

Small Procurement for Construction

Fairbanks Pioneer Home Kitchen Flooring & Tub Room Modernizations

Project No. AJF 20-02C

You are invited to submit a quote to: **Provide all labor, supervision, permits, equipment and materials to modernize the tub rooms and replace the kitchen flooring in the dish room area as per the plans and specifications. For Bid Alternate #1, please provide a bid to replace the commercial dishwasher.**

Bids must be received before 2:00 PM local time August 28, 2019 at the address listed in the bid documents.

Bidders are encouraged to attend a pre-bid walkthrough which will be held at 2:00pm August 13, 2019. This will be the ONLY opportunity for Contractors to see the project before the bids are due. The Fairbanks Pioneer Home is located at 2221 Eagan Avenue Fairbanks, AK 99701

The project completion date is 180 Days after NTP

Engineer's Estimate: Less than \$175,000

Please direct all project or site related inquiries to Mark Moon, Project Manager at (907) 269-7812.

Issued: August 6, 2019

Small Procurement for Construction

Fairbanks Pioneer Home Tub & Dish Room Renovations

Project No. AJF 20-02C

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Issued: July 30, 2019



STATE OF ALASKA
DEPARTMENT OF HEALTH & SOCIAL SERVICES
FMS FACILITIES

INVITATION FOR QUOTES FOR
A SMALL PROCUREMENT
(CONSTRUCTION RELATED)

[per AS 36.30.320(a)]

Project Name & No.: <u>Fairbanks Pioneer Home</u> <u>Tub & Dish Room Renovations</u> <u># AJF 20-02C</u> Location: <u>2221 Eagan Ave. Fairbanks, AK 99701</u>	Procurement Agency and Address: Dept. of Health & Social Services FMS Facilities 3601 C St., Suite 578 Anchorage, AK 99503 (907) 269-7812 Mark.Moon@alaska.gov
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Contracting Officer: Amy Burke, FMS Facilities Chief

Date of Issuance: August 6, 2019

DESCRIPTION OF WORK, REQUIRED COMPLETION DATE, LISTING OF ATTACHMENTS:

Provide all labor, supervision, permits and materials per the Plans & Specifications to renovate the Dish Room, Two Tub Rooms and Repair Piping at the Fairbanks Pioneer Home

Quotes that exceed \$25,000 must file mandatory bi-weekly certified payrolls - See SPECIAL NOTICE TO BIDDERS for other pertinent DOLWD requirements. Work shall be completed by 180 Days after Notice To Proceed.

To be considered responsive, Contractor must provide a current copy of their Business license and any required registrations with their Quote Submittal.

The Project cost estimate is: ☐ under \$ 10,000 ☐ \$ 10,001 - \$ 50,000 ☐ \$ 50,001-\$ 100,000 ☒ \$100,001-\$ 200,000 *
*Base Bid Quotes in excess of \$200,000 will be deemed non-responsive.

Davis-Bacon Wages (Title 36.05) will be required if the project cost is \$25,000 or more. At that amount, online filing with Dept. of Labor and certified payrolls will also be required by the contractor.

The following insurance is required: ☒ Workers Comp ☒ General Liability ☒ Automobile

Quotes for furnishing all labor, equipment and materials and performing all work for the above Project are invited. All quotes must be received before 2:00 pm local time on the 28th day of August, 2019. Late quotes cannot be accepted. Disadvantaged Business Enterprises (DBE's) may submit quotes and will not be discriminated against on the grounds of race, color, national origin or sex in consideration for an award which results from this invitation. Any errors, omissions, or questions pertaining to solicitation procedures or project requirements, requests for additional documents, or inquiries pertaining to site conditions or scheduled visits must be made to: Mark Moon, Building Management Specialist at: 3601 C St Suite 578 Anchorage, AK 99503; Email: mark.moon@alaska.gov; Telephone: (907) 269-7812; Fax: (907) 465-2607. Applicable provisions of AS 36.30 and 2 AAC 12 govern this solicitation.

SUBMITTAL OF QUOTES: Quotes for this project must be submitted in the manner noted below. All contractors must familiarize themselves with the *Instructions to Bidders*, page 2 of this form, prior to submitting their quote.

☐ - VERBAL QUOTES SHALL BE GIVEN TO _____
AT THE ABOVE NOTED TELEPHONE NUMBER, PRIOR TO THE STATED DEADLINE.

☒ - WRITTEN QUOTES, INCLUDING AMENDMENTS OR WITHDRAWALS, MUST BE RECEIVED PRIOR TO THE ABOVE NOTED DEADLINE. QUOTES MUST BE SUBMITTED ON FORM SPC-002, QUOTE SUBMITTAL, ATTACHED.

Written quotes may be submitted by Fax, hand delivered, mailed in a sealed envelope or emailed to: mark.moon@alaska.gov. Confidentiality is only assured for sealed quotes. Mailed quotes must allow time for delivery and the envelope must be marked as follows:

Quote for Project:

Procurement Agency Address:

Name: Tub & Dish Room Renovations
Number: AJF 20-02C
Attn: Mark Moon, Project Manager

Dept. of Health & Social Services
FMS Facilities
3601 C St, Suite 578, Anchorage, AK 99503

Quote amendments or withdrawals must be made in writing to the individual of the Procurement Agency receiving the quotes, and must be received prior to the time for quote submittal.



STATE OF ALASKA
DEPARTMENT OF Health & Social Services, Facilities

**INVITATION FOR QUOTES FOR
 A SMALL PROCUREMENT
 (CONSTRUCTION RELATED)**

INSTRUCTIONS TO BIDDERS

The State of Alaska desires that all contractors submitting quotes on construction contracts are given a fair and equal opportunity to compete. Contractors are required to follow these instructions:

REVIEW THE PROJECT DOCUMENTS: Most construction projects in excess of \$1,000 will have some type of written documentation prepared expressly for the work. If you are asked to submit a quote and no written information has been provided, you should ask the procurement agency for written documentation. If the scope of services has been described to you verbally, and you are selected for contract award, you must ensure that the information of the services to be performed (scope of work) is put in writing prior to accepting the contract. When providing a quote, carefully review and consider all materials related to the solicitation and work of the contract. **By submitting a quote the contractor warrants that they are familiar with the project requirements, have visited or otherwise examined the site, and are aware of the conditions to be encountered.** Contractors can verify the contents and completeness of their documents by contacting the procurement agency individual named on the front of this form.

SUBMITTING THE QUOTE: The quote must be submitted in one of the following formats as called for in the invitation:

1. **VERBAL** – in addition to the quote, the contractor must provide the following information: (1) their valid Alaska Business License number, (2) if applicable, proof that they are an Alaskan Veteran Bidder, (3) if applicable, valid Contractor's Registration number, (4) their intended use of Alaskan products, (5) the carrier's name and policy number for their Workers' Comp Insurance (or a statement of sole proprietorship, if applicable), (6) mailing address, and (7) the Employer (Tax) Identification Number or Social Security Number. The Procurement Agency will enter this information on the quote schedule.
2. **WRITTEN** - if a written quote is solicited, the contractor must complete, in ink or typewritten, the *Small Procurement Quote Submittal Form* SPC-002. Failure to acknowledge receipt of addenda or to execute the form correctly and completely may disqualify the quote.

NOTE: The *Department of Labor* requires a contractor to be licensed and registered for the required type of work prior to submitting a quote. If the procurement agency determines that the contractor is improperly registered or licensed, their quote may be deemed nonresponsive.

SUBCONTRACTOR LISTING: Subcontractors intended to be utilized on this contract must be listed in the response to the solicitation. Work shall not be awarded to any subcontractor without prior approval from the procurement agency. Subcontractors may be added or removed only as approved by the procurement agency.

DETERMINATION OF THE LOWEST RESPONSIBLE QUOTE AND CONTRACT AWARD: Following receipt and determination of all **responsive** oral, written or sealed quotes, the procurement agency will compare the quotes and determine the lowest quote. If the procurement agency discovers a discrepancy between the unit price and the extended amount; the unit price will prevail. Conditioned quotes, unless expressly requested, will not be considered. When the quote schedule is composed of a basic amount with alternates, the procurement agency will base its determination of the low quote and the amount of the contract award solely upon those quotes, basic and alternates that are priced within the extent of available construction funds. Alternates will be considered for award in the order listed, except that if the order of award is not affected, the award may include any combination of funded alternates, or none, as may be in the best interest of the procurement agency.

When determining the lowest quote, the procurement agency will also give a 5% Alaska Bidder, 5% Alaska Veteran preference, and an appropriate Alaska Products preference to quotes designating the applicability of any of these preferences. To qualify for the Alaska Bidder preference (per AS 36.30.170) the person must (1) hold a current Alaska business license, (2) submit the quote for goods or services under the name appearing on the business license, (3) has maintained a place of business within the state staffed by the bidder, or an employee of the bidder, for a period of six months immediately preceding the date of the quote; (4) is incorporated or qualified to do business under the laws of the state, is a sole proprietorship and the proprietor is a resident of the state, is a limited liability company organized under AS 10.50 and all members are residents of the state, or is a partnership under AS 32.05 or AS 32.11 and all partners are residents of the state; and, (5) if a joint venture, is composed entirely of venturers that qualify under (1) - (4) of this subsection. AS 36.30.170(b). If a bidder qualifies for the Alaska Bidder preference, under AS 36.30.170(b), and is a qualifying entity as defined in AS 36.30.175, they will be awarded an Alaska Veteran preference of five percent (5%). The preference will be given to a (1) sole proprietorship owned by an Alaska Veteran; (2) partnership under AS 32.06 or AS 32.11 if a majority of the partners are Alaska Veterans; (3) limited liability company organized under AS 10.50 if a majority of the members are Alaska Veterans; or (4) corporation that is wholly owned by individuals and a majority of the individuals are Alaska Veterans.

Upon request, a booklet fully describing the Alaska Products preference program is available from the procurement agency.

The procurement agency will make a determination of **responsibility** as required by 2 AAC 12.500. If the lowest contractor is declared responsible, the procurement agency will execute the *Notice of Award / Notice to Proceed*, Form SPC-003, and send it to the contractor for acknowledgement. If the lowest contractor is found to be nonresponsible, this process will be repeated with the second lowest contractor -- and so on until the lowest responsive and responsible contractor is determined.

NOTICE OF AWARD AND PROTEST: A written notice will be provided on all awards exceeding \$25,000 (2 AAC 12.400(h)). All protests must be filed with the Commissioner of the procurement agency (or designee) and copied to the Procurement Officer. Protest procedures are described in AS 36.30.560 and 2 AAC 12.695. The extent of the protest remedy is limited to quote preparation costs (AS 36.30.585).



