED DISCONNECT
	STARTER OR CONTACTOR
	ELECTRICAL PANEL
	TRANSFORMER
	PAD-MOUNTED TRANSFORMER
	POLE-MOUNTED

CT AND METER	METER MAIN	METER PACK

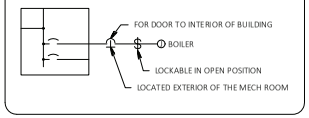
PANEL	GENERATOR	TRANSFER SWITCH
	G	

BOND GROUND AND NEUTRAL	DO NOT BOND
N G	N G

ABBREVIATION

ABBREV.	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
APPROX	APPROXIMATELY
AHJ	AUTHORITY HAVING JURISDICTION
AL	ALUMINUM
ATS	AUTOMATIC TRANSFER SWITCH
AVR	AUDIO-VIDEO RECEIVER
C.O.	CONDUIT ONLY
COAX	COAXIAL
CT	CURRENT TRANSFORMER
CU	COPPER
(D)	DEMOLISH
DB	DECIBEL
E	ELECTRICAL
(E)	EXISTING
EL	EMERGENCY LIGHT
ELU	EMERGENCY LIGHTING UNIT
ENL	EMERGENCY NIGHT LIGHT
ETR	EXISTING TO REMAIN
(F)	FUTURE
FLA	FULL LOAD AMPERAGE
HZ	HERTZ
HP	HORSEPOWER
IAW	IN ACCORDANCE WITH
KVA	KILO VOLT-AMPS
KW	KILOWATT
MAX	MAXIMUM
MDP	MAIN DISTRIBUTION PANEL
MDS	MAIN DISTRIBUTION SWITCHBOARD
MLO	MAIN LUG ONLY
MIN	MINIMUM
MTS	MANUAL TRANSFER SWITCH
MW	MEGAWATT
(N)	NEW
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OH	OVERHEAD
PH	PHASE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PMCS	POWER MONITORING CONTROL SYSTEM
PRI	PRIMARY
SEC	SECONDARY
SMR	SURFACE MOUNTED RACEWAY
SPD	SURGE PROTECTION DEVICE
TCS	TERMINAL CONSTRUCTION STANDARDS
TR	TELECOMMUNICATION ROOM
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS OR VOLTAGE
VAC	VOLTAGE (ALTERNATING CURRENT)
VDC	VOLTAGE (DIRECT CURRENT)
VFD	VARIABLE FREQUENCY DRIVE
VR	VANDAL RESISTANT
VSD	VARIABLE SPEED DRIVE
W	WATT
WP	WEATHERPROOF
WG	WIRE GUARD
XFER	TRANSFER
XFMR	TRANSFORMER

BOILER SPECIFICATION DETAIL



SPECIFICATIONS

SCOPE OF WORK:
FURNISH AND INSTALL ALL MATERIAL AND EQUIPMENT AS INDICATED ON THESE DRAWINGS AND SPECIFICATIONS. PROVIDE COMPLETE AND WORKING SYSTEMS. SECURE AND PAY FOR ALL FEES, PERMITS, ETC., REQUIRED BY FEDERAL, STATE AND LOCAL AGENCIES AND ALL LOCAL UTILITY COMPANIES.

STANDARDS, CODES AND REGULATIONS:
COMPLY WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE, INTERNATIONAL BUILDING CODE, INTERNATIONAL FIRE CODE AND THE ADA STANDARDS FOR FACILITY ACCESSIBILITY BY THE PHYSICALLY HANDICAPPED INCLUDING ALL STATE AND LOCAL AMENDMENTS TO THESE CODES.

ALL SERVICE EQUIPMENT SHALL BE APPROVED BY THE UTILITY COMPANY PRIOR TO ORDERING/PURCHASING. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE UTILITY COMPANY STANDARDS.

MATERIALS AND EQUIPMENT:
ALL MATERIALS AND EQUIPMENT PROVIDED FOR THE PROJECT SHALL BE ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION AS SUITABLE FOR THE USE INTENDED. ALL EQUIPMENT SHALL BEAR THE SEAL OF A NATIONALLY RECOGNIZED TESTING LABORATORY ACCEPTABLE TO THE AHJ.

DRAWINGS:
THE DRAWINGS ARE DIAGRAMMATIC UNLESS SPECIFICALLY DIMENSIONED. BRING QUESTIONABLE ITEMS AND CONFLICTS AMONG PLANS AND SPECIFICATIONS, GOVERNING CODES OR UTILITIES REGULATIONS TO THE ATTENTION OF THE ENGINEER PRIOR TO THE BID. CODES, ORDINANCES, REGULATIONS, MANUFACTURER'S INSTRUCTIONS OR STANDARDS TAKE PRECEDENCE OVER THE DRAWINGS AND SPECIFICATIONS.

WORKMANSHIP:
INSTALLATION OF ALL WORK SHALL BE MADE SO THAT ITS SEVERAL COMPONENT PARTS SHALL FUNCTION AS A WORKABLE SYSTEM COMPLETE WITH ALL ACCESSORIES NECESSARY FOR ITS OPERATION. INSTALL ALL MATERIAL AND EQUIPMENT PER THE MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS AND PER NECA STANDARDS. MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL CONFORM WITH APPLICABLE INDUSTRY, NEMA AND UL STANDARDS WHERE APPLICABLE.

IDENTIFICATION:
PROVIDE ENGRAVED THREE-LAYER LAMINATED PLASTIC NAMEPLATES WITH WHITE LETTERS ON A BLACK BACKGROUND TO IDENTIFY ALL ELECTRICAL DISTRIBUTION AND CONTROL EQUIPMENT. LETTER HEIGHTS SHALL BE 1/8 INCH FOR INDIVIDUAL SWITCHES, MOTOR STARTERS AND LOADS SERVED AND 1/4 INCH ON PANELBOARDS. SECURE NAMEPLATES TO EQUIPMENT FRONTS USING SCREWS, RIVETS OR ADHESIVES. LABEL EACH CONTROLLER AT EACH TERMINATION OR INTERCONNECTION OF WIRING IN PANEL BOARDS, GUTTERS, PULL BOXES, OUTLETS AND LOAD CONNECTIONS. LABEL SHALL DENOTE PANEL NAME AND CIRCUIT NUMBER. ALL OTHER WIRING SHALL BE LABELED WITH A UNIQUE DESIGNATION. THE DESIGNATIONS SHALL ALSO BE SHOWN ON AS-BUILT DIAGRAMS. COLOR CODE PHASE CONDUCTORS PER CONDUCTOR SPECIFICATION.

CONTRACTOR TO PROVIDE A PANEL SCHEDULE COPY IN EACH RESPECTIVE PANEL. PRINT OF SCHEDULES SHALL NOT HAVE TEXT SMALLER THAN 3/32". ANY CIRCUIT CHANGES SHALL BE REFLECTED IN THE FINAL PANEL SCHEDULE. ALL POSTED PANEL SCHEDULES MUST MEET THE REQUIREMENTS OF NEC 408.4 FOR CIRCUIT IDENTIFICATION.

CONDUCTORS:
BRANCH CIRCUIT WIRING MAY BE THHN OR XHHW INSULATED CONDUCTOR. WIRING WHICH ENTERS AREAS EXPOSED TO THE OUTDOORS, SHALL BE TYPE XHHW-2 INSULATED. ALL POWER AND CONTROL CONDUCTORS SHALL BE SOLID OR CLASS B OR C STRANDED, ANNEALED COPPER WITH TYPE THHN OR XHHW-2, 600V INSULATION. MINIMUM BRANCH CIRCUIT CONDUCTOR SIZE SHALL BE #12 AWG. MINIMUM CONTROL CIRCUIT CONDUCTOR SIZE SHALL BE #14 AWG. PULL ALL CONDUCTORS INTO THE RACEWAY AT THE SAME TIME. USE UL LISTED WIRE PULLING LUBRICANT IF REQUIRED. OBSERVE NEC REQUIREMENTS FOR DERATING AND CONDUIT FILL. COLOR CODE CONDUCTORS BLACK, RED, BLUE, WHITE, AND GREEN FOR 208Y/120V CIRCUITS, BROWN, ORANGE, YELLOW, GREEN AND ANY COLOR OTHER THAN GREEN WITH A WHITE STRIPE FOR 480Y/277V CIRCUITS. USE PROPERLY SIZED, INSULATED SPRING WIRE CONNECTORS WITH PLASTIC CAPS FOR ALL CONDUCTORS #8 AWG AND SMALLER. TERMINATE #6 AWG AND LARGER CONDUCTORS WITH INSULATED CRIMP OR COMPRESSION TYPE CONNECTORS. IF ALUMINUM CONDUCTORS ARE ALLOWED TO BE USED BY THESE DRAWINGS, THE CONTRACTOR SHALL PROTECT AGAINST OVER TORQUING BY USING A TORQUE WRENCH IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

PENETRATIONS OF FIRE RATED ASSEMBLIES AND BARRIERS:
ALL ELECTRICAL PENETRATIONS IN FIRE RATED ASSEMBLIES AND BARRIERS IN WALLS, CEILINGS AND FLOORS SHALL BE SEALED IN ACCORDANCE WITH NEC ARTICLE 300-21 AND THE SPECIFIED UL RATING LISTED IN THE DRAWINGS, TO INCLUDE OTHER DISCIPLINE'S DRAWINGS AND SPECIFICATIONS. ALL HOLES OR VOIDS CREATED TO EXTEND OR REMOVE ELECTRICAL SYSTEMS THROUGH FIRE RATED WALLS, CEILINGS AND FLOORS SHALL BE SEALED WITH AN ASBESTOS-FREE FIRE STOPPING MATERIAL RATED FOR THE INTENDED USE. MATERIALS SHALL BE SUITABLE FOR THE FIRE STOPPING OF PENETRATIONS AND SHALL BE CAPABLE OF MAINTAINING AN EFFECTIVE BARRIER AGAINST FLAME, SMOKE AND GASES IN COMPLIANCE WITH THE REQUIREMENTS OF ASTM AND UL RATINGS. THE FIRE RATING OF THE ELECTRICAL EQUIPMENT ASSEMBLY SHALL BE THE SAME AS THE SPECIFIED RATING FOR THE WALL, CEILING AND FLOOR, AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS FOR THE FIRE RATED ASSEMBLY.

SUPPORTS:
SUPPORT ALL ELECTRICAL EQUIPMENT INCLUDING, BUT NOT LIMITED TO, LIGHT FIXTURES, BOXES, CONDUIT, ETC., PER NEC. PROVIDE NON-METALLIC SUPPORTS, STRUT, HANGARS AND OTHER MATERIAL WHERE REQUIRED FOR CORROSION RESISTANCE.

SEISMIC RESTRAINT:
ELECTRICAL SYSTEMS SHALL BE SEISMICALLY RESTRAINED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE, 2012 EDITION, SECTION 1613 AND ASCE 7 AS REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEISMIC RESTRAINT DESIGN FOR ALL EQUIPMENT USING PRE-MANUFACTURED SYSTEMS OR BY RETAINING THE SERVICES OF A PROFESSIONAL STRUCTURAL ENGINEER LICENSED BY THE STATE OF ALASKA. THE CONTRACTOR SHALL PROVIDE STRUCTURAL ENGINEERING CALCULATIONS FOR REVIEW AND APPROVAL BASED ON EQUIPMENT TO BE USED ON THE PROJECT.

CONDUIT:
CONDUIT SHALL BE PER THIS SPECIFICATION, UNLESS OTHERWISE NOTED ON THE DRAWINGS. CONDUIT SHALL BE RIGID METAL CONDUIT (RMC), INTERMEDIATE METAL CONDUIT (IMC), ELECTRICAL METALLIC TUBING (EMT), OR RIGID NON-METALLIC CONDUIT (RNMC). RMC OR IMC SHALL BE USED IN ALL OUTDOOR AREAS. EMT SHALL NOT BE USED OUTDOORS. CONDUIT FITTINGS FOR RMC AND IMC SHALL BE SCREWED TYPE. THREADLESS COMPRESSION AND SET SCREW FITTINGS SHALL NOT BE USED WITH RMC AND IMC CONDUIT. ALL EMT CONDUIT FITTINGS SHALL BE STEEL OR DIE-CAST, COMPRESSION OR SET SCREW TYPE. CONDUIT OUTLET BODIES AND BOXES FOR USE WITH RMC AND IMC CONDUIT SHALL BE GALVANIZED, MALLEABLE IRON WITH THREADED HUBS AND GASKETED COVERS OF THE SAME MATERIAL AS THE BODY OR BOX. CONDUIT BODIES FOR USE WITH EMT MAY BE CAST ALUMINUM WITH COVERS PROVIDED WITH THE BODY. UNDERGROUND CONDUITS SHALL BE RMC, IMC, HDPE SCHEDULE 40/80 OR PVC SCHEDULE 40/80.

MAKE CONNECTIONS TO MOTORS, TRANSFORMERS AND OTHER EQUIPMENT WITH LIQUIDTIGHT FLEXIBLE METAL CONDUIT OF GALVANIZED STEEL OR ALUMINUM CORE AND OUTER JACKET OF THERMOPLASTIC MATERIAL SUITED FOR THE INTENDED ENVIRONMENT. USE FITTINGS LISTED FOR USE WITH LIQUIDTIGHT FLEXIBLE METAL CONDUIT OF MALLEABLE IRON OR STEEL CONSTRUCTION, ELECTRO ZINC GALVANIZED.

OUTLET BOXES:
PROVIDE ELECTRO-GALVANIZED OR CADMIUM PLATED, ONE PIECE STEEL OUTLET BOXES 4" SQUARE BY 1 1/2" DEEP MINIMUM FOR USE IN INTERIOR AREAS. PROVIDE OUTLET BOXES AND DEVICE COVERS AS SHOWN ON THE DRAWINGS, AND AS REQUIRED FOR SPLICES, TAPS, WIRE PULLING, EQUIPMENT CONNECTIONS, DEVICE INSTALLATION AND CODE COMPLIANCE. FOR OUTDOOR INSTALLATION USE GALVANIZED, CAST, MALLEABLE IRON BOXES WITH INTEGRAL HUBS AND COVERS AND GASKETS FROM THE SAME MANUFACTURER. BELL BOXES ARE NOT ACCEPTABLE WITH RIGID CONDUIT. BELL BOXES MOUNTED ON THE BUILDING EXTERIOR AND FED WITH EMT OR MC CABLE ARE PERMITTED PROVIDED THE WIRING IS CONCEALED.

DEVICES:
RECEPTACLES - PROVIDE NEMA 5-20R OR 5-30R, SINGLE OR DUPLEX, GROUNDING, BACK AND SIDE WIRED, UL NO. 498 APPROVED, NYLON FACE, BRASS TERMINAL SCREWS, SELF-GROUNDING, CERTIFIED TO COMPLY WITH NEMA WD-1, SCREW TERMINAL OR SCREW CLAMP TYPE ONLY. BACK WIRING SHALL BE CLAMP-TYPE TERMINALS WHICH WILL ACCEPT UP TO #10 WIRE. SPRING CLAMPED TYPE TERMINATIONS ARE NOT ACCEPTABLE. PROVIDE DUPLEX CONVENIENCE RECEPTACLES WITH CLASS 3 INTEGRAL GROUND FAULT CURRENT INTERRUPTER AND SPECIFIC USE RECEPTACLES WHERE INDICATED ON THE DRAWINGS. INSTALL RECEPTACLES WITH GROUNDING POLE ON BOTTOM. INSTALL TAMPER RESISTANT OUTLETS IN ALL LOCATIONS SPECIFIED IN THE NEC.

SWITCHES - NEMA WD-1 20 A, 277 OR 120 V AC, BACK AND SIDE WIRED; BACK WIRING SHALL BE CLAMP-TYPE TERMINALS WHICH WILL ACCEPT UP TO #10 WIRE. GENERAL USE SNAP SWITCH, UL NO. 20 LISTED, SELF- GROUNDING BINDING SCREW-TYPE TERMINALS WITH WHITE TOGGLE, NUMBER OF POLES AS INDICATED ON THE DRAWINGS. SCREW TERMINAL OR SCREW CLAMP TYPE ONLY. INSTALL SWITCHES WITH OFF POSITION DOWN.

DEVICE PLATES - PROVIDE UL LISTED ONE PIECE ROUNDED EDGE "STREAMLINE" DESIGN FLUSH DEVICE PLATES, COUNTERSUNK SCREWS TO MATCH DEVICE PLATE.

ALL DEVICES SHALL BE FLUSH MOUNTED UNLESS OTHERWISE SPECIFIED. ALL DEVICES AND FACE PLATES SHALL MATCH IN COLOR.

PANELBOARDS:
PROVIDE NEW BRANCH CIRCUIT BREAKERS OF THE SAME TYPE AS THE PANELBOARD AND RATING AS SHOWN ON THE DRAWINGS. PRIOR TO COMPLETION OF THE PROJECT, PROVIDE A NEWLY TYPED CIRCUIT DIRECTORY FOR EACH OF THE PANELBOARDS SHOWING CIRCUITING ARRANGEMENT. PANELS AND CIRCUIT BREAKERS SHALL HAVE FAULT RATINGS THAT MEET OR EXCEED THE SHORT CIRCUIT RATINGS SHOWN ON THE ONE-LINE DIAGRAM.

THE ELECTRICAL ONE-LINE DIAGRAM TAKES PRECEDENCE FOR DEFINING AND SPECIFYING ELECTRICAL CHARACTERISTICS, TO INCLUDE VOLTAGE, AMPERAGE, BREAKER SPACES, AND SHORT CIRCUIT VALUES RELATIVE TO PANELS, SWITCHGEAR, TRANSFORMERS AND SIMILAR ELECTRICAL EQUIPMENT.

FIELD MARKING
LABEL MAXIMUM AVAILABLE FAULT CURRENT PER NEC 110.24

SURGE PROTECTION DEVICE (SPD)
ALL PANELS SHALL HAVE A SURGE PROTECTION DEVICE AT EACH ELECTRICAL PANEL AND LOAD CENTER. ALL SURGE PROTECTION DEVICES SHALL COME EQUIPPED WITH A SERVICE ALARM THAT NOTIFIES THE OWNER IF THE SURGE PROTECTION DEVICE REQUIRES MAINTENANCE OR REPLACEMENT. SURGE PROTECTION DEVICE SHALL PROVIDE MINIMUM 100,000 AMPS PER PHASE PROTECTION.

PROJECT SCOPE OF WORK

THIS PROJECT CONSISTS OF A NEW PEMB OF APPROXIMATELY 2,400 SF. THE BUILDING WILL MOSTLY BE AN OPEN STRUCTURE WITH CLASSROOMS AND TWO BATHROOMS. THE BUILDING WILL HAVE ONE OVERHEAD DOOR, AND SEVERAL PERSONNEL DOORS TO THE EXTERIOR. A NEARBY EXISTING METER/PANEL WILL BE USED TO POWER THE FACILITY. THE FLOORPLAN DESIGN WILL BE PROVIDED BY WOLF ARCHITECTURE, IN CAD OR REVIT FORMAT. TWO DESIGN REVIEWS ARE INCLUDED.

CONTRACTOR DESIGN-BUILD REQUIREMENTS

1. CONTRACTOR SHALL INCLUDE ANY ADDITIONAL POWER FOR ALL EQUIPMENT NEEDED FOR THE SUCESSFUL COMPLETION OF THE PROJECT, WHETHER SHOWN ON THESE DRAWINGS OR NOT.
2. FINAL PLACEMENT FOR EXTERIOR BUILDING DISCONNECT TO BE DETERMINED BY CONTRACTOR.
3. CONNECT BUILDING POWER TO NEARBY BUILDING, SIZE FEEDERS FOR VOLTAGE DROP AND SHORT CIRCUIT. ASSUME SOURCE IS 100' DISTANCE.
4. VERIFY BRANCH CIRCUITRY WITH ACTUAL EQUIPMENT
5. PROPOSE SWITCHING FOR ALL SWITCHING, IF DIFFERENT THAN SHOWN.
6. VERIFY FINAL BUILDING LOAD FOR FINAL SIZE OF PANEL.
7. PROVIDE A DATA LAYOUT, IT CABINET, PATCH PANELS, CERTIFIED TESTING FOR A COMPLETE SYSTEM READY FOR OUTSIDE CONNECTION.
8. CONTRACTOR SHALL DESIGN AND INSTALL A FIRE ALARM SYSTEM WITH PULL STATIONS, HORN, STROBES AND SMOKE DETECTION IN ACCORDANCE WITH NFPA AND STATE OF ALASKA CRITERIA.

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MSB STORAGE BUILDING
PALMER, AK

REVISION SCHEDULE

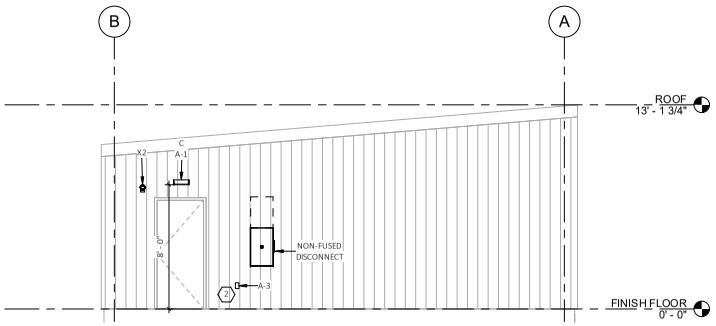
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PERMIT NUMBER

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CHECKED BY: SB	JOB NO.: Q21052

SHEET TITLE
LEGEND AND SPECIFICATIONS

SHEET NO.
E-001
BID #B23-01

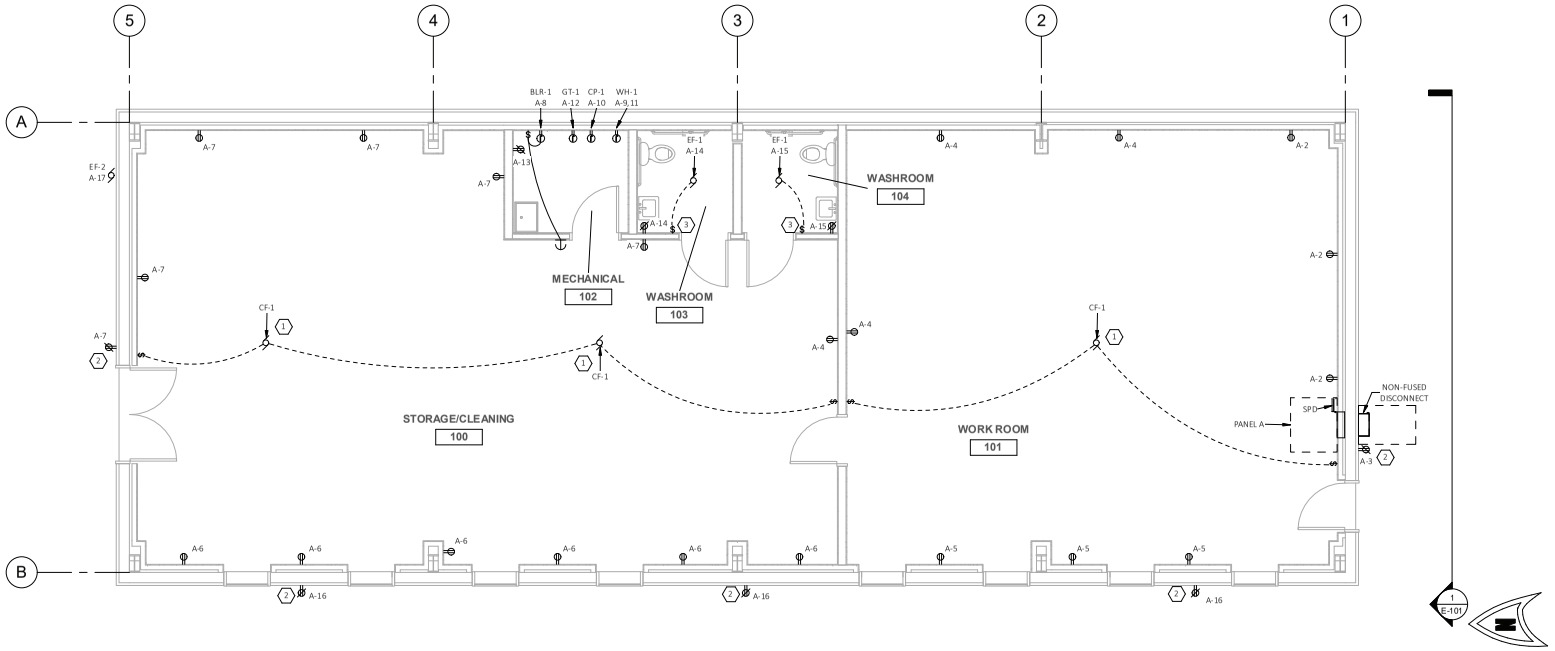


1 SERVICE ELEVATION

1/4" = 1'-0"

HEX NOTES

#	DESCRIPTION
1	FAN CONTROLS SHALL INCLUDE FORWARD, REVERSE, EACH WITH 3-SPEEDS.
2	RECEPTACLE SHALL BE WEATHER-RESISTANT TYPE AND HAVE A WEATHERPROOF WHILE-IN-USE EXTRA DUTY COVER.
3	EF-1 (EXHAUST FAN) TO BE ON THE SAME SWITCH AS LIGHTING.