**STATE OF ALASKA
DEPARTMENT OF HEALTH & SOCIAL SERVICES
FMS FACILITIES**

**SMALL PROCUREMENT QUOTE SUBMITTAL
(CONSTRUCTION RELATED)**

[per AS 36.30.320(a)]

Project Name & No.: <u>Fairbanks Pioneer Home</u> <u>Tub & Dish Room Renovations # AJF 20-02C</u> Location: <u>2221 Eagan Ave. Fairbanks, AK 99701</u>	Procurement Agency and Address: <u>State of Alaska, DHSS/FMS Facilities</u> <u>3601 C Street, Suite 578</u> <u>Anchorage, AK 99503</u> <u>(907) 269-7812 / Fax: (907) 334-2689</u> <u>Mark.Moon@alaska.gov</u>
Contracting Officer: Amy Burke, FMS/FAC Chief	Date of Issuance: August 6,, 2019 Bid is Due: August 28, 2019 @ 2:00 pm

QUOTE: Provide all labor, supervision, permits and materials per the Plans & Specifications to renovate the Dish Room, Two Tub Rooms and Repair Piping at the Fairbanks Pioneer Home

- | | | |
|----|--|----------|
| a. | Lump Sum Total Basic Bid | \$ _____ |
| b. | Additive Alternate #1 Bid | \$ _____ |
| c. | Alaska Bidder's Preference - (5% of Basic Bid) | \$ _____ |
| d. | Alaska Bidder's Preference for 5% of Additive Alternate #1 | \$ _____ |
| e. | Alaska Veterans Preference - 5% of Basic Bid (not to exceed \$5,000) | \$ _____ |
| f. | Alaska Veterans Preference – 5% of Basic Bid + Additive Alt #1
(not to exceed \$5,000) | \$ _____ |
| g. | Alaska Products Preference - (Attach worksheet(s)) | \$ _____ |
| h. | Adjusted Basic Bid: (a - c - e - g) | \$ _____ |
| i. | Adjusted Basic Bid + Adjusted Add. Alt #1 (a + b - c - d - f - g) | \$ _____ |
| j. | Lump Sum Total Basic Bid + Add Alt #1 (Unadjusted) | \$ _____ |

I have reviewed the bid documents, with addenda _____, and understand the scope of services and conditions required for Project number **AJF 20-02C**. I agree to furnish all necessary labor, materials, and equipment for the above amount(s). The Work shall be accomplished in a professional manner acceptable to the Procurement Officer.

Contractor _____ Contractor Reg. No. _____

Authorized Signature _____ Title _____

Address _____

Business License # _____ EIN or SSN _____ Phone # _____

Offeror is Claiming: ☐ Alaska Bidder Preference ☐ Alaska Products Pref. (worksheet)
☐ Alaska Veteran Preference

Procurement Officer: _____

Date of Receipt of Bid: _____

Offeror to Complete this Portion



**STATE OF ALASKA
DEPARTMENT OF HEALTH & SOCIAL SERVICES**

**NOTICE OF AWARD (NOA)
SMALL PROCUREMENT CONTRACT
(CONSTRUCTION RELATED)
[per AS 36.30.320]**

Project Name & No.: <u>Fairbanks Pioneer Home</u> <u>Kitchen Flooring & Tub Room Modernizations</u> <u># AJF 20-02C</u> Location: <u>2221 Eagan Ave.</u> <u>Fairbanks, AK 99701</u>	Procurement Agency and Address: Dept. of Health & Social Services FMS Facilities 3601 C St., Suite 578 Anchorage, AK 99503 (907) 269-7812 Mark.Moon@alaska.gov
Contracting _____ Officer's Signature: Amy Burke, FMS/Facilities Chief	Date of Issuance: _____

TO: _____ _____ _____	FOR: Work related to Basic Bid of: <u>AJF 20-02C</u> including the basic quote and alternate quote item(s): _____	<table border="1"> <tr> <th>The Contractor Must Submit:</th> </tr> <tr> <td>Insurance</td> </tr> <tr> <td>Bonding*</td> </tr> <tr> <td>Certified Wages**</td> </tr> <tr> <td>Subcontractor List***</td> </tr> </table>	The Contractor Must Submit:	Insurance	Bonding*	Certified Wages**	Subcontractor List***
The Contractor Must Submit:							
Insurance							
Bonding*							
Certified Wages**							
Subcontractor List***							

* **Bonding** - If contract bid amount exceeds \$80,000, Performance & Payment Bonds will be required for 50% of bid amount.
 ** **Certified Wages** - Contracts over \$25,000 require bi-weekly Certified Payroll be submitted to the Dept. of Labor (see Special Instructions to Bidders form)
 *** **Subcontractor List** - Contractor will be required to submit a Subcontractor list if they are utilized

Your quote in the amount of \$_____ submitted on _____, is accepted for performance of the Work described in the attached Invitation for Quotes (Form SPC-001), and the quote as submitted on the *Small Procurement Quote Submittal* (Form SPC-002), which are a part of this Contract.

The Contractor must sign, date, and return this document to the procurement address shown above or email to: Mark.Moon@alaska.gov . The Procurement Officer will then sign and return a copy to the Contractor, and the Award will be deemed made.

The Work of this contract may not commence until the Notice to Proceed (NTP) is issued.

Contractor's Signature of Contract Award Acceptance: _____ Date : _____

NOTICE TO UNSELECTED OFFERORS ON PROJECTS OVER \$ 25,000

In accordance with the protest rights afforded under 2 AAC 12.400(d)(2)(B) & (3), a copy of this Notice of Award is hereby provided to those individuals and businesses who submitted a response to the initial solicitation on which this award is made.



STATE OF ALASKA
DEPARTMENT OF HEALTH & SOCIAL SERVICES

NOTICE OF AWARD (NOA)
SMALL PROCUREMENT CONTRACT
(CONSTRUCTION RELATED)

GENERAL CONDITIONS

[Construction Procurement under AS 36.30.320]

These terms, conditions and requirements apply to the Contract Documents describing the Work for the Project. If any provision of these Contract Documents is declared by a court to be illegal or in conflict with any law, the validity of the remaining provisions and the ensuing rights and obligations of the Parties to the contract shall not be affected.

Whenever used in these Contract Documents, the following terms shall have the indicated meaning. Any term not so defined shall have its ordinary meaning.

- **Approved or Approval** - means written approval by the Procurement Officer or authorized representative.
- **Award** - means the written acceptance of the lowest responsive and responsible quote by the Procurement Agency.
- **Contract Documents** - includes the *Invitation for Quotes for a Small Procurement*, Form SPC-001 (with Instructions - if issued), the *Notice of Award / Notice to Proceed*, Form SPC-003, any addenda, written changes, or attachments as noted in the description of the Work.
- **Procurement Officer** - the person authorized to enter into and administer the contract on behalf of the Procurement Agency.
- **Parties to the Contract** - includes the Procurement Agency, the owner Agency representing the State of Alaska, and the Contractor, being the entity contracting with the owner Agency for performance of the Work.
- **Project** - The total construction, of which the Work performed under the Contract, is the whole or part.
- **Project Manager** - the Procurement Officer's authorized representative, responsible for Contract administration.
- **Work** - is the act of, and the result from, performing services, furnishing labor, furnishing and incorporating materials and equipment into the Project and performing other duties and obligations, all as required by the Contract Documents.

1. The Procurement Officer (or authorized representative) has the authority to make findings, determinations and decisions with respect to the contract; to Approve materials, Work and payment therefore; and to modify or terminate the contract on behalf of the Procurement Agency.
2. The Contractor shall have sole responsibility for the means, methods, sequences, or procedures of construction and safety precautions related to the Project. The Contractor shall conduct all Work in such a manner that protects the public and State resources.
3. The Contractor must comply with all applicable laws, regulations, codes, ordinances and written directives issued by the Procurement Officer. In addition, the Contractor must obtain applicable licenses and permits; provide supervision, labor, tools, and new materials (except as may otherwise be provided by the Procurement Agency); and utilize Alaska Products and Wood Products when applicable (see AS 36.05.010 & AS 36.30.322). **Hazardous Materials:** The CONTRACTOR is to be aware under 29 CFR 1926.1101(k)(2)(ii) Construction Industry Standards, any building or facility constructed prior to 1980 may contain suspected Hazardous Materials. All known or perceived known Hazardous Materials information will be provided by the DEPARTMENT's facility staff to the CONTRACTOR upon request. Any new suspected Hazardous Materials encountered by the CONTRACTOR shall be made known to the DEPARTMENT within 3 business days of discovery. Once notified the DEPARTMENT will have an Environmental Assessment completed to verify if hazardous materials exist.
4. The Contractor shall not award Work to any subcontractor without prior Approval from the Procurement Officer.
5. The Procurement Agency reserves the right to make written changes to the Contract Documents for modifications within the general scope of the Work.
6. Any act or occurrence be it a result of an emergency, differing site condition or change order, which may form the basis of a claim for a price or time adjustment must be reported immediately to the Procurement Officer.
7. **The Department of Labor and Workforce Development, Wage and Hour Administration, must be notified in accordance with AS 36.05.010 and AS 36.05.030 if the resulting contract for repairs or construction exceeds \$25,000.** The Contractor must comply with the requirements noted within the Department of Labor packet entitled, "Laborers' & Mechanics' Minimum Rates of Pay." To obtain a copy of the referenced packet, contact the Procurement Agency or the Department of Labor.
8. The primary contractor working on public construction projects with an amount of \$25,000 or more must file a Notice of Work and pay a one percent fee based on the estimated value of work performed by the prime contractor and one percent of the value of each subcontractor's price, to the Department of Labor and Workforce Development, Wage and Hour Administration (DOLWD) - The maximum fee is \$5,000.00. The notice and fees must be filed with the DOLWD before work commences on the project.

Upon completing the construction project, the primary contractor must file a Notice of Completion (NOC) and make payment of any additional fees due to increases in the contract amounts due the primary contractor. Contractor must file the Notice of Work and Notice of Completion online. Please call the Dept. of Labor for instructions and/or assistance in filing (<http://labor.alaska.gov/lss/whhome.htm>).

9. The Contractor shall indemnify, save harmless, and defend the Procurement Agency, its agents and its employees in accordance with Appendix B1. Furthermore, the Contractor shall, prior to the Award of the contract, provide proof of Workmen's Compensation, General Liability, and Automobile Insurance in amounts as applicable under Appendix B1. These coverages shall remain in force for the duration of the Contract.
10. The Contractor shall remedy all defects in materials or workmanship that develop within a period of one year from the date of final payment.
11. The Procurement Agency will make final payment to the Contractor following approval of completion of all Work and the Contractor's submittal of all releases, warranties, record documents, permits and invoices. Liens or other claims relating to the Project may be withheld from final payment if written notice is first given to the Contractor. Acceptance of the final payment will constitute the Contractor's waiver to future claims.
12. Any dispute arising out of this Contract, which cannot be satisfactorily remedied by the Parties to the Contract, shall be resolved under AS 36.30.620 - 699.