2 Power Layout

1/4" = 1'-0"

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MSB STORAGE BUILDING

PALMER, AK

REVISION SCHEDULE		
#	DESCRIPTION	DATE

PERMIT NUMBER

DRAWN BY: MB	DATE: 7/8/2022
CHECKED BY: SB	JOB NO.: Q21052

SHEET TITLE: POWER LAYOUT

SHEET NO.: E-101

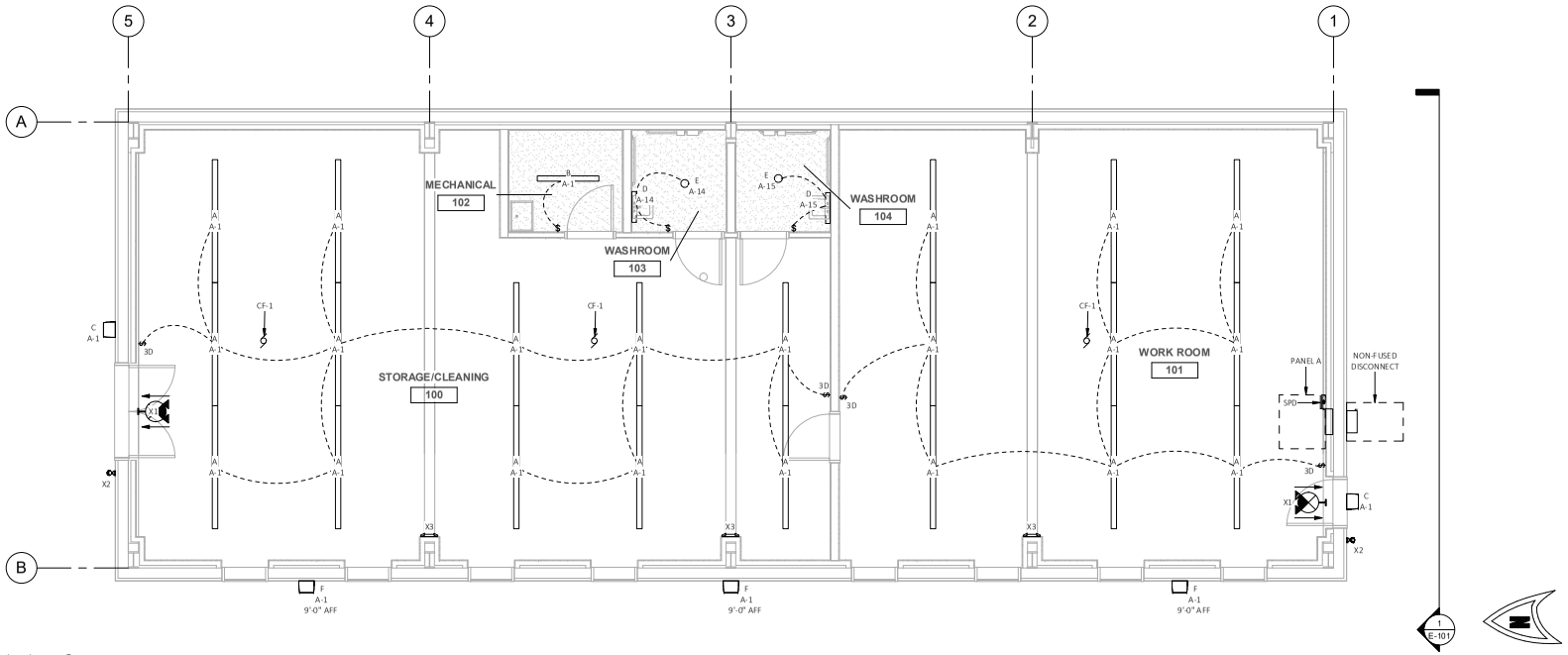
BID #823-01

LIGHTING SCHEDULE

TYPE	MFG	MODEL NUMBER	DESCRIPTION	WATTAGE	COLOR TEMP.	LUMENS	DIMMING	VOLTAGE	MOUNTING
A	CREE	LS8-80L-840-R-UL-10V	8FT LINEAR	61	4000K	8,000	0-10V	120V	SURFACE
B	CREE	LS4-40L-840-R-UL-10V	4FT LINEAR	31	4000K	4,000	0-10V	120V	SURFACE
C	CREE	XSPW-B-WM-3ME-2L-40K-UL-BK-ML	TYPE 2ME ENTRY LIGHT	19	4000K	2,500	NO DIM	120V	SURFACE
D	LITHONIA	FMVCSL-24IN-MVOLT-40K-90CRI-BN	BATHROOM VANITY	18	4000K	1,375	NO DIM	120V	SURFACE
E	CREE	CDR-6-ALS-9ACK-10V5-WH-UNV	6IN CAN LIGHT	19	4000K	1,500	NO DIM	120V	RECESSED
F	CREE	XSPW-B-WM-4ME-4L-40K-UL-BK-P	TYPE 4ME PARKING LOT LIGHTING IP66 ARCTIC RATED -40°F	31	4000K	4,270	NO DIM	120V	SURFACE 9' AFF
X1	GREEN EMERGENCY EXIT SIGN W/ BATTERY, WALL MOUNTED, DUAL LAMPS. SIMILAR TO COOPER LIGHTING'S **ES7-1-70-S-G-W**								
X2	ARCTIC RATED EMERGENCY REMOTE HEAD W/ BATTERY. SIMILAR TO COOPER LIGHTING'S **SRM50DGY**								
X3	EMERGENCY WALL PACK W/ BATTERY, DUAL LAMPS. SIMILAR TO COOPER LIGHTING'S **SEL25**								

GENERAL NOTES

#	DESCRIPTION
	1. CONTRACTOR SHALL PROVIDE COMPATIBLE DIMMING SWITCHES FOR LIGHTING WITH 0-10V DIMMING
	2. COORDINATE LIGHTING & SUSPENDED FANS TO AVOID CONFLICT.



1 Lighting Layout

1/4" = 1'-0"

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PALMER, AK

REVISION SCHEDULE

#	DESCRIPTION	DATE

PERMIT NUMBER

DRAWN BY	DATE
MB	7/8/2022
CHECKED BY:	JOB NO.
SB	Q21052

SHEET TITLE
LIGHTING LAYOUT

SHEET NO.
E-102
BID #B23-01

Branch Panel: A

Location:
Supply From:
Mounting: SEE PLANS
Enclosure: 1

Volts: 120/240 Single
Phases: 1
Wires: 3

A.I.C. Rating: CONTRACTOR TO DETERMIN
Mains Type: MLO
Mains Rating: 225 A
MCB Rating: 225 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		Poles	Trip	Circuit Description	CKT
1	LIGHTING	20 A	1	1312 VA	540 VA			1	20 A	RECEP - WORK ROOM EAST	2
3	RECEP - SERVICE ENTRANCE	20 A	1			180 VA	720 VA	1	20 A	RECEP - WORK ROOM NORTH	4
5	RECEP - WORK ROOM SOUTH	20 A	1	540 VA	1080 VA			1	20 A	RECEP - STORAGE SOUTH	6
7	RECEP - STORAGE WEST	20 A	1			1080 VA	1000 VA	1	15 A	BOILER [1]	8
9	WATER HEATER [1]	70 A	2	6000 VA	506 VA			1	20 A	BOILER CIRC PUMP	10
11	–	–	–			6000 VA	50 VA	1	20 A	GLYCOL MAKE-UP TANK	12
13	RECEP - MECHANICAL	20 A	1	180 VA	232 VA			1	20 A	WASHROOM WEST	14
15	WASHROOM EAST	20 A	1			232 VA	540 VA	1	20 A	RECEP - EXTERIOR	16
17	EF-2, EXHAUST FAN	20 A	1	115 VA							18
19											20
21											22
23											24
25											26
27											28
29											30
31											32
33											34
35											36
37											38
39							0 VA	2	30 A	SURGE PROTECTION DEVICE [1]	40
41					0 VA			--	--	--	42
			Total Load:	10448 VA		9802 VA					
			Total Amps:	87 A		82 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Heating	12000 VA	100.00%	12000 VA		
Motor	641 VA	100.00%	641 VA	**Total Conn. Load:**	20246 VA
Other	1050 VA	100.00%	1050 VA	**Total Est. Demand:**	20246 VA
Receptacle	5220 VA	100.00%	5220 VA	**Total Conn.:**	84 A
Lighting	1400 VA	100.00%	1400 VA	**Total Est. Demand:**	84 A

Notes:
[1] Breaker size shall be verified with actual equipment prior to order and installation. Contact the engineer with any discrepancies.

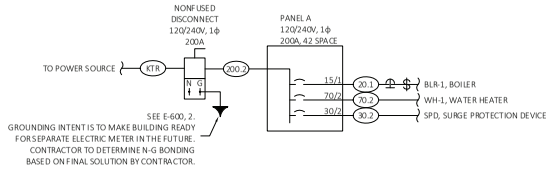
SERVICE LOAD CALC

SERVICE LOAD CALCULATIONS

SERVICE ELECTRICAL CHARACTERISTICS	200A, 120/240V, 1-PHASE, 3-WIRE
GENERAL LOADS	
RECEPTACLES	5,220 VA
ACTUAL LIGHTING LOAD	1,400 VA
CONTINUOUS LOAD FACTOR	350 VA
SUBTOTAL	5,220 VA
MECHANICAL LOADS	
CF-1, CEILING FAN	75 VA
EF-1, EXHAUST FAN x2	20 VA
EF-2, EXHAUST FAN	115 VA
WH-1, WATER HEATER	12,000 VA
BLR-1, BOILER	1,000 VA
CP-1, BOILER CIRC PUMP	506 VA
25% LARGEST MOTOR	127 VA
GT, GLYCOL MAKE-UP TANK	50 VA
SUBTOTAL	13,893 VA
25% FUTURE EXPANSION	4,778 VA
TOTAL LOAD ON SERVICE	23,891 VA
TOTAL LOAD IN AMPS	100 A
TOTAL LOAD IN KW (ASSUMING .85 PF)	20 kW

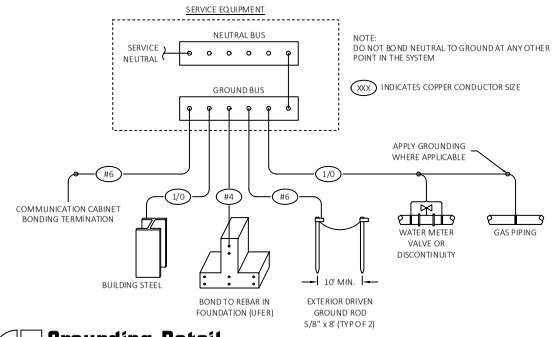
FEEDER SCHEDULE

FEEDER #	# OF SETS	CONDUCTOR TYPE	# OF HOTS	HOT SIZE (AWG/KCMIL)	# OF NEUTRALS	NEUTRAL SIZE (AWG/KCMIL)	# OF GROUNDS	GROUND SIZE (AWG/KCMIL)	INSULATION TYPE	CONDUIT TYPE	CONDUIT SIZE (IN.)
200.2	1	Copper	2	# 3/0	1	# 3/0	1	# 4	XHHW	RMC	2"
200.2	1	Aluminum	2	# 250	1	# 250	1	# 2	XHHW	RMC	2-1/2"
70.2	1	Copper	2	# 4	1	# 4	1	# 8	THHN	EMT	1"
30.2	1	Copper	2	# 10	1	# 10	1	# 10	THHN	EMT	1/2"
20.1	1	Copper	1	# 12	1	# 12	1	# 12	THHN	EMT	1/2"
KTR	CONTRACTOR TO SIZE FOR VOLTAGE DROP AT 80% OF PANEL AMPACITY.										



1 One-Line Diagram

NOT TO SCALE



2 Grounding Detail

NOT TO SCALE

Sandon Broek
EE-12026
1/8/2022
REGISTERED PROFESSIONAL ENGINEER
Q ENGINEERS, INC.
ELECTRICAL ENGINEERING
CONTACT: 907.268.4154
MATANUSKA-SUSITNA BOROUGH SCHOOL DISTRICT
PALMER, AK
CONTACT: 907.864.2003

MSB STORAGE BUILDING

PALMER, AK

REVISION SCHEDULE

#	DESCRIPTION	DATE

PERMIT NUMBER

DRAWN BY: MB	DATE: 7/8/2022
CHECKED BY: SB	JOB NO.: Q21052

SHEET TITLE
ONE-LINE DIAGRAM, SCHEDULES, CALCULATIONS, DETAILS

SHEET NO.
E-600
BID #823-01

MINIMUM RATES OF PAY
For Laborers and Mechanics

Effective April 1, 2022 Issue 44

PAMPHLET No. 600

Title 36. Public Contracts
AS 36.05

DEPARTMENT OF LABOR
AND WORKFORCE DEVELOPMENT
Wage and Hour

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THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Labor and Workforce Development

Office of the Commissioner

Post Office Box 111149
Juneau, Alaska 99811
Main: 907.465.2700
fax: 907.465-2784

April 1, 2022

TO ALL CONTRACTING AGENCIES:

At the Alaska Department of Labor and Workforce Development, our goal is putting Alaskans to work. This pamphlet is designed to help contractors awarded public construction contracts understand the most significant laws of the State of Alaska pertaining to prevailing wage.

This pamphlet identifies current prevailing wage rates for public construction contracts (any construction projects awarded for the State of Alaska or its political subdivisions, such as local governments and certain non-profit organizations). Because these rates may change in a subsequent determination, please be sure you are using the appropriate rates. The rates published in this edition become effective April 1, 2022.

The prevailing wage rates contained in this pamphlet are applicable to public construction projects with a final bid date of April 11, 2022, or later. As the law now provides, these rates will remain stable during the life of a contract or for 24 calendar months, whichever is shorter. **The 24-month period begins on the date the prime contract is awarded.** Upon expiration of the initial 24-month period, the latest wage rates issued by the department shall become effective for a subsequent 24-month period or until the original contract is completed, whichever occurs first. This process shall be repeated until the original contract is completed.

The term "original contract" means the signed contract that resulted from the original bid and any amendments, including changes of work scope, additions, extensions, change orders, and other instruments agreed to by the parties that have not been subject to subsequent open bid procedures.

If a higher federal rate is required due to partial federal funding or other federal participation, the higher rate must be paid.

For additional copies of this pamphlet go to: http://labor.state.ak.us/lss/pamp600.htm

For questions regarding prevailing wage or employment preference requirements, please contact the nearest Wage and Hour office. These offices are listed on Page x.