APPENDIX B¹
BONDS, INDEMNITY AND INSURANCE

Article 1. Bonds

If Required and Noted on Page one of the Notice of Award Form SPC-003, the CONTRACTOR shall furnish Performance and Payment Bonds, each in an amount as shown on the Contract as security for the faithful performance and payment of all CONTRACTOR'S obligations under the Contract Documents. These bonds shall remain in effect for one year after the date of Final Acceptance and until all obligations under this Contract, except special guarantees as per 12.7, have been met. All bonds shall be furnished on forms provided by the DEPARTMENT (or copies thereof) and shall be executed by such Sureties as are authorized to do business in the State of Alaska. The Contracting Officer may at his option copy the Surety with notice of any potential default or liability.

At the option of the CONTRACTOR, bonds may be provided by individual Surety the adequacy of which shall be determined by the Contracting Officer. Any costs incurred by the CONTRACTOR or individual Surety shall be borne by the CONTRACTOR. Where individual Sureties are used, two individual Sureties must each provide the State of Alaska with security equal to the amount of each bond by one, or a combination of, the following methods:

- a. Escrow account in the name of the DEPARTMENT for the duration of the Contract. Acceptable securities would include, but not necessarily be limited to: Cash; treasury notes; bearer instruments having a specific value, or; money market certificates.
- b. First *Deed of Trust* with the DEPARTMENT designated as beneficiary, against the unencumbered value of the real property located within the State of Alaska or an agreement by any second party, including deeds of trust, mortgage, lien or judgment interests to subrogate their interests to that of the State of Alaska in the real property which has been offered by the individual Surety.

A title insurance policy with the State of Alaska as a named beneficiary and a current (within 3 months) professional appraisal or assessed valuation will be required to ascertain the true value of the property offered as collateral. If buildings or other valued improvements are involved then fire and casualty insurance with the State of Alaska as a named insured and in limits and coverages acceptable to the Contracting Officer shall be required. The appraiser shall acknowledge in writing that the appraisal is prepared for the benefit of the DEPARTMENT and the DEPARTMENT has the right to rely on its contents. This *Deed* must be recorded in the recording office where the property is located.

With respect to clauses "a" and "b" above, the *Deed of Trust* or other accepted security shall not be released until 12 months after Final Acceptance of the Project and settlement of all outstanding claims.

Replacement of Bond and Surety:

If the Surety on any bond furnished in connection with this Contract is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of paragraph 5.2, or otherwise becomes unacceptable to the DEPARTMENT, or if any such Surety fails to furnish reports as to his financial condition as requested by the DEPARTMENT, the CONTRACTOR shall within five days thereafter substitute another bond and Surety, both of which must be acceptable to DEPARTMENT.

An individual Surety may be replaced by a corporate Surety during the course of the Contract period. If the Surety desires to dispose of the collateral posted, the DEPARTMENT may, at its option, accept substitute collateral.

Article 2. Indemnification

The Contractor shall indemnify, hold harmless, and defend the contracting agency from and against any claim of, or liability for error, omission or negligent act of the Contractor under this agreement. The Contractor shall not be required to indemnify the contracting agency for a claim of, or liability for, the independent negligence of the contracting agency. If there is a claim of, or liability for, the joint negligent error or omission of the Contractor and the independent negligence of the Contracting agency, the indemnification and hold harmless obligation shall be apportioned on a comparative fault basis. "Contractor" and "Contracting agency", as used within this and the following article, include the employees, agents and other contractors who are directly responsible, respectively, to each. The term "independent negligence" is negligence other than in the Contracting agency's selection, administration, monitoring, or controlling of the Contractor and in approving or accepting the Contractor's work.

Article 3. Insurance

Without limiting Contractor's indemnification, it is agreed that Contractor shall purchase at its own expense and maintain in force at all times during the performance of services under this agreement the following policies of insurance. Where specific limits are shown, it is understood that they shall be the minimum acceptable limits. If the Contractor's policy contains higher limits, the state shall be entitled to coverage to the extent of such higher limits. Certificates of Insurance must be furnished to the Contracting Officer prior to beginning work and must provide for a 30-day prior notice of cancellation, non-renewal or material change of conditions. Failure to furnish satisfactory evidence of insurance or lapse of the policy is a material breach of this contract and shall be grounds for termination of the Contractor's services. All insurance policies shall comply with, and be issued by insurers licensed to transact the business of insurance under AS 21.

3.1 Workers' Compensation Insurance: The Contractor shall provide and maintain, for all employees engaged in work under this contract, coverage as required by AS 23.30.045, and; where applicable, any other statutory obligations including but not limited to Federal U.S.L. & H. and Jones Act requirements.

- **The policy must waive subrogation against the State.**

3.2 Commercial General Liability Insurance: covering all business premises and operations used by the Contractor in the performance of services under this agreement with minimum coverage limits of \$300,000, combined single limit per occurrence.

- **The State of Alaska must be named as additional insured.**

3.3 Commercial Automobile Liability Insurance: covering all vehicles used by the Contractor in the performance of services under this agreement with minimum coverage limits of \$300,000, combined single limit per occurrence.



**STATE OF ALASKA
DEPARTMENT OF HEALTH & SOCIAL SERVICES**

**NOTICE TO PROCEED (NTP)
SMALL PROCUREMENT CONTRACT
(CONSTRUCTION RELATED)**

[per AS 36.30.320]

Project Name & No.: <u>Fairbanks Pioneer Home</u> <u>Kitchen Flooring & Tub Room Modernizations</u> <u># AJF 20-02C</u> Location: <u>2221 Eagan Ave, Fairbanks, AK 99701</u>	Procurement Agency and Address: Dept. of Health & Social Services FMS Facilities 3601 C St., Suite 578 Anchorage, AK 99503 (907) 269-7812 Mark.Moon@alaska.gov
Project _____ Manager: Mark Moon, Building Management Specialist	Date of Issuance: _____

TO: _____ _____ _____	FOR: Work related to Basic Bid of: <u>AJF 20-02C</u> including the basic quote and alternate quote item(s): _____	The Contractor Must Submit: Insurance Bonding* Certified Wages** <u>Subcontractor List***</u>
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You have successfully met the requirements for submittal of all contract documents to the Procurement Agency and Dept. of Labor and Workforce Development related to the subject Project.

Upon receipt of this document, the Contractor may begin work on the subject project, in accordance with the terms of the contract. The Work of this contract must commence within 10 calendar days following the date of signature by the Procurement Officer, shown above (i.e., the effective date of the Contract) and all Work of the Contract must be complete on or before **June 30, 2019**. Send all invoices to the address above or email them to: Mark.Moon@alaska.gov

Contractor's Signature of Acknowledgment: _____ Date : _____

* **Bonding** - If contract bid amount exceeds \$80,000, Performance & Payment Bonds will be required for 50% of bid amount.
 ** **Certified Wages** – Contracts over \$25,000 require biweekly Certified Payroll be submitted to the Dept. of Labor (see Special Instructions to Bidders form)
 *** **Subcontractor List** – Contractor will be required to submit a Subcontractor list if they are utilized

**STATE OF ALASKA
DEPARTMENT OF HEALTH & SOCIAL SERVICES
ALASKA PRODUCTS PREFERENCE WORKSHEET
SMALL PROCUREMENT CONTRACT
(CONSTRUCTION RELATED)**

(See Instructions on back)

Project Name: Fairbanks Pioneer Home -Kitchen Flooring & Tub Room Modernizations

Project Number: AJF 19-02C

Procurement Agency: FMS Facilities Contractor: _____

PRODUCT	MANUFACTURER	CLASS & PREFERENCE PERCENTAGE	TOTAL DECLARED VALUE	REDUCTION AMOUNT
			TOTAL	

NOTICE TO BIDDERS

In order for bids to be considered responsive, the following items must be completed on the Small Procurement Quote Submittal (Construction Related) form (Form SPC-002):

1. Complete all prices and figures as indicated on the Quote Submittal (Form SPC-002) portion of the form, unless indicated otherwise;
2. Complete the Contractor's firm name and authorized signature lines;
3. Enter a valid Alaska Business License number and, if applicable, a valid Contractor's Registration number.
4. Include a current copy of your Contractors license and any required registrations with the Small Procurement Quote Submittal (Construction Related) form (Form SPC-002)

ALASKAN PREFERENCES

Alaska Bidders Preference

To qualify for the Bidder's Preference (per AS 36.30.170), the bidder must:

1. Hold a current Alaska Business License;
2. Submit the bid under the name appearing on the license;
3. Has staffed and maintained a place of business in Alaska for the previous six (6) months;
4. Is incorporated or qualified to do business under the laws of the State.

Alaska Veterans Preference

To qualify for the Veterans Preference (per AS 36.30.175), the bidder must:

1. Qualify for the Alaska Bidder's Preference
2. Add value by actually performing the services or have prior experience in selling the supplies
3. Qualify as an Alaska Veteran
4. The value of the preference cannot exceed \$5,000.

Alaska Products Preference

If applicable, the use of Alaska Products can be claimed on the Alaska Products Preference Worksheet (Form SPB -007). Eligible products can be obtained by contacting the local Department of Commerce & Economic Development office. **WARNING:** If the use of Alaska Products is claimed, the contractor will be mandated to use the specified products in the performance of the contract.

The Adjusted Basic Bid amount will be used for the determination of the low responsive bidder. Once determined, the contract will be awarded for the Total Basic Bid Amount.

CONTRACT AWARD

The apparent low responsive bidder will be required to submit the following documents prior to Contract Award:

1. Project specific requirements, if any, as noted on the Invitation for Quotes;
2. A Certificate of Insurance indicating the insurance coverage outlined on the Invitation for Quotes;
3. Current copies of both the valid Alaska Business License and, if applicable, a copy of the valid Contractor's Registration; and
4. List all subcontractors to be used on the project (form included in bid packet).
5. Copy of a completed Notice of Work form filed with the Dept. of Labor **if required** (see Special Notice to Bidders in packet).



STATE OF ALASKA
DEPARTMENT OF HEALTH & SOCIAL SERVICES

SUBCONTRACTOR LIST

Fairbanks Pioneer Home – Tub & Dish Room Renovations AJF 20-02C

Project Name and Number

The apparent low bidder shall complete this form and submit it so as to be received by the Contracting Officer prior to the close of business on the fifth working day after receipt of written notice from the Department.

Failure to submit this form with all required information by the due date will result in the bidder being declared non-responsive and may result in the forfeiture of the Bid Security.

Scope of work must be clearly defined. If an item of work is to be performed by more than one firm, indicate the portion or percent of work to be done by each.

Check as applicable:

☐ All work on the below-referenced project will be accomplished without subcontracts greater than ½ of 1% of the contract amount.