Sincerely,

Tamika L. Ledbetter

Dr. Tamika L. Ledbetter
Commissioner

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Table of Contents

Excerpts from Alaska Law

Sec. 36.05.005. Applicability.... iv
Sec. 36.05.010. Wage rates on public construction. iv
Sec. 36.05.040. Filing schedule of employees, wages paid and other information iv
Sec. 36.05.045. Notice of work and completion; withholding of payment iv
Sec. 36.05.060. Penalty for violation of this chapter v
Sec. 36.05.070. Wage rates in specifications and contracts for public works v
Sec. 36.05.080. Failure to pay agreed wages....v
Sec. 36.05.090. Payment of wages from withheld payments and listing contractors who violate contracts.....v
Sec. 36.05.900. Definition.. vi

Excerpts from Alaska Administrative Code

8 AAC 30.051. Purpose vi
8 AAC 30.052. Board and lodging; remote sites vi
8 AAC 30.054. Per diem instead of board and lodging vi
8 AAC 30.056. Alternative arrangement.... vii
8 AAC 30.900. General definitions (selected excerpts).... vii

Additional Information

Per Diem vii
Laborer Classification Clarification.... viii
Apprentice Rates.... viii
Fringe Benefit Plans.... viii
Special Prevailing Wage Rate Determination.... ix
Alaska Employment Preference Information.... ix
Labor Standards and Safety Notice Requests x
Debarment List x

Wage Rates .... Pages 1-26

Shipyard Rate Addendum....Pages 28

Note to Readers: The statutes and administrative regulations listed in this publication were taken from the official codes, as of the effective date of the publication. However, there may be errors or omissions that have not been identified and changes that occurred after the publication was printed. This publication is intended as an informational guide only and is not intended to serve as a precise statement of the statutes and regulations of the State of Alaska. To be certain of current laws and regulations, please refer to the official codes.

EXCERPTS FROM ALASKA LAW

Sec. 36.05.005. Applicability.
This chapter applies only to a public construction contract that exceeds $25,000.

Sec. 36.05.010. Wage rates on public construction.
A contractor or subcontractor who performs work on a public construction contract in the state shall pay not less than the current prevailing rate of wages for work of a similar nature in the region in which the work is done. The current prevailing rate of wages is that contained in the latest determination of prevailing rate of wages issued by the Department of Labor and Workforce Development at least 10 days before the final date for submission of bids for the contract. The rate shall remain in effect for the life of the contract or for 24 calendar months, whichever is shorter. At the end of the initial 24-month period, if new wage determinations have been issued by the department, the latest wage determination shall become effective for the next 24-month period or until the contract is completed, whichever occurs first. This process shall be repeated until the contract is completed.

Sec. 36.05.040. Filing schedule of employees, wages paid, and other information.
All contractors or subcontractors who perform work on a public construction contract for the state or for a political subdivision of the state shall, before the Friday of every second week, file with the Department of Labor and Workforce Development a sworn affidavit for the previous reporting period, setting out in detail the number of persons employed, wages paid, job classification of each employee, hours worked each day and week, and other information on a form provided by the Department of Labor and Workforce Development.

Sec. 36.05.045. Notice of work and completion; withholding of payment.

(a) Before commencing work on a public construction contract, the person entering into the contract with a contracting agency shall designate a primary contractor for purposes of this section. Before work commences, the primary contractor shall file a notice of work with the Department of Labor and Workforce Development. The notice of work must list work to be performed under the public construction contract by each contractor who will perform any portion of work on the contract and the contract price being paid to each contractor. The primary contractor shall pay all filing fees for each contractor performing work on the contract, including a filing fee based on the contract price being paid for work performed by the primary contractor's employees. The filing fee payable shall be the sum of all fees calculated for each contractor. The filing fee shall be one percent of each contractor's contract price. The total filing fee payable by the primary contractor under this subsection may not exceed $5,000. In this subsection, "contractor" means an employer who is using employees to perform work on the public construction contract under the contract or a subcontract.

(b) Upon completion of all work on the public construction contract, the primary contractor shall file with the Department of Labor and Workforce Development a notice of completion together with payment of any additional filing fees owed due to increased contract amounts. Within 30 days after the department's receipt of the primary contractor's notice of completion, the department shall inform the contracting agency of the amount, if any, to be withheld from the final payment.

(c) A contracting agency

(1) may release final payment of a public construction contract to the extent that the agency has received verification from the Department of Labor and Workforce Development that

(A) the primary contractor has complied with (a) and (b) of this section;

(B) the Department of Labor and Workforce Development is not conducting an investigation under this title; and

(C) the Department of Labor and Workforce Development has not issued a notice of a violation of this chapter to the primary contractor or any other contractors working on the public construction contract; and

(2) shall withhold from the final payment an amount sufficient to pay the department's estimate of what may be needed to compensate the employees of any contractors under investigation on this construction contract, and any unpaid filing fees.

(d) The notice and filing fee required under (a) of this section may be filed after work has begun if
(1) The public construction contract is for work undertaken in immediate response to an emergency; and
(2) The notice and fees are filed not later than 14 days after the work has begun.

(e) A false statement made on a notice required by this section is punishable under AS 11.56.210.

Sec. 36.05.060. Penalty for violation of this chapter.

A contractor who violates this chapter is guilty of a misdemeanor and upon conviction is punishable by a fine of not less than $100 nor more than $1,000, or by imprisonment for not less than 10 days nor more than 90 days, or by both. Each day a violation exists constitutes a separate offense.

Sec. 36.05.070. Wage rates in specifications and contracts for public works.

(a) The advertised specifications for a public construction contract that requires or involves the employment of mechanics, laborers, or field surveyors must contain a provision stating the minimum wages to be paid various classes of laborers, mechanics, or field surveyors and that the rate of wages shall be adjusted to the wage rate under AS 36.05.010.

(b) Repealed by §17 ch 142 SLA 1972.

(c) A public construction contract under (a) of this section must contain provisions that
(1) the contractor or subcontractors of the contractor shall pay all employees unconditionally and not less than once a week;
(2) wages may not be less than those stated in the advertised specifications, regardless of the contractual relationship between the contractor or subcontractors and laborers, mechanics, or field surveyors;
(3) the scale of wages to be paid shall be posted by the contractor in a prominent and easily accessible place at the site of the work;
(4) the state or a political subdivision shall withhold so much of the accrued payments as is necessary to pay to laborers, mechanics, or field surveyors employed by the contractor or subcontractors the difference between
(A) the rates of wages required by the contract to be paid laborers, mechanics, or field surveyors on the work; and
(B) the rates of wages in fact received by laborers, mechanics, or field surveyors.

Sec. 36.05.080. Failure to pay agreed wages.

Every contract within the scope of AS 36.05.070 shall contain a provision that if it is found that a laborer, mechanic, or field surveyor employed by the contractor or subcontractor has been or is being paid a rate of wages less than the rate of wages required by the contract to be paid, the state or its political subdivision may, by written notice to the contractor, terminate the contractor's right to proceed with the work or the part of the work for which there is a failure to pay the required wages and to prosecute the work to completion by contract or otherwise, and the contractor and the contractor's sureties are liable to the state or its political subdivision for excess costs for completing the work.

Sec. 36.05.090. Payment of wages from withheld payments and listing contractors who violate contracts.

(a) The state disbursing officer in the case of a state public construction contract and the local fiscal officer in the case of a political subdivision public construction contract shall pay directly to laborers, mechanics, or field surveyors from accrued payments withheld under the terms of the contract the wages due laborers, mechanics, or field surveyors under AS 36.05.070.

(b) The state disbursing officer or the local fiscal officer shall distribute to all departments of the state government and to all political subdivisions of the state a list giving the names of persons who have disregarded their obligations to employees. A person appearing on this list and a firm, corporation, partnership, or association in which the person has an interest may not work as a contractor or

subcontractor on a public construction contract for the state or a political subdivision of the state until three years after the date of publication of the list. If the accrued payments withheld under the contract are insufficient to reimburse all the laborers, mechanics, or field surveyors with respect to whom there has been a failure to pay the wages required under AS 36.05.070, the laborers, mechanics, or field surveyors have the right of action or intervention or both against the contractor and the contractor's sureties conferred by law upon persons furnishing labor or materials, and in the proceedings it is not a defense that the laborers, mechanics, or field surveyors accepted or agreed to accept less than the required rate of wages or voluntarily made refunds.

Sec. 36.05.900. Definition.
In this chapter, "contracting agency" means the state or a political subdivision of the state that has entered into a public construction contract with a contractor.

EXCERPTS FROM ALASKA ADMINISTRATIVE CODE

Notice:** Regulations relating to board and lodging and per diem went into effect on November 25, 2018. The new regulations are excerpted here

8 AAC 30.051. Purpose. The purpose of 8 AAC 30.052 – 8 AAC 30.056 is to ensure that wages paid to laborers, mechanics, and field surveyors do not fall below the prevailing rate of pay.

8 AAC 30.052. Board and lodging; remote sites. (a) A contractor on a public construction project located 65 or more road miles from the international airport closest to the project area in either Fairbanks, Juneau, or Anchorage, or that is inaccessible by road in a two-wheel drive vehicle, shall provide adequate board and lodging to each laborer, mechanic, or field surveyor while the person is employed on the project. If commercial lodging facilities are not available, the contractor shall provide temporary lodging facilities. Lodging facilities must comply with all applicable state and federal laws. For a highway project, the location of the project is measured from the midpoint of the project.

(b) A contractor is not required to provide board and lodging:
(1) to a laborer, mechanic, or field surveyor who is a domiciled resident of the project area; or
(2) on a laborer, mechanic, or field surveyor's scheduled days off, when the person can reasonably travel between the project and the person's permanent residence; for the purposes of this paragraph, "scheduled day off" means a day in which a person does not perform work on-site, is not required to remain at or near the job location for the benefit of the contractor, and is informed of the day off at least seven days before the day off.
(c) Upon a contractor's written request, the commissioner may waive the requirements of (a) of this section where:
(1) the project is inaccessible by road in a two-wheel drive vehicle, but the laborer, mechanic, or field surveyor can reasonably travel between the project and the person's permanent residence within one hour; or
(2) a laborer, mechanic, or field surveyor is not a domiciled resident of the project area, but has established permanent residence, with the intent to remain indefinitely, within 65 road miles of the project, or for a highway project, the mid-point of the project.

8 AAC 30.054. Per diem instead of board and lodging. (a) A contractor may pay a laborer, mechanic, or field surveyor per diem instead of providing board and lodging, when the following conditions are met:
(1) the department determines that per diem instead of board and lodging is an established practice for the work classification; the department shall publish and periodically revise its determinations in the pamphlet *Laborers and Mechanics Minimum Rates of Pay*;
(2) the contractor pays each laborer, mechanic, or field surveyor the appropriate per diem rate as published and periodically revised in the pamphlet *Laborers and Mechanics Minimum Rates of Pay*; and

(3) the contractor pays the per diem to each laborer, mechanic, or field surveyor on the same day that wages are paid.

(b) A contractor may not pay per diem instead of board and lodging on a highway project located

(1) west of Livengood on the Elliot Highway, AK-2;
(2) on the Dalton Highway, AK-11;
(3) north of milepost 20 on the Taylor Highway, AK-5;
(4) east of Chicken on the Top of the World Highway; or
(5) south of Tetlin Junction to the Alaska-Canada border on the Alaska Highway, AK-2.

8 AAC 30.056. Alternative arrangement. Upon a contractor's written request, the commissioner may approve an alternative board and lodging or per diem arrangement, provided

(1) the arrangement does not reduce the laborer, mechanic, or field surveyor's wages below the prevailing wage rate; and

(2) the laborer, mechanic, or field surveyor voluntarily enters into and signs the written arrangement; a labor organization representing laborers, mechanics, or field surveyors may enter into the written agreement on their behalf.

8 AAC 30.900. General definitions (selected excerpts only):

In this chapter and in AS 36

(22) "domiciled resident" means a person living within 65 road miles of a public construction project, or in the case of a highway project, the mid-point of the project, for at least 12 consecutive months prior to the award of the public construction project;

(23) "employed on the project" means the time period from the date the laborer, mechanic, or field surveyor first reports on-site to the project through the final date the person reports on-site to the project.

ADDITIONAL INFORMATION

PER DIEM

Notice: New regulations relating to board and lodging and per diem went into effect on November 25, 2018. The regulations provide a comprehensive set of requirements for the provision of board and lodging or per diem for workers on remote projects. Please refer to Alaska Administrative Code 8 AAC Chapter 30 and read the chapter carefully.

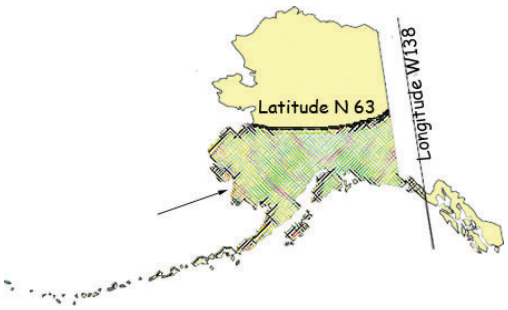
The Alaska Department of Labor and Workforce Development has determined that per diem is an established work practice for certain work classifications. These classifications are indicated throughout the Pamphlet by an asterisk (*) under the classification title. If all of the conditions of 8 AAC 30.054 are met, an employer may pay workers in these classifications per diem instead of providing board and lodging on a remote project.