OR

☐ Subcontractor List is as follows:

FIRM NAME, ADDRESS, & PHONE No.	AK BUSINESS LICENSE No. & CONTRACTOR'S REGISTRATION No.	SCOPE OF WORK TO BE PERFORMED

CONTINUE SUBCONTRACTOR INFORMATION ON REVERSE

I hereby certify the listed Alaska Business licenses and Contractor's registrations were valid at the time bids were opened for this project.

Signature of Authorized Company Representative

Title

Company Name

Company Address (Street or PO Box, City, State, Zip)

Date

Phone Number

FIRM NAME, ADDRESS, & PHONE No.	AK BUSINESS LICENSE No. & CONTRACTOR'S REGISTRATION No.	SCOPE OF WORK TO BE PERFORMED



STATE OF ALASKA
DEPARTMENT OF HEALTH & SOCIAL SERVICES

ALASKA VETERAN'S PREFERENCE AFFIDAVIT

In response to the Invitation to Bid for:

Fairbanks Pioneer Home Kitchen Flooring & Tub Room Modernizations #AJF 19-02C,

I certify under penalty of perjury that _____
(Name) qualifies for the Alaska Veteran's Preference under the following conditions:

- (a) If a bidder qualifies under AS 36.30.170(b) as an Alaska bidder and is a qualifying entity, a five percent bid preference shall be applied to the bid price (preference may not exceed \$5,000). In this subsection, "qualifying entity" means a:
- (1) Sole proprietorship owned by an Alaska Veteran;
 - (2) Partnership under AS 32.06 or AS 32.11 if a majority of the members are Alaska Veteran's;
 - (3) Limited liability company organized under AS 10.50 if a majority of the individuals are Alaska Veterans.
 - (4) Corporation that is wholly owned by individuals and a majority of the individuals are Alaska veterans.
- (b) To qualify for a preference under this section, a bidder must add value by the bidder itself actually performing, controlling, managing and supervising a significant part of the services provided, or the bidder must have sold supplies of the general nature solicited to other state agencies, governments, or the general public.
- (c) In this section, "Alaska Veteran" means an individual who is a:
- (1) Resident of this state; and
 - (2) Veteran; means an individual who:
 - (A) Served in the:
 - (i) Armed Forces of the United States, including a reserve unit of the United States armed forces; or
 - (ii) Alaska Territorial Guard, the Alaska Army National Guard, the Alaska Air National Guard, or the Alaska Naval Militia; and
 - (B) Was separated from the service under a condition that was not dishonorable.

Authorized Signature

Printed Name

Date



Laborers' & Mechanics' Minimum Rates of Pay

Effective May 1, 2019
Issue 38

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THE STATE
of **ALASKA**
GOVERNOR MICHAEL J. 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

May 1, 2019

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 and resident hire requirements.

This pamphlet identifies current prevailing wage rates and resident hire classifications 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 May 1, 2019.

The prevailing wage rates contained in this pamphlet are applicable to public construction projects with a final bid date of May 11, 2019, 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 xi.

Sincerely,

A blue ink signature of Dr. Tamika L. Ledbetter, written in a cursive style.

Dr. Tamika L. Ledbetter
Commissioner

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Wage Rates Pages 1-26

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.

Photo By: Sgt. Ian Leones. Courtesy of the United States Marine Corps. Safety Note: Potential safety issues include making sure the vehicle and equipment are secured from inadvertent movement while work is performed. Gloves and eye protection would help reduce the chances of injuries while performing this type of work.

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.

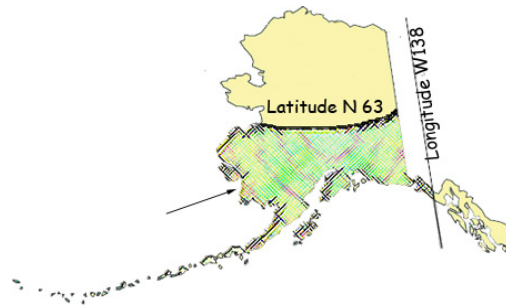
The Alaska Department of Labor and Workforce Development has determined that per diem is an established work practice for certain work classifications. These classifications are indicated throughout the Pamphlet by an asterisk (*) under the classification title. If all of the conditions of 8 AAC 30.054 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.

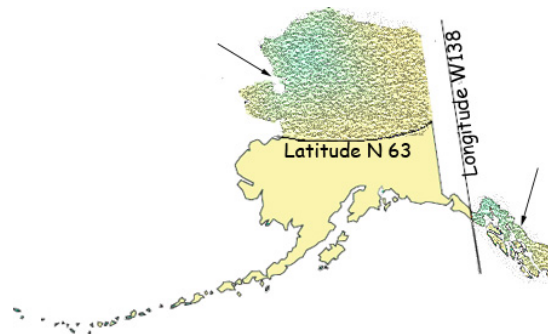
LABORER CLASSIFICATION CLARIFICATION

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 Administration
P.O. Box 111149
Juneau, AK 99811-1149

-or-

Email: statewide.wagehour@alaska.gov

DEPARTMENT OF LABOR and WORKFORCE DEVELOPMENT
ALASKA EMPLOYMENT PREFERENCE INFORMATION

By authority of AS 36.10.150 and 8 AAC 30.064, the Commissioner of Labor and Workforce Development has determined the State of Alaska to be a Zone of Underemployment. A Zone of Underemployment requires that Alaska residents who are eligible under AS 36.10.140 be given a minimum of 90 percent employment preference on public works contracts throughout the state in certain job classifications. **This 90 percent Alaska resident hiring preference applies on a project-by-project, craft-by-craft or occupational basis and must be met each workweek by each contractor/subcontractor in each of the following classifications:**

Boilermakers	Electricians	Laborers	Roofers
Bricklayers	Engineers & Architects	Mechanics	Sheet Metal Workers
Carpenters	Equipment Operators	Millwrights	Surveyors
Cement Masons	Foremen & Supervisors	Painters	Truck Drivers
Culinary Workers	Insulation Workers	Piledriving Occupations	Tug Boat Workers
	Ironworkers	Plumbers & Pipefitters	Welders

This determination became effective July 1, 2017, and remains in effect through June 30, 2019. This determination will be applied to projects with a bid submission deadline on or after July 1, 2017 and to projects previously covered by the 2015 Alaska employment preference determination. This will afford contractors an opportunity to consider the impacts of Alaska resident hire in their bids.

The first person on a certified payroll in any classification is called the "first worker" and is not required to be an Alaskan resident. However, once the contractor adds any more workers in the classification, then all workers in the classification are counted, and the 90 percent calculation is applied to compute the number of required Alaskans to be in compliance. To compute the number of Alaskan residents required in a workweek in a particular classification, multiply the total number of workers in the classification by 90 percent. The result is then rounded down to the nearest whole number to determine the number of Alaskans that must be employed in that classification.

If a worker works in more than one classification during a week, the classification in which they spent the most time would be counted for employment preference purposes. If the time is split evenly between two classifications, the worker is counted in both classifications.

If you have difficulty meeting the 90 percent requirement, an approved waiver must be obtained before a non-Alaska resident is hired who would put the contractor/subcontractor out of compliance (8 AAC 30.081 (e) (f)). The waiver process requires proof of an adequate search for qualified Alaskan workers. Qualified Alaska residents identified through the search must be hired before waivers for non-resident workers may be granted. To apply for a waiver, contact the nearest Wage and Hour Office for instructions.

Here is an example to apply the 90 percent requirement to four boilermaker workers. Multiply four workers by 90% and drop the fraction ($.90 \times 4 = 3.6 - .6 = 3$). The remaining number is the number of Alaskan resident boilermakers required to be in compliance in that particular classification for that week.

The penalties for being out of compliance are serious. AS 36.10.100 (a) states "A contractor who violates a provision of this chapter shall have deducted from amounts due to the contractor under the contract the prevailing wages which should have been paid to a displaced resident and these amounts shall be retained by the contracting agency." If a contractor/subcontractor is found to be out of compliance, penalties accumulate until they come into compliance.

Contractors are responsible for determining residency status. If you have difficulty determining whether a worker is an Alaska resident, you should contact the nearest Wage and Hour Office. Contact Wage and Hour in Anchorage at (907) 269-4900, in Fairbanks at (907) 451-2886, or in Juneau at (907) 465-4842.

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

Anchorage

1251 Muldoon Road, Suite 113
Anchorage, Alaska 99504-2098
Phone: (907) 269-4900

Email:
statewide.wagehour@alaska.gov

Juneau

PO Box 111149
Juneau, Alaska 99811
Phone: (907) 465-4842

Email:
statewide.wagehour@alaska.gov

Fairbanks

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 Administration 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

Tim Banach, Individual
Boulder Creek Electric

Debarment Expires

February 23, 2021
February 23, 2021

Laborers' & Mechanics' Minimum Rates of Pay

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits	THR
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Boilermakers

*See per diem note on last page

A0101	Boilermaker (journeyman)	46.13	8.57	16.42	1.65	VAC 3.50 SAF 0.34	76.61
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Bricklayers & Blocklayers

*See per diem note on last page

A0201	Blocklayer	40.81	9.83	8.50	0.55	L&M 0.15 0.74	60.58
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Bricklayer

Marble or Stone Mason

Refractory Worker (Firebrick, Plastic, Castable, and Gunitite Refractory Applications)

Terrazzo Worker

Tile Setter

A0202	Tuck Pointer Caulker	40.81	9.83	8.50	0.55	L&M 0.15 0.74	60.58
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Cleaner (PCC)

A0203	Marble & Tile Finisher	34.79	9.83	8.50	0.55	L&M 0.15 0.74	54.56
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Terrazzo Finisher

A0204	Torginal Applicator	38.83	9.83	8.50	0.55	L&M 0.15 0.74	58.60
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Carpenters, Statewide

*See per diem note on last page

A0301	Carpenter (journeyman)	38.34	10.08	14.63	0.95	L&M 0.10 SAF 0.10	64.20
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Lather/Drywall/Acoustical

Cement Masons, Region I (North of N63 latitude)

*See per diem note on last page

N0401	Group I, including:	38.13	8.70	11.80	1.18	L&M 0.10	59.91
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Application of Sealing Compound

Application of Underlayment

Building, General

Cement Mason (journeyman)

Concrete

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, Region I (North of N63 latitude)								
*See per diem note on last page								
N0401	Group I, including:	38.13	8.70	11.80	1.18	L&M		59.91
	Concrete Paving							
	Curb & Gutter, Sidewalk							
	Curing of All Concrete							
	Grouting & Caulking of Tilt-Up Panels							
	Grouting of All Plates							
	Patching Concrete							
	Screed Pin Setter							
	Spackling/Skim Coating							
N0402	Group II, including:	38.13	8.70	11.80	1.18	L&M		59.91
	Form Setter							
N0403	Group III, including:	38.13	8.70	11.80	1.18	L&M		59.91
	Concrete Saw (self-powered)							
	Curb & Gutter Machine							
	Floor Grinder							
	Pneumatic Power Tools							
	Power Chipping & Bushing							
	Sand Blasting Architectural Finish							
	Screed & Rodding Machine Operator							
	Troweling Machine Operator							
N0404	Group IV, including:	38.13	8.70	11.80	1.18	L&M		59.91
	Application of All Composition Mastic							
	Application of All Epoxy Material							
	Application of All Plastic Material							
	Finish Colored Concrete							
	Guniting Nozzleman							
	Hand Powered Grinder							
	Tunnel Worker							
N0405	Group V, including:	38.13	8.70	11.80	1.18	L&M		59.91
	Plasterer							
Cement Masons, Region II (South of N63 latitude)								
*See per diem note on last page								
S0401	Group I, including:	37.88	8.70	11.80	1.18	L&M		59.66