Per Diem Rate: As of May 1st, 2019, the minimum per diem rate is $100.00 per day, or part thereof, the worker is employed on the project. In the event that a contractor provides lodging facilities, but no meals, the department will accept a payment of $48 per day for meals to meet the per diem requirements.

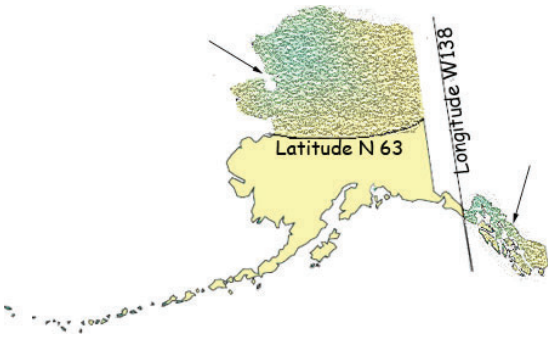
LABORER CLASSIFICATION CLARIFICATION

The laborer rates categorized in class code S1201-S1206 apply in one area of Alaska; the area that is south of N63 latitude and west of W138 Longitude. The laborer rates categorized in class code N1201-N1206 apply in two areas of Alaska; the Alaska areas north of N63 latitude and east of W138 longitude. The following graphic representations should assist with clarifying the applicable wage rate categories:

S1201-
S1206



N1201-
N1206



APPRENTICE RATES

Apprentice rates at less than the minimum prevailing rates may be paid to apprentices according to an apprentice program which has been registered and approved by the Commissioner of the Alaska Department of Labor and Workforce Development in writing or according to a bona fide apprenticeship program registered with the U.S. Department of Labor, Office of Apprenticeship Training. **Any employee listed on a payroll at an apprentice wage rate who is not registered as above shall be paid the journeyman prevailing minimum wage in that work classification.** Wage rates are based on prevailing crew makeup practices in Alaska and apply to work performed regardless of either the quality of the work performed by the employee or the titles or classifications which may be assigned to individual employees.

FRINGE BENEFIT PLANS

Contractors/subcontractors may compensate fringe benefits to their employees in any one of three methods. The fringe benefits may be paid into a union trust fund, into an approved benefit plan, or paid directly on the paycheck as gross wages.

Where fringe benefits are paid into approved plans, funds, or programs including union trust funds, the payments must be contributed at least monthly. If contractors submit their own payroll forms and are paying fringe benefits into approved plans, funds, or programs, the employer's certification must include, in addition to those requirements of 8 AAC 30.020(c), a statement that fringe benefit payments have been or will be paid at least monthly. Contractors who pay fringe benefits to a plan must ensure the plan is one approved by the Internal Revenue Service and that the plan meets the requirements of 8 AAC 30.025 (eff. 3/2/08) in order for payments to be credited toward the prevailing wage obligation.

SPECIAL PREVAILING WAGE RATE DETERMINATION

Special prevailing wage rate determinations may be requested for special projects or a special worker classification if the work to be performed does not conform to traditional public construction for which a prevailing wage rate has been established under 8 AAC 30.050(a) of this section. Requests for special wage rate determinations must be in writing and filed with the Commissioner at least 30 days before the award of the contract. An applicant for a special wage rate determination shall have the responsibility to support the necessity for the special rate. An application for a special wage rate determination filed under this section must contain:

(1) a specification of the contract or project on which the special rates will apply and a description of the work to be performed;
(2) a brief narrative explaining why special wage rates are necessary;
(3) the job class or classes involved;
(4) the special wage rates the applicant is requesting, including survey or other relevant wage data to support the requested rates;
(5) the approximate number of employees who would be affected; and
(6) any other information which might be helpful in determining if special wage rates are appropriate.

Requests made pursuant to the above should be addressed to:

Director
Alaska Department of Labor and Workforce Development
Labor Standards and Safety Division
Wage and Hour
P.O. Box 111149
Juneau, AK 99811-1149
-or-
Email: statewide.wagehour@alaska.gov

EMPLOYMENT PREFERENCE INFORMATION

In October 2019, the Alaska Attorney General issued a formal opinion stating that the Alaska Statutes 36.10.150 of the State's 90% Employment Preference law, also known as the Alaska Resident Hire law, violates both the U.S. and Alaska Constitutions. As a result, the state has stopped all enforcement activity.
A copy of the Attorney General opinion is found here:

http://law.alaska.gov/pdf/opinions/opinions_2019/19-005_AK-hire.pdf

Alaska Department of Labor and Workforce Development
Labor Standards and Safety Division
Wage and Hour
Web site: http://labor.state.ak.us/lss/pamp600.htm

Anchorage	Juneau	Fairbanks
1251 Muldoon Road, Suite 113 Anchorage, Alaska 99504-2098 Phone: (907) 269-4900 Email: statewide.wagehour@alaska.gov	PO Box 111149 Juneau, Alaska 99811 Phone: (907) 465-4842 Email: statewide.wagehour@alaska.gov	Regional State Office Building 675 7th Ave., Station J-1 Fairbanks, Alaska 99701-4593 Phone: (907) 451-2886 Email: statewide.wagehour@alaska.gov

LABOR STANDARDS AND SAFETY NOTICE REQUESTS

If you would like to receive Wage and Hour or Mechanical Inspection **regulation notices** or **publications information**, they are available via electronic mail, by signing up in the GovDelivery System, https://public.govdelivery.com/accounts/AKDOL/subscriber/new and selecting topics *LSS – Wage and Hour – Forms and Publications*, *LSS – Mechanical Inspection Regulations*, or *LSS – Wage and Hour Regulations*.

Publications are also available online at http://labor.alaska.gov/lss/home.htm

DEBARMENT LIST

AS 36.05.090(b) states that "the state disbursing officer or the local fiscal officer shall distribute to all departments of the state government and to all political subdivisions of the state a list giving the names of persons who have disregarded their obligations to employees."

A person appearing on the following debarment list and a firm, corporation, partnership, or association in which the person has an interest may not work as a contractor or subcontractor on a public construction contract for the state or a political subdivision of the state for three years from the date of debarment.

Company Name	Debarment Expires

No companies are currently debarred.

Laborers' & Mechanics' Minimum Rates of Pay

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
Boilermakers	*See per diem note on last page							
						VAC	**SAF**	
A0101	Boilermaker (journeyman)	46.97	8.57	18.08	1.90	4.25	0.34	80.11
Bricklayers & Blocklayers	*See per diem note on last page							
						L&M		
A0201	Blocklayer	42.01	9.00	10.20	0.62	0.20		62.03
	Bricklayer Marble or Stone Mason Refractory Worker (Firebrick, Plastic, Castable, and Gunite Refractory Applications) Terrazzo Worker Tile Setter							
						L&M		
A0202	Tuck Pointer Caulker	42.01	9.00	10.20	0.62	0.20		62.03
	Cleaner (PCC)							
						L&M		
A0203	Marble & Tile Finisher	35.84	9.00	10.20	0.62	0.20		55.86
	Terrazzo Finisher							
						L&M		
A0204	Torginal Applicator	35.84	9.00	10.20	0.62	0.20		55.86
Carpenters, Region I (North of 63 latitude)	*See per diem note on last page							
						L&M	**SAF**	
N0301	Carpenter (journeyman)	42.34	10.08	15.23	1.75	0.20	0.20	69.80
	Lather/Drywall/Acoustical							
Carpenters, Region II (South of N63 latitude)	*See per diem note on last page							
						L&M	**SAF**	
S0301	Carpenter (journeyman)	42.34	10.08	15.77	1.75	0.20	0.20	70.34
	Lather/Drywall/Acoustical							
Cement Masons	*See per diem note on last page							

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits	THR
Cement Masons	*See per diem note on last page						
						L&M	
A0401	Group I, including:	40.13	8.70	11.80	1.43	0.10	62.16
	Application of Sealing Compound						
	Application of Underlayment						
	Building, General						
	Cement Finisher						
	Cement Mason (journeyman)						
	Concrete						
	Concrete Paving						
	Concrete Polishing						
	Concrete Repair						
	Curb & Gutter, Sidewalk						
	Curing of All Concrete						
	General Concrete Pour Tender						
	Grouting & Caulking of Tilt-Up Panels						
	Grouting of All Plates						
	Patching Concrete						
	Screed Pin Setter						
	Screeder or Rodder						
	Spackling/Skim Coating						
						L&M	
A0402	Group II, including:	40.13	8.70	11.80	1.43	0.10	62.16
	Form Setter						
						L&M	
A0403	Group III, including:	40.13	8.70	11.80	1.43	0.10	62.16
	Concrete Saw Cutter Operator (All Control Joints and Self-powered)						
	Curb & Gutter Machine						
	Floor Grinder						
	Pneumatic Power Tools						
	Power Chipping & Bushing						
	Sand Blasting Architectural Finish						
	Screed & Rodding Machine Operator						
	Troweling Machine Operator (all concrete surfaces)						
						L&M	
A0404	Group IV, including:	40.13	8.70	11.80	1.43	0.10	62.16
	Acoustical or Imitation Acoustical Finish						
	Application of All Composition Mastic						
	Application of All Epoxy Material						
	Application of All Plastic Material						
	Finish Colored Concrete						
	Gunite Nozzleman						
	Hand Powered Grinder						

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Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits	THR
Cement Masons	*See per diem note on last page						
A0404	Group IV, including:	40.13	8.70	11.80	1.43	L&M 0.10	62.16
	Preparing, scratching and browsing of all ceilings and walls, finished with terrazo or tile						
	Tunnel Worker						
A0405	Group V, including:	40.13	8.70	11.80	1.43	L&M 0.10	62.16
	Casting and finishing						
	EIFS Systems						
	Finishing of all interior and exterior plastering						
	Fireproofing (Pryocrete, Cafco, Albi-Clad, sprayed fiberglass)						
	Gypsum, Portland Cement						
	Kindred material and products						
	Operation and control of all types of plastering machines, including power tools and floats, used by the industry						
	Overcoating and maintenance of interior/exterior plaster surfaces						
	Plasterer						
	Veneer plastering process (Rapid Plaster, U.S.G. "Imperial Systems", and Pabcoat Systems")						
	Venetian plaster and color-integrated Italian/Middle-Eastern line plaster						
Culinary Workers							
A0501	Baker/Cook	28.37	7.31	7.56		LEG	43.24
A0503	General Helper	25.07	7.31	7.56		LEG	39.94
	Housekeeper						
	Janitor						
	Kitchen Helper						
A0504	Head Cook	28.97	7.31	7.56		LEG	43.84
A0505	Head Housekeeper	25.45	7.31	7.56		LEG	40.32
	Head Kitchen Help						
Dredgemen	*See per diem note on last page						
A0601	Assistant Engineer	42.76	11.05	13.75	1.00	L&M 0.10	0.05 68.71
	Craneman						

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Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
Dredgemen	*See per diem note on last page							
A0601	Assistant Engineer	42.76	11.05	13.75	1.00	**L&M** 0.10	0.05	68.71
	Electrical Generator Operator (primary pump/power barge/dredge) Engineer Welder							
A0602	Assistant Mate (deckhand)	41.60	11.05	13.75	1.00	**L&M** 0.10	0.05	67.55
A0603	Fireman	42.04	11.05	13.75	1.00	**L&M** 0.10	0.05	67.99
A0605	Leverman Clamshell	45.29	11.05	13.75	1.00	**L&M** 0.10	0.05	71.24
A0606	Leverman Hydraulic	43.53	11.05	13.75	1.00	**L&M** 0.10	0.05	69.48
A0607	Mate & Boatman	42.76	11.05	13.75	1.00	**L&M** 0.10	0.05	68.71
A0608	Oiler (dredge)	42.04	11.05	13.75	1.00	**L&M** 0.10	0.05	67.99
Electricians	*See per diem note on last page							
A0701	Inside Cable Splicer	42.77	14.23	13.92	0.95	**L&M** 0.20	**LEG** 0.15	72.22
A0702	Inside Journeyman Wireman, including:	42.44	14.23	14.16	0.95	**L&M** 0.20	**LEG** 0.15	72.13
	Technicians (including use of drones in electrical construction)							
A0703	Power Cable Splicer	63.04	14.23	19.08	0.95	**L&M** 0.25	**LEG** 0.15	97.70
A0704	Tele Com Cable Splicer	50.53	14.23	17.17	0.95	**L&M** 0.20	**LEG** 0.15	83.23
A0705	Power Journeyman Lineman, including:	61.29	14.23	19.03	0.95	**L&M** 0.25	**LEG** 0.15	95.90
	Power Equipment Operator Technician (including use of drones in electrical construction)							
A0706	Tele Com Journeyman Lineman, including:	48.78	14.23	17.11	0.95	**L&M** 0.20	**LEG** 0.15	81.42
	Technician (including use of drones in telecommunications construction) Tele Com Equipment Operator							