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
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Cement Masons, Region II (South of N63 latitude)

*See per diem note on last page

						L&M	
S0401	Group I, including:	37.88	8.70	11.80	1.18	0.10	59.66
	Application of Sealing Compound						
	Application of Underlayment						
	Building, General						
	Cement Mason (journeyman)						
	Concrete						
	Concrete Paving						
	Curb & Gutter, Sidewalk						
	Curing of All Concrete						
	Grouting & Caulking of Tilt-Up Panels						
	Grouting of All Plates						
	Patching Concrete						
	Screed Pin Setter						
	Spackling/Skim Coating						
						L&M	
S0402	Group II, including:	37.88	8.70	11.80	1.18	0.10	59.66
	Form Setter						
						L&M	
S0403	Group III, including:	37.88	8.70	11.80	1.18	0.10	59.66
	Concrete Saw (self-powered)						
	Curb & Gutter Machine						
	Floor Grinder						
	Pneumatic Power Tools						
	Power Chipping & Bushing						
	Sand Blasting Architectural Finish						
	Screed & Rodding Machine Operator						
	Troweling Machine Operator						
						L&M	
S0404	Group IV, including:	37.88	8.70	11.80	1.18	0.10	59.66
	Application of All Composition Mastic						
	Application of All Epoxy Material						
	Application of All Plastic Material						
	Finish Colored Concrete						
	Guniting Nozzleman						
	Hand Powered Grinder						
	Tunnel Worker						
						L&M	
S0405	Group V, including:	37.88	8.70	11.80	1.18	0.10	59.66
	Plasterer						

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
Culinary Workers							
A0501	Baker/Cook	28.37	7.40	6.97		LEG 0.07	42.81
A0503	General Helper	25.05	7.40	6.97		LEG 0.07	39.49
	Housekeeper						
	Janitor						
	Kitchen Helper						
A0504	Head Cook	28.97	7.40	6.97		LEG 0.07	43.41
A0505	Head Housekeeper	25.45	7.40	6.97		LEG 0.07	39.89
	Head Kitchen Help						
Dredgemen							
*See per diem note on last page							
A0601	Assistant Engineer	39.76	10.00	12.50	1.00	L&M 0.10	0.05 63.41
	Craneman						
	Electrical Generator Operator (primary pump/power barge/dredge)						
	Engineer						
	Welder						
A0602	Assistant Mate (deckhand)	38.60	10.00	12.50	1.00	L&M 0.10	0.05 62.25
A0603	Fireman	39.04	10.00	12.50	1.00	L&M 0.10	0.05 62.69
A0605	Leverman Clamshell	42.29	10.00	12.50	1.00	L&M 0.10	0.05 65.94
A0606	Leverman Hydraulic	40.53	10.00	12.50	1.00	L&M 0.10	0.05 64.18
A0607	Mate & Boatman	39.76	10.00	12.50	1.00	L&M 0.10	0.05 63.41
A0608	Oiler (dredge)	39.04	10.00	12.50	1.00	L&M 0.10	0.05 62.69
Electricians							
*See per diem note on last page							
A0701	Inside Cable Splicer	40.03	13.64	13.84	0.95	L&M 0.20	LEG 0.15 68.81

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
Electricians							
*See per diem note on last page							
A0702	Inside Journeyman Wireman, including: Technicians (including use of drones in electrical construction)	39.70	13.64	14.08	0.95	L&M 0.20 LEG 0.15	68.72
A0703	Power Cable Splicer	56.05	13.64	18.87	0.95	L&M 0.20 LEG 0.15	89.86
A0704	Tele Com Cable Splicer	49.28	13.64	16.13	0.95	L&M 0.20 LEG 0.15	80.35
A0705	Power Journeyman Lineman, including: Power Equipment Operator Technician (including use of drones in electrical construction)	54.30	13.64	18.82	0.95	L&M 0.20 LEG 0.15	88.06
A0706	Tele Com Journeyman Lineman, including: Technician (including use of drones in telecommunications construction) Tele Com Equipment Operator	47.53	13.64	16.08	0.95	L&M 0.20 LEG 0.15	78.55
A0707	Straight Line Installer - Repairman	47.53	13.64	16.08	0.95	L&M 0.20 LEG 0.15	78.55
A0708	Powderman	52.30	13.64	18.76	0.95	L&M 0.20 LEG 0.15	86.00
A0710	Material Handler	26.57	13.07	4.80	0.15	L&M 0.15 LEG 0.15	44.89
A0712	Tree Trimmer Groundman	27.54	13.64	12.23	0.15	L&M 0.15 LEG 0.15	53.86
A0713	Journeyman Tree Trimmer	36.21	13.64	12.49	0.15	L&M 0.15 LEG 0.15	62.79
A0714	Vegetation Control Sprayer	39.66	13.64	12.59	0.15	L&M 0.15 LEG 0.15	66.34
A0715	Inside Journeyman Communications CO/PBX	38.28	13.64	13.79	0.95	L&M 0.20 LEG 0.15	67.01
Elevator Workers							
*See per diem note on last page							
A0802	Elevator Constructor	40.06	15.58	17.51	0.62	L&M 0.42 VAC 4.44	78.63
A0803	Elevator Constructor Mechanic	57.23	15.58	17.51	0.62	L&M 0.42 VAC 6.35	97.71

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
Heat & Frost Insulators/Asbestos Workers							
*See per diem note on last page							
A0902	Asbestos Abatement-Mechanical Systems	38.68	9.24	11.01	1.20	SAF 0.12	60.25
A0903	Asbestos Abatement/General Demolition All Systems	38.68	9.24	11.01	1.20	SAF 0.12	60.25
A0904	Insulator, Group II	38.68	9.24	11.01	1.20	SAF 0.12	60.25
A0905	Fire Stop	38.68	9.24	11.01	1.20	SAF 0.12	60.25
IronWorkers							
*See per diem note on last page							
A1101	Ironworkers, including:	37.90	8.73	21.18	1.57	L&M 0.20 IAF 0.36	69.94
	Bender Operators						
	Bridge & Structural						
	Machinery Mover						
	Ornamental						
	Reinforcing						
	Rigger						
	Sheeter						
	Signalman						
	Stage Rigger						
	Toxic Haz-Mat Work						
	Welder						
A1102	Helicopter	38.90	8.73	21.18	1.57	L&M 0.20 IAF 0.36	70.94
	Tower (energy producing windmill type towers to include nacelle and blades)						
A1103	Fence/Barrier Installer	34.40	8.73	20.93	1.47	L&M 0.20 IAF 0.36	66.09
	Guard Rail Installer						
A1104	Guard Rail Layout Man	35.14	8.73	20.93	1.47	L&M 0.20 IAF 0.36	66.83
Laborers (The Alaska areas north of N63 latitude and east of W138 longitude)							
*See per diem note on last page							
N1201	Group I, including:	30.71	8.70	17.31	1.30	L&M 0.20 LEG 0.20	58.42
	Asphalt Worker (shovelman, plant crew)						

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
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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:	30.71	8.70	17.31	1.30	0.20	0.20	58.42
	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							
	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							

						L&M	LEG	
N1202	Group II, including:	31.71	8.70	17.31	1.30	0.20	0.20	59.42
	Burning & Cutting Torch							

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

Laborers (The Alaska areas north of N63 latitude and east of W138 longitude)

*See per diem note on last page

						L&M	LEG	
N1202	Group II, including:	31.71	8.70	17.31	1.30	0.20	0.20	59.42
	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)							
	Guniting 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							

						L&M	LEG	
N1203	Group III, including:	32.61	8.70	17.31	1.30	0.20	0.20	60.32
	Bit Grinder							
	Camera/Tool/Video Operator							
	Guardrail Machine Operator							
	High Rigger & Tree Topper							
	High Scaler							
	Multiplate							

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
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Laborers (The Alaska areas north of N63 latitude and east of W138 longitude)

*See per diem note on last page

						L&M	LEG	
N1203	Group III, including:	32.61	8.70	17.31	1.30	0.20	0.20	60.32

Plastic Welding
Slurry Seal Squeegee Man
Traffic Control Supervisor
Welding Certified (in connection with laborer's work)

						L&M	LEG	
N1204	Group IIIA	35.89	8.70	17.31	1.30	0.20	0.20	63.60

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)
Traffic Control Supervisor, DOT Qualified

						L&M	LEG	
N1205	Group IV	20.28	8.70	17.31	1.30	0.20	0.20	47.99

Final Building Cleanup
Permanent Yard Worker

						L&M	LEG	
N1206	Group IIIB	39.68	5.99	17.31	1.30	0.20	0.20	64.68

Federal Powderman (Responsible Person in Charge)
Grade Checking (setting or transferring of grade marks, line and grade, GPS, drones)
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:	30.71	8.70	17.31	1.30	0.20	0.20	58.42

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

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
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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:	30.71	8.70	17.31	1.30	0.20	0.20	58.42
	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							
	Landscape 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							

						L&M	LEG	
S1202	Group II, including:	31.71	8.70	17.31	1.30	0.20	0.20	59.42
	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	THR
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Laborers (The area that is south of N63 latitude and west of W138 longitude)

*See per diem note on last page

						L&M	LEG	
S1202	Group II, including:	31.71	8.70	17.31	1.30	0.20	0.20	59.42

Environmental Laborer (asbestos, marine work)
Floor Preparation, Core Drilling
Foam Gun or Foam Machine Operator
Green Cutter (dam work)
Guniting 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

						L&M	LEG	
S1203	Group III, including:	32.61	8.70	17.31	1.30	0.20	0.20	60.32

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)

						L&M	LEG	
S1204	Group IIIA	35.89	8.70	17.31	1.30	0.20	0.20	63.60

Asphalt Raker, Asphalt Belly Dump Lay Down
Drill Doctor (in the field)

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
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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	35.89	8.70	17.31	1.30	0.20	0.20	63.60

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	
S1205	Group IV	20.28	8.70	17.31	1.30	0.20	0.20	47.99

Final Building Cleanup
Permanent Yard Worker

						L&M	LEG	
S1206	Group IIIB	39.68	5.99	17.31	1.30	0.20	0.20	64.68

Federal Powderman (Responsible Person in Charge)
Grade Checking (setting or transferring of grade marks, line and grade, GPS, drones)
Stake Hopper

Millwrights

*See per diem note on last page

						L&M		
A1251	Millwright (journeyman)	36.99	10.08	12.28	1.00	0.40	0.05	60.80

						L&M		
A1252	Millwright Welder	37.99	10.08	12.28	1.00	0.40	0.05	61.80

Painters, Region I (North of N63 latitude)

*See per diem note on last page

						L&M		
N1301	Group I, including:	32.29	8.21	12.70	1.08	0.07		54.35

Brush
General Painter
Hand Taping
Hazardous Material Handler
Lead-Based Paint Abatement
Roll

						L&M		
N1302	Group II, including:	32.81	8.21	12.70	1.08	0.07		54.87

Bridge Painter

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
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Painters, Region I (North of N63 latitude)

*See per diem note on last page

							L&M	
N1302	Group II, including:	32.81	8.21	12.70	1.08	0.07		54.87
	Epoxy Applicator							
	General Drywall Finisher							
	Hand/Spray Texturing							
	Industrial Coatings Specialist							
	Machine/Automatic Taping							
	Pot Tender							
	Sandblasting							
	Specialty Painter							
	Spray							
	Structural Steel Painter							
	Wallpaper/Vinyl Hanger							

N1304	Group IV, including:	39.78	8.21	15.23	1.05	0.05		64.32
	Glazier							
	Storefront/Automatic Door Mechanic							

N1305	Group V, including:	29.13	8.21	5.02	0.83	0.07		43.26
	Carpet Installer							
	Floor Coverer							
	Heat Weld/Cove Base							
	Linoleum/Soft Tile Installer							

Painters, Region II (South of N63 latitude)

*See per diem note on last page

							L&M	
S1301	Group I, including :	30.13	8.21	12.85	1.08	0.07		52.34
	Brush							
	General Painter							
	Hand Taping							
	Hazardous Material Handler							
	Lead-Based Paint Abatement							
	Roll							
	Spray							

							L&M	
S1302	Group II, including :	31.38	8.21	12.85	1.08	0.07		53.59
	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								
S1303	Group III, including :	31.48	8.21	12.85	1.08	L&M		53.69
	Bridge Painter							
	Epoxy Applicator							
	Industrial Coatings Specialist							
	Pot Tender							
	Sandblasting							
	Specialty Painter							
	Structural Steel Painter							
S1304	Group IV, including:	39.99	8.21	14.27	1.08	L&M		63.62
	Glazier							
	Storefront/Automatic Door Mechanic							
S1305	Group V, including:	29.13	8.21	5.02	0.83	L&M		43.26
	Carpet Installer							
	Floor Coverer							
	Heat Weld/Cove Base							
	Linoleum/Soft Tile Installer							
Piledrivers								
*See per diem note on last page								
A1401	Piledriver	38.34	10.08	14.63	0.95	L&M		64.20
	Assistant Dive Tender							
	Carpenter/Piledriver							
	Rigger							
	Sheet Stabber							
	Skiff Operator							
A1402	Piledriver-Welder/Toxic Worker	39.34	10.08	14.63	0.95	L&M		65.20
A1403	Remotely Operated Vehicle Pilot/Technician	42.65	10.08	14.63	0.95	L&M		68.51
	Single Atmosphere Suit, Bell or Submersible Pilot							
A1404	Diver (working) **See note on last page	82.45	10.08	14.63	0.95	L&M		108.31
A1405	Diver (standby) **See note on last page	42.65	10.08	14.63	0.95	L&M		68.51

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
Piledrivers								
*See per diem note on last page								
A1406	Dive Tender **See note on last page	41.65	10.08	14.63	0.95	L&M 0.10	IAF 0.10	67.51
A1407	Welder (American Welding Society, Certified Welding Inspector)	43.90	10.08	14.63	0.95	L&M 0.10	IAF 0.10	69.76
Plumbers, Region I (North of N63 latitude)								
*See per diem note on last page								
N1501	Journeyman Pipefitter	41.46	8.25	16.90	1.25	L&M 0.65	S&L	68.51
	Plumber							
	Welder							
Plumbers, Region II (South of N63 latitude)								
*See per diem note on last page								
S1501	Journeyman Pipefitter	39.00	10.33	15.02	1.35	L&M 0.20		65.90
	Plumber							
	Welder							
Plumbers, Region IIA (1st Judicial District)								
*See per diem note on last page								
X1501	Journeyman Pipefitter	38.02	13.37	11.25	2.50	L&M 0.24		65.38
	Plumber							
	Welder							
Power Equipment Operators								
*See per diem note on last page								
A1601	Group I, including:	40.53	10.00	12.50	1.00	L&M 0.10	0.05	64.18
	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							
	Cleaning Machine							
	Coating Machine							

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

Power Equipment Operators

*See per diem note on last page

						L&M		
A1601	Group I, including:	40.53	10.00	12.50	1.00	0.10	0.05	64.18
	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							
	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)							
	Licensed Line & Grade							
	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)							
	Service Oiler/Service Engineer							

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
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Power Equipment Operators

*See per diem note on last page

A1601	Group I, including:	40.53	10.00	12.50	1.00	L&M 0.10	0.05	64.18
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Shot Blast Machine
Shovels, Backhoes, Excavators with all attachments, and Gradealls (3 yards & under)
Sideboom (under 45 tons)
Spreaders Topside (Asphalt Paver, Slurry machine, and similar types)
Sub Grader (Gurries, Reclaimer & similar types)
Tack Tractor
Truck Mounted Concrete Pump, Conveyor/Tele-belt, & Creter
Wate Kote Machine

A1602	Group IA, including:	42.29	10.00	12.50	1.00	L&M 0.10	0.05	65.94
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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, Roto-Mill/Profiler (finish: when finishing to final grade and/or to hubs, or for asphalt)
Power Plants (1000 k.w. & over)
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

A1603	Group II, including:	39.76	10.00	12.50	1.00	L&M 0.10	0.05	63.41
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Boiler - Fireman
Cement Hogs & Concrete Pump Operator
Conveyors (except those listed in Group I)
Grade Checker
Hoists on Steel Erection, Towermobiles & Air Tuggers
Horizontal/Directional Drill Locator
Licensed Grade Technician
Locomotives, Rod & Geared Engines
Mixers
Screening, Washing Plant

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
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Power Equipment Operators

*See per diem note on last page

A1603	Group II, including:	39.76	10.00	12.50	1.00	0.10	0.05	63.41
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Sideboom (cradling rock drill, regardless of size)
 Skidder
 Trenching Machines (under 16 inches)
 Water/Waste Water Treatment Operator

A1604	Group III, including:	39.04	10.00	12.50	1.00	0.10	0.05	62.69
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"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 2-1/2 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

A1605	Group IV, including:	32.83	10.00	12.50	1.00	0.10	0.05	56.48
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Crane Assistant Engineer/Rig Oiler
 Drill Helper

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
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Power Equipment Operators

*See per diem note on last page

A1605	Group IV, including:	32.83	10.00	12.50	1.00	L&M		
						0.10	0.05	56.48

Parts & Equipment Coordinator
Spotter
Steam Cleaner
Swamper (on trenching machines or shovel type equipment)

Roofers

*See per diem note on last page

A1701	Roofer & Waterproofer	44.62	11.75	3.41	0.81	L&M		
						0.10	0.03	60.72

A1702	Roofer Material Handler	31.23	11.75	3.41	0.81	L&M		
						0.10	0.03	47.33

Sheet Metal Workers, Region I (North of N63 latitude)

*See per diem note on last page

N1801	Sheet Metal Journeyman	47.74	10.80	13.11	1.45	L&M		
						0.12		73.22

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

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	42.70	10.80	13.49	1.68	0.43	L&M	69.10
	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							
Sprinkler Fitters								
*See per diem note on last page								
A1901	Sprinkler Fitter	47.25	10.02	15.95	0.52	0.25	L&M	73.99
Surveyors								
*See per diem note on last page								
A2001	Chief of Parties	43.16	10.83	12.14	1.15	0.10	L&M	67.38
A2002	Party Chief	41.57	10.83	12.14	1.15	0.10	L&M	65.79
A2003	Line & Grade Technician/Office Technician/GPS, Drones	40.97	10.83	12.14	1.15	0.10	L&M	65.19
A2004	Associate Party Chief (including Instrument Person & Head Chain Person)/Stake Hop/Grademan	38.85	10.83	12.14	1.15	0.10	L&M	63.07
A2006	Chain Person (for crews with more than 2 people)	34.51	10.83	12.14	1.15	0.10	L&M	58.73

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

Truck Drivers

*See per diem note on last page

A2101	Group I, including:	39.94	10.83	12.14	1.15	L&M 0.10	64.16
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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
Lowboys (including attached trailers & jeeps up to & including 8 axles)
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:	41.21	10.83	12.14	1.15	L&M 0.10	65.43
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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, 9 axles, up to & including 12 axles (over 12 axles or 150 tons to be negotiated)

A2103	Group II, including:	38.68	10.83	12.14	1.15	L&M 0.10	62.90
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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)

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								
A2103	Group II, including:	38.68	10.83	12.14	1.15	0.10	L&M	62.90
	Stringing Truck							
	Turn-O-Wagon or DW-10 (not self loading)							
A2104	Group III, including:	37.86	10.83	12.14	1.15	0.10	L&M	62.08
	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)							
A2105	Group IV, including:	37.28	10.83	12.14	1.15	0.10	L&M	61.50
	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)							

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
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Truck Drivers

*See per diem note on last page

A2105	Group IV, including:	37.28	10.83	12.14	1.15	L&M 0.10		61.50
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Rigger (air/water/oilfield)
Tireman, Light Duty
Track Truck Equipment
Truck Vacuum Sweeper
Warehouseperson
Water Truck (Below 250 Bbls)
Water Truck (straight)
Water Wagon, Semi

A2106	Group V, including:	36.52	10.83	12.14	1.15	L&M 0.10		60.74
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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:	33.78	8.70	17.31	1.30	L&M 0.20	LEG 0.20	61.49
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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:	34.88	8.70	17.31	1.30	L&M 0.20	LEG 0.20	62.59
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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, Laborers (The Alaska areas north of N63 latitude and east of W138 longitude)

*See per diem note on last page

						L&M	LEG	
N2202	Group II, including:	34.88	8.70	17.31	1.30	0.20	0.20	62.59

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	
N2203	Group III, including:	35.87	8.70	17.31	1.30	0.20	0.20	63.58

Miner
 Retimberman

						L&M	LEG	
N2204	Group IIIA, including:	39.48	8.70	17.31	1.30	0.20	0.20	67.19

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)