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Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
Electricians *See per diem note on last page								
A0707	Straight Line Installer - Repairman	48.78	14.23	17.11	0.95	**L&M** 0.20	**LEG** 0.15	81.42
A0708	Powderman	59.29	14.23	18.97	0.95	**L&M** 0.25	**LEG** 0.15	93.84
A0710	Material Handler	26.57	13.92	5.80	0.15	**L&M** 0.15	**LEG** 0.15	46.74
A0712	Tree Trimmer Groundman	29.12	14.23	13.35	0.15	**L&M** 0.15	**LEG** 0.15	57.15
A0713	Journeyman Tree Trimmer	38.05	14.23	13.62	0.15	**L&M** 0.15	**LEG** 0.15	66.35
A0714	Vegetation Control Sprayer	41.60	14.23	13.73	0.15	**L&M** 0.15	**LEG** 0.15	70.01
A0715	Inside Journeyman Communications CO/PBX	41.02	14.23	13.87	0.95	**L&M** 0.20	**LEG** 0.15	70.42
Elevator Workers *See per diem note on last page								
A0802	Elevator Constructor	44.21	16.02	20.21	0.65	**L&M** 0.60	**VAC** 4.90	86.59
A0803	Elevator Constructor Mechanic	63.16	16.02	20.21	0.65	**L&M** 0.60	**VAC** 7.01	107.65
Heat & Frost Insulators/Asbestos Workers *See per diem note on last page								
A0902	Asbestos Abatement-Mechanical Systems	39.50	9.24	11.12	1.20	**IAF** 0.14	**LML** 0.05	61.25
A0903	Asbestos Abatement/General Demolition All Systems	39.50	9.24	11.12	1.20	**IAF** 0.14	**LML** 0.05	61.25
A0904	Insulator, Group II	39.50	9.24	11.12	1.20	**IAF** 0.14	**LML** 0.05	61.25
A0905	Fire Stop	39.50	9.24	11.12	1.20	**IAF** 0.14	**LML** 0.05	61.25
IronWorkers *See per diem note on last page								
A1101	Ironworkers, including:	40.82	9.51	24.28	0.76	**L&M** 0.20	**IAF** 0.24	75.81

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Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
IronWorkers *See per diem note on last page								
						L&M	**IAF**	
A1101	Ironworkers, including:	40.82	9.51	24.28	0.76	0.20	0.24	75.81
	Bender Operators Bridge & Structural Hangar Doors Hollow Metal Doors Industrial Doors Machinery Mover Ornamental Reinforcing Rigger Sheeter Signalman Stage Rigger Toxic Haz-Mat Work Welder							
						L&M	**IAF**	
A1102	Helicopter	41.82	9.51	24.28	0.76	0.20	0.24	76.81
	Helicopter (used for rigging and setting) Tower (energy producing windmill type towers to include nacelle and blades)							
						L&M	**IAF**	
A1103	Fence/Barrier Installer	37.32	9.51	24.28	0.76	0.20	0.24	72.31
						L&M	**IAF**	
A1104	Guard Rail Layout Man	38.06	9.51	24.28	0.76	0.20	0.24	73.05
						L&M	**IAF**	
A1105	Guard Rail Installer	38.32	9.51	24.28	0.76	0.20	0.24	73.31
Laborers (The Alaska areas north of N63 latitude and east of W138 longitude) *See per diem note on last page								
						L&M	**LEG**	
N1201	Group I, including:	33.00	8.95	21.16	1.40	0.20	0.20	64.91
	Asphalt Worker (shovelman, plant crew) Brush Cutter Camp Maintenance Laborer Carpenter Tender or Helper Choke Setter, Hook Tender, Rigger, Signalman Concrete Labor (curb & gutter, chute handler, curing, grouting, screeding) Crusher Plant Laborer Demolition Laborer							

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Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits	L&M	LEG	THR
Laborers (The Alaska areas north of N63 latitude and east of W138 longitude) *See per diem note on last page									
N1201	Group I, including:	33.00	8.95	21.16	1.40		0.20	0.20	64.91
	Ditch Digger								
	Dumpman								
	Environmental Laborer (hazard/toxic waste, oil spill)								
	Fence Installer								
	Fire Watch Laborer								
	Flagman								
	Form Stripper								
	General Laborer								
	Guardrail Laborer, Bridge Rail Installer								
	Hydro-seeder Nozzleman								
	Laborer, Building								
	Landscaper or Planter								
	Laying of Mortarless Decorative Block (retaining walls, flowered decorative block 4 feet or less - highway or landscape work)								
	Material Handler								
	Pneumatic or Power Tools								
	Portable or Chemical Toilet Serviceman								
	Pump Man or Mixer Man								
	Railroad Track Laborer								
	Sandblast, Pot Tender								
	Saw Tender								
	Slurry Work								
	Steam Cleaner Operator								
	Steam Point or Water Jet Operator								
	Storm Water Pollution Protection Plan Worker (SWPPP Worker - erosion and sediment control Laborer)								
	Tank Cleaning								
	Utiliwalk & Utilidor Laborer								
	Watchman (construction projects)								
	Window Cleaner								
N1202	Group II, including:	34.00	8.95	21.16	1.40		0.20	0.20	65.91
	Burning & Cutting Torch								
	Cement or Lime Dumper or Handler (sack or bulk)								
	Certified Erosion Sediment Control Lead (CESCL Laborer)								
	Choker Splicer								
	Chucktender (wagon, air-track & hydraulic drills)								
	Concrete Laborer (power buggy, concrete saws, pumpcrete nozzleman, vibratorman)								
	Culvert Pipe Laborer								
	Cured Inplace Pipelayer								

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits	L&M	LEG	THR
Laborers (The Alaska areas north of N63 latitude and east of W138 longitude) *See per diem note on last page									
N1202	Group II, including:	34.00	8.95	21.16	1.40		0.20	0.20	65.91
	Environmental Laborer (asbestos, marine work)								
	Floor Preparation, Core Drilling								
	Foam Gun or Foam Machine Operator								
	Green Cutter (dam work)								
	Gunite Operator								
	Hod Carrier								
	Jackhammer/Chipping Gun or Pavement Breaker								
	Laser Instrument Operator								
	Laying of Mortarless Decorative Block (retaining walls, flowered decorative block over 4 feet - highway or landscape work)								
	Mason Tender & Mud Mixer (sewer work)								
	Pilot Car								
	Pipelayer Helper								
	Plasterer, Bricklayer & Cement Finisher Tender								
	Powderman Helper								
	Power Saw Operator								
	Railroad Switch Layout Laborer								
	Sandblaster								
	Scaffold Building & Erecting								
	Sewer Caulker								
	Sewer Plant Maintenance Man								
	Thermal Plastic Applicator								
	Timber Faller, Chainsaw Operator, Filer								
	Timberman								
N1203	Group III, including:	34.90	8.95	21.16	1.40		0.20	0.20	66.81
	Bit Grinder								
	Camera/Tool/Video Operator								
	Guardrail Machine Operator								
	High Rigger & Tree Topper								
	High Scaler								
	Multiplate								
	Plastic Welding								
	Slurry Seal Squeegee Man								
	Traffic Control Supervisor								
	Welding Certified (in connection with laborer's work)								
N1204	Group IIIA	38.18	8.95	21.16	1.40		0.20	0.20	70.09
	Asphalt Raker, Asphalt Belly Dump Lay Down								
	Drill Doctor (in the field)								

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Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
						L&M	LEG	
Laborers (The Alaska areas north of N63 latitude and east of W138 longitude) *See per diem note on last page								
N1204	Group IIIA	38.18	8.95	21.16	1.40	0.20	0.20	70.09
	Driller (including, but not limited to wagon drills, air-track drills, hydraulic drills)							
	Pioneer Drilling & Drilling Off Tugger (all type drills)							
	Pipelayers							
	Powderman (Employee Possessor)							
	Storm Water Pollution Protection Plan Specialist (SWPPP Specialist)							
	Traffic Control Supervisor, DOT Qualified							
						L&M	LEG	
N1205	Group IV	22.57	8.95	21.16	1.40	0.20	0.20	54.48
	Final Building Cleanup							
	Permanent Yard Worker							
						L&M	LEG	
N1206	Group IIIB	41.97	6.24	21.16	1.40	0.20	0.20	71.17
	Driller (including, but not limited to wagon drills, air-track drills, hydraulic drills)(over 5,000 hours)							
	Federal Powderman (Responsible Person in Charge)							
	Grade Checking (setting or transferring of grade marks, line and grade, GPS, drones)							
	Pioneer Drilling & Drilling Off Tugger (all type drills)(over 5,000 hours)							
	Stake Hopper							
Laborers (The area that is south of N63 latitude and west of W138 longitude) *See per diem note on last page								
						L&M	LEG	
S1201	Group I, including:	33.00	8.95	21.16	1.40	0.20	0.20	64.91
	Asphalt Worker (shovelman, plant crew)							
	Brush Cutter							
	Camp Maintenance Laborer							
	Carpenter Tender or Helper							
	Choke Setter, Hook Tender, Rigger, Signalman							
	Concrete Labor (curb & gutter, chute handler, curing, grouting, screeding)							
	Crusher Plant Laborer							
	Demolition Laborer							
	Ditch Digger							
	Dumpman							
	Environmental Laborer (hazard/toxic waste, oil spill)							
	Fence Installer							
	Fire Watch Laborer							
	Flagman							

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
						L&M	LEG	
Laborers (The area that is south of N63 latitude and west of W138 longitude) *See per diem note on last page								
S1201	Group I, including:	33.00	8.95	21.16	1.40	0.20	0.20	64.91
	Form Stripper							
	General Laborer							
	Guardrail Laborer, Bridge Rail Installer							
	Hydro-seeder Nozzleman							
	Laborer, Building							
	Landscaper or Planter							
	Laying of Mortarless Decorative Block (retaining walls, flowered decorative block 4 feet or less - highway or landscape work)							
	Material Handler							
	Pneumatic or Power Tools							
	Portable or Chemical Toilet Serviceman							
	Pump Man or Mixer Man							
	Railroad Track Laborer							
	Sandblast, Pot Tender							
	Saw Tender							
	Slurry Work							
	Steam Cleaner Operator							
	Steam Point or Water Jet Operator							
	Storm Water Pollution Protection Plan Worker (SWPPP Worker - erosion and sediment control Laborer)							
	Tank Cleaning							
	Utiliwalk & Utilidor Laborer							
	Watchman (construction projects)							
	Window Cleaner							
S1202	Group II, including:	34.00	8.95	21.16	1.40	0.20	0.20	65.91
	Burning & Cutting Torch							
	Cement or Lime Dumper or Handler (sack or bulk)							
	Certified Erosion Sediment Control Lead (CESCL Laborer)							
	Choker Splicer							
	Chucktender (wagon, air-track & hydraulic drills)							
	Concrete Laborer (power buggy, concrete saws, pumpcrete nozzleman, vibratorman)							
	Culvert Pipe Laborer							
	Cured Inplace Pipelayer							
	Environmental Laborer (asbestos, marine work)							
	Floor Preparation, Core Drilling							
	Foam Gun or Foam Machine Operator							
	Green Cutter (dam work)							
	Gunite Operator							
	Hod Carrier							

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
						L&M	LEG	
Laborers (The area that is south of N63 latitude and west of W138 longitude) *See per diem note on last page								
S1202	Group II, including:	34.00	8.95	21.16	1.40	0.20	0.20	65.91
	Jackhammer/Chipping Gun or Pavement Breaker Laser Instrument Operator Laying of Mortarless Decorative Block (retaining walls, flowered decorative block over 4 feet - highway or landscape work) Mason Tender & Mud Mixer (sewer work) Pilot Car Pipelayer Helper Plasterer, Bricklayer & Cement Finisher Tender Powderman Helper Power Saw Operator Railroad Switch Layout Laborer Sandblaster Scaffold Building & Erecting Sewer Caulker Sewer Plant Maintenance Man Thermal Plastic Applicator Timber Faller, Chainsaw Operator, Filer Timberman							
S1203	Group III, including:	34.90	8.95	21.16	1.40	0.20	0.20	66.81
	Bit Grinder Camera/Tool/Video Operator Guardrail Machine Operator High Rigger & Tree Topper High Scaler Multiplate Plastic Welding Slurry Seal Squeegee Man Traffic Control Supervisor Welding Certified (in connection with laborer's work)							
S1204	Group IIIA	38.18	8.95	21.16	1.40	0.20	0.20	70.09
	Asphalt Raker, Asphalt Belly Dump Lay Down Drill Doctor (in the field) Driller (including, but not limited to wagon drills, air-track drills, hydraulic drills) Pioneer Drilling & Drilling Off Tugger (all type drills) Pipelayers Powderman (Employee Possessor) Storm Water Pollution Protection Plan Specialist (SWPPP Specialist)							

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
Laborers (The area that is south of N63 latitude and west of W138 longitude) *See per diem note on last page								
						L&M	**LEG**	
S1204	Group IIIA	38.18	8.95	21.16	1.40	0.20	0.20	70.09
	Traffic Control Supervisor, DOT Qualified							
						L&M	**LEG**	
S1205	Group IV	22.57	8.95	21.16	1.40	0.20	0.20	54.48
	Final Building Cleanup Permanent Yard Worker							
						L&M	**LEG**	
S1206	Group IIIB	41.97	6.24	21.16	1.40	0.20	0.20	71.17
	Driller (including, but not limited to wagon drills, air-track drills, hydraulic drills)(over 5,000 hours) Federal Powderman (Responsible Person in Charge) Grade Checking (setting or transferring of grade marks, line and grade, GPS, drones) Pioneer Drilling & Drilling Off Tugger (all type drills)(over 5,000 hours) Stake Hopper							
Millwrights *See per diem note on last page								
						L&M		
A1251	Millwright (journeyman)	44.00	10.08	12.28	1.10	0.40	0.05	67.91
						L&M		
A1252	Millwright Welder	45.00	10.08	12.28	1.10	0.40	0.05	68.91
Painters, Region I (North of N63 latitude) *See per diem note on last page								
						L&M		
N1301	Group I, including:	34.25	8.85	15.10	1.08	0.07		59.35
	Brush General Painter Hand Taping Hazardous Material Handler Lead-Based Paint Abatement Roll							
						L&M		
N1302	Group II, including:	34.77	8.85	15.10	1.08	0.07		59.87
	Bridge Painter Epoxy Applicator General Drywall Finisher Hand/Spray Texturing Industrial Coatings Specialist							