						L&M	LEG	
N2206	Group IIIB, including:	43.65	5.99	17.31	1.30	0.20	0.20	68.65

Federal Powderman (Responsible Person in Charge)
 Grade Checking (setting or transferring of grade marks, line and grade, GPS, drones)
 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

						L&M	LEG	
S2201	Group I, including:	33.78	8.70	17.31	1.30	0.20	0.20	61.49

Brakeman
 Mucker
 Nipper
 Storm Water Pollution Protection Plan Worker (SWPPP Worker - erosion and sediment control Laborer)
 Topman & Bull Gang

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
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Tunnel Workers, Laborers (The area that is south of N63 latitude and west of W138 longitude)

*See per diem note on last page

						L&M	LEG	
S2201	Group I, including:	33.78	8.70	17.31	1.30	0.20	0.20	61.49
	Tunnel Track Laborer							
						L&M	LEG	
S2202	Group II, including:	34.88	8.70	17.31	1.30	0.20	0.20	62.59
	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:	35.87	8.70	17.31	1.30	0.20	0.20	63.58
	Miner							
	Retimberman							
						L&M	LEG	
S2204	Group IIIA, including:	39.48	8.70	17.31	1.30	0.20	0.20	67.19
	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)							
						L&M	LEG	
S2206	Group IIIB, including:	43.65	5.99	17.31	1.30	0.20	0.20	68.65
	Federal Powderman (Responsible Person in Charge)							
	Grade Checking (setting or transferring of grade marks, line and grade, GPS, drones)							
	Stake Hopper							

Tunnel Workers, Power Equipment Operators

*See per diem note on last page

						L&M		
A2207	Group I	44.58	10.00	12.50	1.00	0.10	0.05	68.23
						L&M		
A2208	Group IA	46.52	10.00	12.50	1.00	0.10	0.05	70.17

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								
		L&M						
A2209	Group II	43.74	10.00	12.50	1.00	0.10	0.05	67.39
		L&M						
A2210	Group III	42.94	10.00	12.50	1.00	0.10	0.05	66.59
		L&M						
A2211	Group IV	36.11	10.00	12.50	1.00	0.10	0.05	59.76

* 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.

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



State of Alaska
Department of Administration
Substitute Form W-9

Questions? Email DOA.DOF.Vendor.HelpDesk@alaska.gov

RETURN COMPLETED FORM TO:

Department of Administration
Division of Finance
P.O. Box 110204
Juneau, AK 99811-0204
Or FAX to: (907) 465-2169

DO NOT send to IRS

Taxpayer Identification Number (TIN) Verification

The Internal Revenue Service requires the State of Alaska to issue 1099 forms when payments to individuals, partnerships or limited liability companies for rents, services, prizes, and awards meet or exceed \$600.00 for the year. An IRS Form 1099 is not required when payments are specifically for merchandise or made to some types of corporations.

Print or Type

Please see attachment or reverse for complete instructions

Legal Name (as shown on your income tax return)	State of Alaska Vendor Number (if known)
Business Name , if different from above (use if doing business as (DBA) or enter business name of Sole Proprietorship)	Entity Designation (check only one type) <input type="radio"/> Individual / Sole Proprietor <input type="radio"/> Partnership <input type="radio"/> General Corporation <input type="radio"/> Medical Corporation <input type="radio"/> Legal Corporation <input type="radio"/> Limited Liability Company – Individual <input type="radio"/> Limited Liability Company – Partnership <input type="radio"/> Limited Liability Company – Corporation <input type="radio"/> Government Entity <input type="radio"/> Estate / Trust <input type="radio"/> Organization Exempt from Tax - Nonprofit (under Section 501 (a)(b)(c)(d))
Primary Address (for 1099 form) PO Box or Number and Street, City, State, Zip + 4	Exemption (See Instructions) <input type="text"/> Exempt payee code (if any) <input type="text"/> Exemption from FATCA Reporting Code (if any)
Remit Address (where payment should be mailed, if different from Primary Address) PO Box or Number and Street, City, State, Zip + 4	

Taxpayer Identification Number (TIN) Provide Only One (If sole proprietorship provide EIN, if applicable)

Social Security Number (SSN)	Employer Identification Number (EIN)
If Change of Ownership or Entity Designation	Date of Change:
Previous Owner / Business Name	Previous Taxpayer Identification Number (TIN)

Certification

The Internal Revenue Service does not require your consent to any provision of this document other than the certifications required to avoid backup withholding.

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number, **AND**
2. I am not subject to backup withholding because (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, **AND**
3. I am a U.S. person (including a U.S. resident alien), **AND**
4. The FATCA code(s) entered on this form (if any) indicating I am exempt from FATCA reporting is correct.

Printed Name	Printed Title	Telephone Number
Signature	Date	Email Address

Instructions for Completing Taxpayer Identification Number (TIN) Verification (Substitute W-9) -- Page 1

Legal Name

As registered with the Internal Revenue Service (IRS)

- Individuals: Enter First Name MI Last Name
- Sole Proprietorships: Enter First Name MI Last Name
- LLC Single Owner: Enter owner's First Name MI Last Name
- All Others: Enter Legal Name of Business

Business Name

- Individuals: Leave blank
- Sole Proprietorships: Enter Business Name
- LLC Single Owner: Enter LLC Business Name
- All Others: Complete only if doing business as a DBA

Primary Address

Address where 1099 tax form should be mailed.

Remit Address

Address where payment should be mailed. Complete only if different from primary address.

State of Alaska Vendor Number

Your vendor number is an eight character alphanumeric code assigned to your company in the State of Alaska's accounting system. You may contact us at the email address listed on the form if you do not know your vendor number.

Entity Designation

Check *ONE* box which describes the type of business entity.

Taxpayer Identification Number

LIST ONLY ONE: Social Security Number OR Employer Identification Number. See *"What Name and Number to Give the Requester"* at right.

If you do not have a TIN, apply for one immediately. Individuals use federal form SS-05 which can be obtained from the Social Security Administration. Businesses and all other entities use federal form SS-04 which can be obtained from the Internal Revenue Service.

Change of Ownership or Entity Designation

This information is requested to allow taxable income to be reported correctly for both the new and old entities.

Certification

You must cross out item 2 if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to furnish your correct TIN to persons who must file information

returns with the IRS to report interest, dividends, and certain other income paid to you, mortgage interest you paid, the acquisition or abandonment of secured property, or contributions you made to an IRA. The IRS uses the numbers for identification purposes and to help verify the accuracy of your tax return. You must provide your TIN whether or not you are required to file a tax return. Payers must generally withhold 28% of taxable interest, dividend, and certain other payments to a payee who does not furnish a TIN to a payer. Certain penalties may also apply.

What Name and Number to Give the Requester

For this type of account:	Give name and SSN of:
Individual	The individual
Two or more individuals (joint account)	The actual owner of the account or, if combined funds, the first individual on the account ¹
Custodian account of a minor (Uniform Gift to Minors Act)	The minor ²
The usual revocable savings trust (grantor is also trustee)	The grantor-trustee ¹
So-called trust account that is not a legal or valid trust under state law	The actual owner ¹
Sole proprietorship or Single-Owner LLC	The owner ¹
For this type of account:	Give name and EIN of:
Sole Proprietorship or Single-Owner LLC	The owner ³
A valid trust, estate, or pension trust	Legal entity ⁴
Corporation or LLC electing corporate status on Form 8832	The corporation
Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
Partnership or multi-member LLC	The partnership
A broker or registered nominee	The broker or nominee
Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district or prison) that receives agricultural program payments	The public entity

¹ List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

² Circle the minor's name and furnish the minor's SSN.

³ **You must show your individual name**, but you may also enter your business or "DBA" name. You may use either your SSN or EIN (if you have one).

⁴ List first and circle the name of the legal trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) **Note:** If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

Revised 09/29/2015

Instructions for Completing Taxpayer Identification Number (TIN) Verification (Substitute W-9) -- Page 2

Exemptions

If you are exempt from backup withholding and/or Foreign Account Tax Compliance Act (FATCA) reporting, enter in the Exemptions box any code(s) that may apply to you. See **Exempt payee code** and **Exemption from FATCA reporting code** below.

Exempt payee code

Generally, individuals (including sole proprietors) are not exempt from backup withholding. Corporations are exempt from backup withholding for certain payments, such as interest and dividends. Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.

Note. If you are exempt from backup withholding, you should still complete this form to avoid possible erroneous backup withholding.

The following codes identify payees that are exempt from backup withholding:

1. An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)
2. The United States or any of its agencies or instrumentalities
3. A state, the District of Columbia, a possession of the United States, or any of their political subdivisions or instrumentalities
4. A foreign government or any of its political subdivisions, agencies, or instrumentalities
5. A corporation
6. A dealer in securities or commodities required to register in the United States, the District of Columbia, or a possession of the United States
7. A futures commission merchant registered with the Commodity Futures Trading Commission
8. A real estate investment trust
9. An entity registered at all times during the tax year under the Investment Company Act of 1940
10. A common trust fund operated by a bank under section 584(a)
11. A financial institution
12. A middleman known in the investment community as a nominee or custodian
13. A trust exempt from tax under section 664 or described in section 4947

Exemption from FATCA reporting code

The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements.

- A. An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)
- B. The United States or any of its agencies or instrumentalities
- C. A state, the District of Columbia, a possession of the United States, or any of their political subdivisions or instrumentalities
- D. A corporation the stock of which is regularly traded on one or more established securities markets, as described in Reg. section 1.1472-1(c)(1)(i)
- E. A corporation that is a member of the same expanded affiliated group as a corporation described in Reg. section 1.1472-1(c)(1)(i)
- F. A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state
- G. A real estate investment trust
- H. A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940
- I. A common trust fund as defined in section 584(a)
- J. A bank as defined in section 581
- K. A broker
- L. A trust exempt from tax under section 664 or described in section 4947(a)(1)
- M. A tax exempt trust under a section 403(b) plan or section 457(g) plan

SCOPE OF WORK

PROJECT: AJF 20-02C Tub & Dish Room Renovations

FACILITY NAME: Fairbanks Pioneer Home

PROJECT MANAGER: Mark Moon, DHSS Building Maintenance Specialist
907 269-7812 mark.moon@alaska.gov

FACILITY CONTACT: Andrew Carie, Building Maintenance
907 458-2227 Andrew.Carie@alaska.gov

ADDRESS: 2221 Eagan Ave, Fairbanks, AK 99701

OVERVIEW:

This is a selective renovation project at the Fairbanks Pioneer home. There are four main areas of work for this project. The Dish Room in the Kitchen, the Moosewood Tub Room, the Aurora Tub Room and Pipe Repairs in the crawlspace adjacent to the Aurora Tub Room. There is one Additive Alternate to replace the commercial dishwasher in the dish room. Each room will vary in scope of work and are described in full detail in the Construction Drawings and Specifications.