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits	THR
Painters, Region I (North of N63 latitude) *See per diem note on last page							
						L&M	
N1302	Group II, including:	34.77	8.85	15.10	1.08	0.07	59.87
	Machine/Automatic Taping Pot Tender Sandblasting Specialty Painter Spray Structural Steel Painter Wallpaper/Vinyl Hanger						
N1304	Group IV, including:	41.16	8.85	18.21	1.05	0.05	69.32
	Glazier Storefront/Automatic Door Mechanic						
N1305	Group V, including:	39.86	8.85	5.00	1.10	0.10	54.91
	Carpet Installer Floor Coverer Heat Weld/Cove Base Linoleum/Soft Tile Installer						
N1306	Group VI, including:	48.17	9.90	5.00	1.10	0.10	64.27
	Traffic Control Striper						
Painters, Region II (South of N63 latitude) *See per diem note on last page							
						L&M	
S1301	Group I, including :	31.39	8.85	15.95	1.08	0.07	57.34
	Brush General Painter Hand Taping Hazardous Material Handler Lead-Based Paint Abatement Roll Spray						
						L&M	
S1302	Group II, including :	32.64	8.85	15.95	1.08	0.07	58.59
	General Drywall Finisher Hand/Spray Texturing Machine/Automatic Taping Wallpaper/Vinyl Hanger						

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits	THR
Painters, Region II (South of N63 latitude) *See per diem note on last page							
						L&M	
S1303	Group III, including :	32.74	8.85	15.95	1.08	0.07	58.69
	Bridge Painter Epoxy Applicator Industrial Coatings Specialist Pot Tender Sandblasting Specialty Painter Structural Steel Painter						
						L&M	
S1304	Group IV, including:	41.37	8.85	17.25	1.08	0.07	68.62
	Glazier Storefront/Automatic Door Mechanic						
						L&M	
S1305	Group V, including:	39.86	8.85	5.00	1.10	0.10	54.91
	Carpet Installer Floor Coverer Heat Weld/Cove Base Linoleum/Soft Tile Installer						
S1306	Group VI, including:	48.17	9.90	5.00	1.10	0.10	64.27
	Traffic Control Striper						
Piledrivers *See per diem note on last page							
						L&M	**IAF**
A1401	Piledriver	42.34	10.08	15.23	1.75	0.20	0.20 69.80
	Assistant Dive Tender Carpenter/Piledriver Rigger Sheet Stabber Skiff Operator						
						L&M	**IAF**
A1402	Piledriver-Welder/Toxic Worker	43.34	10.08	15.23	1.75	0.20	0.20 70.80
						L&M	**IAF**
A1403	Remotely Operated Vehicle Pilot/Technician	46.65	10.08	15.23	1.75	0.20	0.20 74.11
	Single Atmosphere Suit, Bell or Submersible Pilot						
						L&M	**IAF**
A1404	Diver (working) **See note on last page	86.45	10.08	15.23	1.75	0.20	0.20 113.91

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Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
Piledrivers								
	*See per diem note on last page							
						L&M	**IAF**	
A1405	Diver (standby) **See note on last page	46.65	10.08	15.23	1.75	0.20	0.20	74.11
						L&M	**IAF**	
A1406	Dive Tender **See note on last page	45.65	10.08	15.23	1.75	0.20	0.20	73.11
						L&M	**IAF**	
A1407	Welder (American Welding Society, Certified Welding Inspector)	47.90	10.08	15.23	1.75	0.20	0.20	75.36
Plumbers, Region I (North of N63 latitude)								
	*See per diem note on last page							
						L&M	**S&L**	
N1501	Journeyman Pipefitter	42.91	11.75	17.45	1.50	0.65		74.26
	Plumber							
	Welder							
Plumbers, Region II (South of N63 latitude)								
	*See per diem note on last page							
						L&M		
S1501	Journeyman Pipefitter	41.00	11.38	15.27	1.55	0.20		69.40
	Plumber							
	Welder							
Plumbers, Region IIA (1st Judicial District)								
	*See per diem note on last page							
						L&M		
X1501	Journeyman Pipefitter	40.82	13.37	11.75	2.50	0.24		68.68
	Plumber							
	Welder							
Power Equipment Operators								
	*See per diem note on last page							
						L&M		
A1601	Group I, including:	43.53	11.05	13.75	1.00	0.10	0.05	69.48
	Asphalt Roller: Breakdown, Intermediate, and Finish							
	Back Filler							
	Barrier Machine (Zipper)							
	Beltcrete with Power Pack & similar conveyors							
	Bending Machine							
	Boat Coxswain							
	Bulldozer							
	Cableways, Highlines & Cablecars							

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Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits	L&M	THR
Power Equipment Operators *See per diem note on last page								
A1601	Group I, including:	43.53	11.05	13.75	1.00	0.10	0.05	69.48

Cleaning Machine
Coating Machine
Concrete Hydro Blaster
Cranes (45 tons & under or 150 feet of boom & under (including jib & attachments))
(a) Hydralifts or Transporters, (all track or truck type)
(b) Derricks
(c) Overhead
Crushers
Deck Winches, Double Drum
Ditching or Trenching Machine (16 inch or over)
Drag Scraper, Yarder, and similar types
Drilling Machines, Core, Cable, Rotary and Exploration
Finishing Machine Operator, Concrete Paving, Laser Screed, Sidewalk, Curb & Gutter Machine
Grade Checker and/or Line and Grade including Drone
Helicopters
Hover Craft, Flex Craft, Loadmaster, Air Cushion, All-Terrain Vehicle, Rollagon, Bargecable, Nodwell, & Snow Cat
Hydro Ax, Feller Buncher & similar
Hydro Excavation (Vac-Truck and Similar)
Loaders (2 1/2 yards through 5 yards, including all attachments):
(a) Forklifts (with telescopic boom & swing attachment)
(b) Front End & Overhead, (2-1/2 yards through 5 yards)
(c) Loaders, (with forks or pipe clamp)
(d) Loaders, (elevating belt type, Euclid & similar types)
Material Transfer Vehicle (Elevating Grader, Pickup Machine, and similar types)
Mechanic, Welder, Bodyman, Electrical, Camp & Maintenance Engineer
Micro Tunneling Machine
Mixers: Mobile type with hoist combination
Motor Patrol Grader
Mucking Machine: Mole, Tunnel Drill, Horizontal/Directional Drill Operator and/or Shield
Off-Road Hauler (including Articulating and Haul Trucks)
Operator on Dredges
Piledriver Engineer, L.B. Foster, Puller or similar paving breaker
Plant Operator (Asphalt & Concrete)
Power Plant, Turbine Operator 200 k.w & over (power plants or combination of power units over 300 k.w.)
Remote Controlled Equipment
Scraper (through 40 yards)

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
Power Equipment Operators *See per diem note on last page								
						L&M		
A1601	Group I, including:	43.53	11.05	13.75	1.00	0.10	0.05	69.48
	Service Oiler/Service Engineer Shot Blast Machine Shovels, Backhoes, Excavators with all attachments, and Gradealls (3 yards & under) Sideboom (under 45 tons) Sub Grader (Gurries & similar types) Tack Tractor Truck Mounted Concrete Pump, Conveyor/Tele-belt, & Creter Wate Kote Machine							
						L&M		
A1602	Group IA, including:	45.29	11.05	13.75	1.00	0.10	0.05	71.24
	Camera/Tool/Video Operator (Slipline) Certified Welder, Electrical Mechanic, Camp Maintenance Engineer, Mechanic (over 10,000 hours) Cranes (over 45 tons or 150 feet including jib & attachments) (a) Clamshells & Draglines (over 3 yards) (b) Tower Cranes Licensed Water/Waste Water Treatment Operator Loaders (over 5 yards) Motor Patrol Grader, Dozer, Grade Tractor (finish: when finishing to final grade and/or to hubs, or for asphalt) Power Plants (1000 k.w. & over) Profiler, Reclaimer, and Roto-Mill Quad Scrapers (over 40 yards) Screed Shovels, Backhoes, Excavators with all attachments (over 3 yards) Sidebooms (over 45 tons) Slip Form Paver, C.M.I. & similar types Topside (Asphalt Paver, Slurry machine, Spreaders, and similar types)							
						L&M		
A1603	Group II, including:	42.76	11.05	13.75	1.00	0.10	0.05	68.71
	Boiler - Fireman Cement Hogs & Concrete Pump Operator Conveyors (except those listed in Group I) Hoists on Steel Erection, Towermobiles & Air Tuggers Horizontal/Directional Drill Locator Locomotives, Rod & Geared Engines Mixers Screening, Washing Plant							

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Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
Power Equipment Operators *See per diem note on last page								
						L&M		
A1603	Group II, including:	42.76	11.05	13.75	1.00	0.10	0.05	68.71
	Sideboom (cradling rock drill, regardless of size)							
	Skidder							
	Trenching Machines (under 16 inches)							
	Water/Waste Water Treatment Operator							
						L&M		
A1604	Group III, including:	42.04	11.05	13.75	1.00	0.10	0.05	67.99
	"A" Frame Trucks, Deck Winches							
	Bombardier (tack or tow rig)							
	Boring Machine							
	Brooms, Power (sweeper, elevator, vacuum, or similar)							
	Bump Cutter							
	Compressor							
	Farm Tractor							
	Forklift, Industrial Type							
	Gin Truck or Winch Truck (with poles when used for hoisting)							
	Hoists, Air Tuggers, Elevators							
	Loaders:							
	(a) Elevating-Athey, Barber Greene & similar types							
	(b) Forklifts or Lumber Carrier (on construction job sites)							
	(c) Forklifts, (with tower)							
	(d) Overhead & Front End, (under 2-l/2 yards)							
	Locomotives: Dinkey (air, steam, gas & electric) Speeders							
	Mechanics, Light Duty							
	Oil, Blower Distribution							
	Posthole Digger, Mechanical							
	Pot Fireman (power agitated)							
	Power Plant, Turbine Operator, (under 200 k.w.)							
	Pumps, Water							
	Roller (other than Asphalt)							
	Saws, Concrete							
	Skid Hustler							
	Skid Steer (with all attachments)							
	Stake Hopper							
	Straightening Machine							
	Tow Tractor							
						L&M		
A1605	Group IV, including:	35.83	11.05	13.75	1.00	0.10	0.05	61.78
	Crane Assistant Engineer/Rig Oiler							
	Drill Helper							
	Parts & Equipment Coordinator							

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Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
Power Equipment Operators *See per diem note on last page								
						L&M		
A1605	Group IV, including:	35.83	11.05	13.75	1.00	0.10	0.05	61.78
	Spotter							
	Steam Cleaner							
	Swamper (on trenching machines or shovel type equipment)							
Roofers *See per diem note on last page								
						L&M		
A1701	Roofer & Waterproofer	44.62	13.75	3.91	0.81	0.10	0.06	63.25
						L&M		
A1702	Roofer Material Handler	31.23	13.75	3.91	0.81	0.10	0.06	49.86
Sheet Metal Workers, Region I (North of N63 latitude) *See per diem note on last page								
						L&M		
N1801	Sheet Metal Journeyman	49.04	11.85	14.61	1.80	0.12		77.42
	Air Balancing and duct cleaning of HVAC systems							
	Brazing, soldering or welding of metals							
	Demolition of sheet metal HVAC systems							
	Fabrication and installation of exterior wall sheathing, siding, metal roofing, flashing, decking and architectural sheet metal work							
	Fabrication and installation of heating, ventilation and air conditioning ducts and equipment							
	Fabrication and installation of louvers and hoods							
	Fabrication and installation of sheet metal lagging							
	Fabrication and installation of stainless steel commercial or industrial food service equipment							
	Manufacture, fabrication assembly, installation and alteration of all ferrous and nonferrous metal work							
	Metal lavatory partitions							
	Preparation of drawings taken from architectural and engineering plans required for fabrication and erection of sheet metal work							
	Sheet Metal shelving							
	Sheet Metal venting, chimneys and breaching							
	Skylight installation							
Sheet Metal Workers, Region II (South of N63 latitude) *See per diem note on last page								
						L&M		
S1801	Sheet Metal Journeyman	43.75	11.85	14.39	1.68	0.43		72.10
	Air Balancing and duct cleaning of HVAC systems							