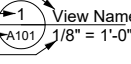


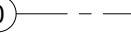

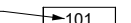
DEPARTMENT OF HEALTH AND SOCIAL SERVICES

FAIRBANKS PIONEER HOME TUB ROOM AND KITCHEN UPGRADES

Project No: AJF 20-02C
FAIRBANKS, AK

GENERAL SYMBOLS

SEE DISCIPLINES FOR SPECIFIC SYMBOLS

NAME _____
NUMBER _____
SHEET LOCATION  View Name
SCALE _____
TRUE NORTH 
PLAN NORTH 
GRID LINE 
REVISION _____
ROOM NAME  Room name
ROOM NUMBER  101

PROJECT TEAM

OWNERS REPRESENTATIVE
DEPARTMENT OF HEALTH AND SOCIAL SERVICES
MARK MOON
3601 C STREET, SUITE 578
ANCHORAGE, AK 99503
907 269-7812
mark.moon@alaska.gov

DESIGN LEAD
DESIGN ALASKA
LYLE AXELARRIS
601 COLLEGE ROAD
FAIRBANKS, AK 99701
907 452-1241
lyle@designalaska.com

PROJECT PHASING

- 1.CONTRACTOR TO PROVIDE DUMPSTER FOR PURPOSES OF DISPOSING OF ALL ITEMS REMOVED DURING PROJECT. COORDINATE LOCATION OF DUMPSTER WITH OWNER.
- 2.ALL DEMOLISHED ITEMS SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.
- 3.FACILITY IS OCCUPIED AND IN OPERATION 24/7. FACILITY MUST REMAIN IN OPERATION WITH MINIMAL SHUT DOWN TIME FOR THE TUB ROOMS AND KITCHEN DISHWASHING AREA.
- 4.COORDINATE ANY ROOM SHUTDOWNS WITH OWNER A MINIMUM OF 3 DAYS PRIOR TO SHUT DOWN. COORDINATE ANY SYSTEM SHUTDOWNS WITH THE OWNER 48 HOURS BEFORE SHUTDOWN.
- 5.THE BUILDING CRAWLSPACE IS THE RETURN AIR PATH FOR THE EXISTING AIR HANDLING UNITS. THERE ARE (5) AIR HANDLING UNITS LOCATED IN THE BUILDING THAT PULL RETURN AIR FROM THE CRAWLSPACE. MINIMIZE AIRBORNE PARTICULATES TO MAXIMUM EXTENT POSSIBLE. SEAL OFF THE AREA PRIOR TO CONCRETE CUTTING TO MINIMIZE DUST FROM ENTERING RETURN AIR PATH. REPLACE ALL AIR HANDLER FILTERS WITH FILTERS MATCHING EXISTING AT SUBSTANTIAL COMPLETION AT A MINIMUM. CHECK FILTER CONDITION ONCE A WEEK AND REPLACE IF FULL. COORDINATE ANY AIR HANDLER SHUTDOWNS WITH OWNER. CRAWLSPACE FLOOR IS DIRT WITH VAPOR BARRIER COVERING. PROVIDE CRAWLSPACE VAPOR BARRIER ON CRAWLSPACE FLOOR IN WORK AREAS WHERE EXISTING VAPOR BARRIER HAS BEEN DAMAGED TO REDUCE DUST GENERATION.

LIST OF AIR HANDLER FILTERS ARE AS FOLLOWS:
AHU-1,2,3 REQUIRE 8 EACH 20X24X2 FILTERS PER CHANGE
AHU-4 REQUIRES 3 EACH 16X20X2 AND 3 EACH 20X20X2 FILTERS PER CHANGE
AHU-5 REQUIRES 3 EACH 16X20X2 AND 3 EACH 20X20X2 FILTERS PER CHANGE

- 6.CAP WASTE PIPING OF ACTIVE PIPES AS REQUIRED TO PREVENT SEWER GASES FROM ENTERING CRAWLSPACE.
- 7.LAYDOWN AREA IS AVAILABLE NORTH OF THE BUILDING IN THE PARKING LOT.

TUB ROOM MODERNIZATION

1. PERFORM WORK ON ONE TUB ROOM AT A TIME AND MAINTAIN ONE TUB ROOM OPERATIONAL AT ALL TIMES.
2. HAVE ALL EQUIPMENT AND MATERIALS ON SITE BEFORE SHUTTING DOWN ROOMS AND STARTING WORK.
3. PROTECT SURROUNDING AREA FROM CONSTRUCTION DUST AND DEBRIS BY ISOLATING THE TUB ROOMS AND PROVIDING A CLEAN WORKING ENVIRONMENT.

KITCHEN RENOVATION

1. KITCHEN WORK CAN OCCUR SIMULTANEOUSLY WITH BATHROOM WORK.
2. OTHER THAN THE DISHWASHING AREA, THE KITCHEN IS TO REMAIN OPERATIONAL. PROVIDE PROTECTION TO PREVENT DUST AND DEBRIS FROM ENTERING THE KITCHEN.
3. KITCHEN CONSTRUCTION TO BE COMPLETE WITHIN 3 WEEKS OF ROOM SHUT DOWN.

SHEET INDEX

GENERAL
G001 GENERAL INFORMATION

ARCHITECTURAL
A200 OVERALL FIRST FLOOR - AREA OF WORK PLAN
A201 DISHWASHER ROOM - DEMO AND RENO
A202 MOOSEWOOD TUB ROOM - DEMO AND RENO
A203 AURORA TUB ROOM - DEMO AND RENO
A600 INTERIOR PLAN - ENLARGED MOOSEWOOD TUB ROOM
A700 ACCESSORY/ FIXTURE TYPES AND INTERIOR ELEVATIONS
A800 INTERIOR DETAILS
A900 SCHEDULES AND TYPES - ROOM

STRUCTURAL
S001 STRUCTURAL GENERAL NOTES
S201 DISHWASHER ROOM - STRUCTURAL DETAILS
S202 MOOSEWOOD TUB ROOM - STRUCTURAL DETAILS
S203 AURORA TUB ROOM STRUCTURAL DETAILS

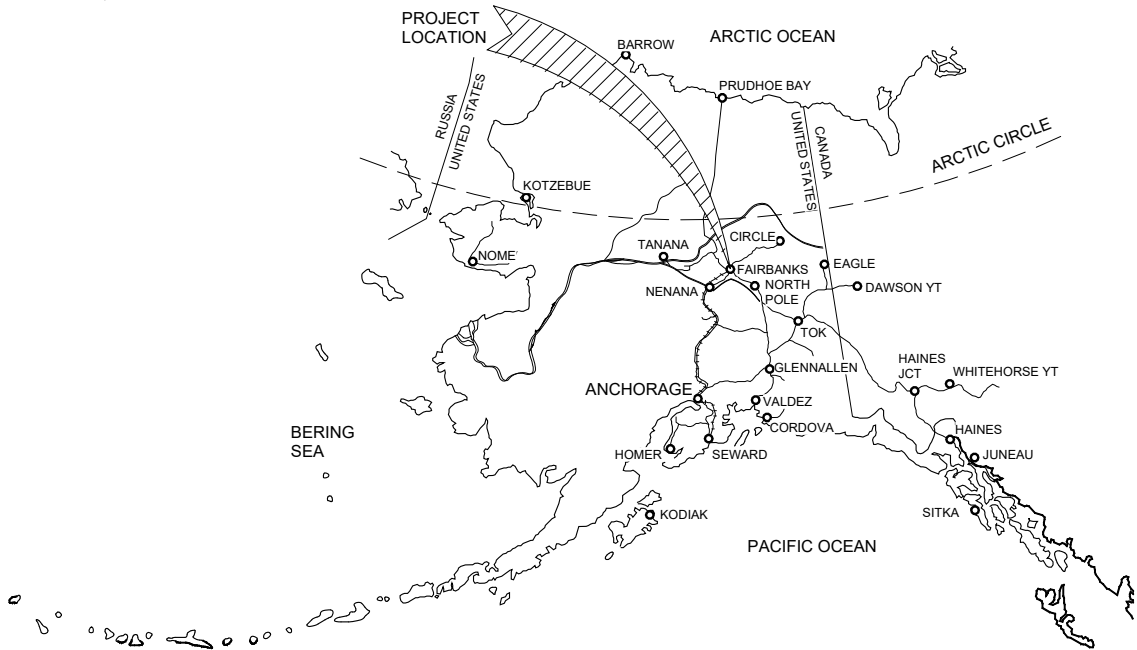
MECHANICAL
M001 MECHANICAL ABBREVIATIONS, LEGENDS, AND SCHEDULES
M101 DISHWASHER ROOM - MECHANICAL DEMO AND RENO
M200 MOOSEWOOD TUB ROOM -UNDERFLOOR - MECHANICAL DEMO AND RENO
M201 MOOSEWOOD TUB ROOM - MECHANICAL DEMO AND RENO
M300 AURORA TUB ROOM - UNDERFLOOR - MECHANICAL DEMO AND RENO
M301 AURORA TUB ROOM - MECHANICAL DEMO AND RENO

CODE SUMMARY

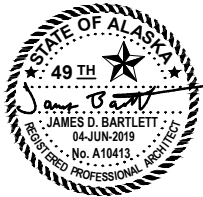
GOVERNING CODES
INTERNATIONAL BUILDING CODE (IBC) 2015
NATIONAL ELECTRIC CODE (NEC) 2014
INTERNATIONAL MECHANICAL CODE (IMC) 2015
UNIFORM PLUMBING CODE (UPC) 2015
INTERNATIONAL FIRE CODE (IFC) 2015

AUTHORITY HAVING JURISDICTION
CITY OF FAIRBANKS

ALASKA MAP



VICINITY MAP



FAIRBANKS
PIONEER HOME -
TUB ROOM AND
KITCHEN
UPGRADES

ISSUE DATE 07 JUN 2019
COMM. NUMBER 381701
DESIGNED BY ENS
DRAWN BY ENS
SCALE 0" 1"

GENERAL
INFORMATION

G001



FAIRBANKS
PIONEER HOME -
TUB ROOM AND
KITCHEN
UPGRADES

ISSUE DATE 07 JUN 2019
COMM. NUMBER 381701
DESIGNED BY ENS
DRAWN BY ENS
SCALE 0" 1"

OVERALL FIRST
FLOOR - AREA OF
WORK PLAN

A200

ARCHITECTURAL SYMBOL LEGEND

SEE G001 AND OTHER DISCIPLINES FOR ADDITIONAL SYMBOLS NOT SHOWN BELOW.

- SPOT ELEVATION
- SPOT SLOPE
- KEYED NOTE
- DOOR TAG
- DETAIL NUMBER
- INTERIOR ELEVATION
- DETAIL NUMBER
- SHEET LOCATION
- SIMILAR
- BUILDING SECTION
- DETAIL NUMBER
- SHEET LOCATION
- SIMILAR
- WALL SECTION
- DETAIL NUMBER
- SHEET LOCATION

TYPICAL RENOVATION NOTES