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits	THR
Sheet Metal Workers, Region II (South of N63 latitude) *See per diem note on last page							
S1801	Sheet Metal Journeyman	43.75	11.85	14.39	1.68	L&M 0.43	72.10
	Brazing, soldering or welding of metals Demolition of sheet metal HVAC systems Fabrication and installation of exterior wall sheathing, siding, metal roofing, flashing, decking and architectural sheet metal work Fabrication and installation of heating, ventilation and air conditioning ducts and equipment Fabrication and installation of louvers and hoods Fabrication and installation of sheet metal lagging Fabrication and installation of stainless steel commercial or industrial food service equipment Manufacture, fabrication assembly, installation and alteration of all ferrous and nonferrous metal work Metal lavatory partitions Preparation of drawings taken from architectural and engineering plans required for fabrication and erection of sheet metal work Sheet Metal shelving Sheet Metal venting, chimneys and breaching Skylight installation						
Sprinkler Fitters *See per diem note on last page							
A1901	Sprinkler Fitter	49.10	10.55	18.15	0.52	L&M 0.25	78.57
Surveyors *See per diem note on last page							
A2001	Chief of Parties	46.16	12.23	13.64	1.15	L&M 0.10	73.28
A2002	Party Chief	44.57	12.23	13.64	1.15	L&M 0.10	71.69
A2003	Line & Grade Technician/Office Technician/GPS, Drones	43.97	12.23	13.64	1.15	L&M 0.10	71.09
A2004	Associate Party Chief (including Instrument Person & Head Chain Person)/Stake Hop/Grademan	41.85	12.23	13.64	1.15	L&M 0.10	68.97
A2006	Chain Person (for crews with more than 2 people)	37.51	12.23	13.64	1.15	L&M 0.10	64.63

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Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits	THR
Truck Drivers *See per diem note on last page							
A2101	Group I, including:	42.94	12.23	13.64	1.15	L&M 0.10	70.06
	Air/Sea Traffic Controllers						
	Ambulance/Fire Truck Driver (EMT certified)						
	Boat Coxswain						
	Captains & Pilots (air & water)						
	Deltas, Commanders, Rollagons, & similar equipment (when pulling sleds, trailers or similar equipment)						
	Dump Trucks (including rockbuggy, side dump, belly dump, & trucks with pups) over 40 yards up to & including 60 yards						
	Helicopter Transporter						
	Liquid Vac Truck/Super Vac Truck						
	Material Coordinator or Purchasing Agent						
	Ready-mix (over 12 yards up to & including 15 yards) (over 15 yards to be negotiated)						
	Semi with Double Box Mixer						
	Tireman, Heavy Duty/Fueler						
	Water Wagon (250 Bbls and above)						
A2102	Group 1A including:	44.21	12.23	13.64	1.15	L&M 0.10	71.33
	Dump Trucks (including rockbuggy, side dump, belly dump & trucks with pups) over 60 yards up to & including 100 yards (over 100 yards to be negotiated)						
	Jeeps (driver under load)						
	Lowboys, including tractor attached trailers & jeeps, up to & including 12 axles (over 12 axles or 150 tons to be negotiated)						
A2103	Group II, including:	41.68	12.23	13.64	1.15	L&M 0.10	68.80
	All Deltas, Commanders, Rollagons, & similar equipment						
	Batch Trucks (8 yards & up)						
	Batch Trucks (up to & including 7 yards)						
	Boom Truck/Knuckle Truck (over 5 tons)						
	Cacasco Truck/Heat Stress Truck						
	Construction and Material Safety Technician						
	Dump Trucks (including rockbuggy, side dump, belly dump, & trucks with pups) over 20 yards up to & including 40 yards						
	Gin Pole Truck, Winch Truck, Wrecker (truck mounted "A" frame manufactured rating over 5 tons)						
	Mechanics						
	Oil Distributor Driver						
	Partsman						
	Ready-mix (up to & including 12 yards)						
	Stringing Truck						

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits	THR
Truck Drivers *See per diem note on last page							
						L&M	
A2103	Group II, including:	41.68	12.23	13.64	1.15	0.10	68.80
	Turn-O-Wagon or DW-10 (not self loading)						
						L&M	
A2104	Group III, including:	40.86	12.23	13.64	1.15	0.10	67.98
	Boom Truck/Knuckle Truck (up to & including 5 tons)						
	Dump Trucks (including rockbuggy, side dump, belly dump, & trucks with pups) over 10 yards up to & including 20 yards						
	Expeditor (electrical & pipefitting materials)						
	Gin Pole Truck, Winch Truck, Wrecker (truck mounted "A" frame manufactured rating 5 tons & under)						
	Greaser - Shop						
	Semi or Truck & Trailer						
	Thermal Plastic Layout Technician						
	Traffic Control Technician						
	Trucks/Jeeps (push or pull)						
						L&M	
A2105	Group IV, including:	40.28	12.23	13.64	1.15	0.10	67.40
	Air Cushion or similar type vehicle						
	All Terrain Vehicle						
	Buggymobile						
	Bull Lift & Fork Lift, Fork Lift with Power Boom & Swing Attachment (over 5 tons)						
	Bus Operator (over 30 passengers)						
	Cement Spreader, Dry						
	Combination Truck-Fuel & Grease						
	Compactor (when pulled by rubber tired equipment)						
	Dump Trucks (including rockbuggy, side dump, belly dump, & trucks with pups) up to & including 10 yards						
	Dumpster						
	Expeditor (general)						
	Fire Truck/Ambulance Driver						
	Flat Beds, Dual Rear Axle						
	Foam Distributor Truck Dual Axle						
	Front End Loader with Fork						
	Grease Truck						
	Hydro Seeder, Dual Axle						
	Hyster Operators (handling bulk aggregate)						
	Loadmaster (air & water operations)						
	Lumber Carrier						
	Ready-mix, (up to & including 7 yards)						
	Rigger (air/water/oilfield)						
	Tireman, Light Duty						

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Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits	THR
Truck Drivers *See per diem note on last page							
A2105	Group IV, including:	40.28	12.23	13.64	1.15	L&M 0.10	67.40
	Track Truck Equipment Truck Vacuum Sweeper Warehouseperson Water Truck (Below 250 Bbls) Water Truck (straight) Water Wagon, Semi						
A2106	Group V, including:	39.52	12.23	13.64	1.15	L&M 0.10	66.64
	Buffer Truck Bull Lifts & Fork Lifts, Fork Lifts with Power Boom & Swing Attachments (up to & including 5 tons) Bus Operator (up to 30 passengers) Farm Type Rubber Tired Tractor (when material handling or pulling wagons on a construction project) Flat Beds, Single Rear Axle Foam Distributor Truck Single Axle Fuel Handler (station/bulk attendant) Gear/Supply Truck Gravel Spreader Box Operator on Truck Hydro Seeders, Single axle Pickups (pilot cars & all light-duty vehicles) Rigger/Swamper Tack Truck Team Drivers (horses, mules, & similar equipment)						
Tunnel Workers, Laborers (The Alaska areas north of N63 latitude and east of W138 longitude) *See per diem note on last page							
N2201	Group I, including:	36.30	8.95	21.16	1.40	L&M 0.20 LEG 0.20	68.21
	Brakeman Mucker Nipper Storm Water Pollution Protection Plan Worker (SWPPP Worker - erosion and sediment control Laborer) Topman & Bull Gang Tunnel Track Laborer						
N2202	Group II, including:	37.40	8.95	21.16	1.40	L&M 0.20 LEG 0.20	69.31
	Burning & Cutting Torch Certified Erosion Sediment Control Lead (CESCL Laborer)						

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
						L&M	LEG	
Tunnel Workers, Laborers (The Alaska areas north of N63 latitude and east of W138 longitude) *See per diem note on last page								
N2202	Group II, including: Concrete Laborer Floor Preparation, Core Drilling Jackhammer/Chipping Gun or Pavement Breaker Laser Instrument Operator Nozzlemen, Pumpcrete or Shotcrete Pipelayer Helper	37.40	8.95	21.16	1.40	0.20	0.20	69.31
N2203	Group III, including: Miner Retimberman	38.39	8.95	21.16	1.40	0.20	0.20	70.30
N2204	Group IIIA, including: Asphalt Raker, Asphalt Belly Dump Lay Down Drill Doctor (in the field) Driller (including, but not limited to wagon drills, air-track drills, hydraulic drills) Pioneer Drilling & Drilling Off Tugger (all type drills) Pipelayer Powderman (Employee Possessor) Storm Water Pollution Protection Plan Specialist (SWPPP Specialist) Traffic Control Supervisor, DOT Qualified	42.00	8.95	21.16	1.40	0.20	0.20	73.91
N2206	Group IIIB, including: Driller (including, but not limited to wagon drills, air-track drills, hydraulic drills)(over 5,000 hours) Federal Powderman (Responsible Person in Charge) Grade Checking (setting or transferring of grade marks, line and grade, GPS, drones) Pioneer Drilling & Drilling Off Tugger (all type drills)(over 5,000 hours) Stake Hopper	46.17	6.24	21.16	1.40	0.20	0.20	75.37
Tunnel Workers, Laborers (The area that is south of N63 latitude and west of W138 longitude) *See per diem note on last page								
S2201	Group I, including: Brakeman Mucker Nipper Storm Water Pollution Protection Plan Worker (SWPPP Worker - erosion and sediment control Laborer)	36.30	8.95	21.16	1.40	0.20	0.20	68.21

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
						L&M	LEG	
S2201	Group I, including:	36.30	8.95	21.16	1.40	0.20	0.20	68.21
	Topman & Bull Gang Tunnel Track Laborer							
						L&M	LEG	
S2202	Group II, including:	37.40	8.95	21.16	1.40	0.20	0.20	69.31
	Burning & Cutting Torch Certified Erosion Sediment Control Lead (CESCL Laborer) Concrete Laborer Floor Preparation, Core Drilling Jackhammer/Chipping Gun or Pavement Breaker Laser Instrument Operator Nozzlemen, Pumpcrete or Shotcrete Pipelayer Helper							
						L&M	LEG	
S2203	Group III, including:	38.39	8.95	21.16	1.40	0.20	0.20	70.30
	Miner Retimberman							
						L&M	LEG	
S2204	Group IIIA, including:	42.00	8.95	21.16	1.40	0.20	0.20	73.91
	Asphalt Raker, Asphalt Belly Dump Lay Down Drill Doctor (in the field) Driller (including, but not limited to wagon drills, air-track drills, hydraulic drills) Pioneer Drilling & Drilling Off Tugger (all type drills) Pipelayer Powderman (Employee Possessor) Storm Water Pollution Protection Plan Specialist (SWPPP Specialist) Traffic Control Supervisor, DOT Qualified							
						L&M	LEG	
S2206	Group IIIB, including:	46.17	6.24	21.16	1.40	0.20	0.20	75.37
	Driller (including, but not limited to wagon drills, air-track drills, hydraulic drills)(over 5,000 hours) Federal Powderman (Responsible Person in Charge) Grade Checking (setting or transferring of grade marks, line and grade, GPS, drones) Pioneer Drilling & Drilling Off Tugger (all type drills)(over 5,000 hours) Stake Hopper							

Tunnel Workers, Laborers (The area that is south of N63 latitude and west of W138 longitude)
*See per diem note on last page

Tunnel Workers, Power Equipment Operators
*See per diem note on last page

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits		THR
Tunnel Workers, Power Equipment Operators *See per diem note on last page								
A2207	Group I	47.88	11.05	13.75	1.00	**L&M** 0.10	0.05	73.83
A2208	Group IA	49.82	11.05	13.75	1.00	**L&M** 0.10	0.05	75.77
A2209	Group II	47.04	11.05	13.75	1.00	**L&M** 0.10	0.05	72.99
A2210	Group III	46.24	11.05	13.75	1.00	**L&M** 0.10	0.05	72.19
A2211	Group IV	39.41	11.05	13.75	1.00	**L&M** 0.10	0.05	65.36

*** Per diem is an established practice for this classification. This means that per diem is an allowable alternative to board and lodging if all criteria are met. See 8 AAC 30.051-08 AAC 30.056, and the per diem information on page vii of this Pamphlet.**

**** Work in combination of classifications: Employees working in any combination of classifications within the diving crew (working diver, standby diver, and tender) in a shift are paid in the classification with the highest rate for a minimum of 8 hours per shift.**

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Shipyard Rates Addendum

This Addendum was developed to address the specialized industry of shipbuilding/repair in Alaska, as it relates to public works. For the purposes of providing rates for shipyard work the Department is adopting Shipyard rates from the state of Washington (King County). These rates only apply to work done in shipbuilding/repair in Alaska, under a public contract. This addendum will be updated two times a year to coincide with the corresponding Issue of *Laborers and Mechanics MINIMUM RATES OF PAY.*

Class Code		BHR H&W PEN TRN Other Benefits THR
Shipyard Workers *See total hourly(THR) note below		
A2300	Ship Building/Repair Boilermaker	47.45
A2305	Ship Building/Repair Carpenter	47.35
A2310	Ship Building/Repair Crane Operator	45.06
A2315	Ship Building/Repair Electrician	48.92
A2320	Ship Building/Repair Heat & Frost Insulator	82.02
A2325	Ship Building/Repair Laborer	47.35
A2330	Ship Building/Repair Mechanist	47.35
A2335	Ship Building/Repair Operating Engineer	45.06
A2340	Ship Building/Repair Painter	47.35
A2345	Ship Building/Repair Pipefitter	47.35
A2350	Ship Building/Repair Rigger	47.45
A2355	Ship Building/Repair Sheet Metal	47.35
A2360	Ship Building/Repair Shipwright	47.35
A2365	Ship Building/Repair Warehouse	45.06

***The THR includes the base hourly rate (BHR) and fringe benefits. Employers must pay a BHR and fringe benefit package that adds up to the THR. Fringe benefits included in the THR can be paid to employees in three ways; paid into a union trust fund, into an approved benefit plan, or paid directly on the paycheck as gross wages.**

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation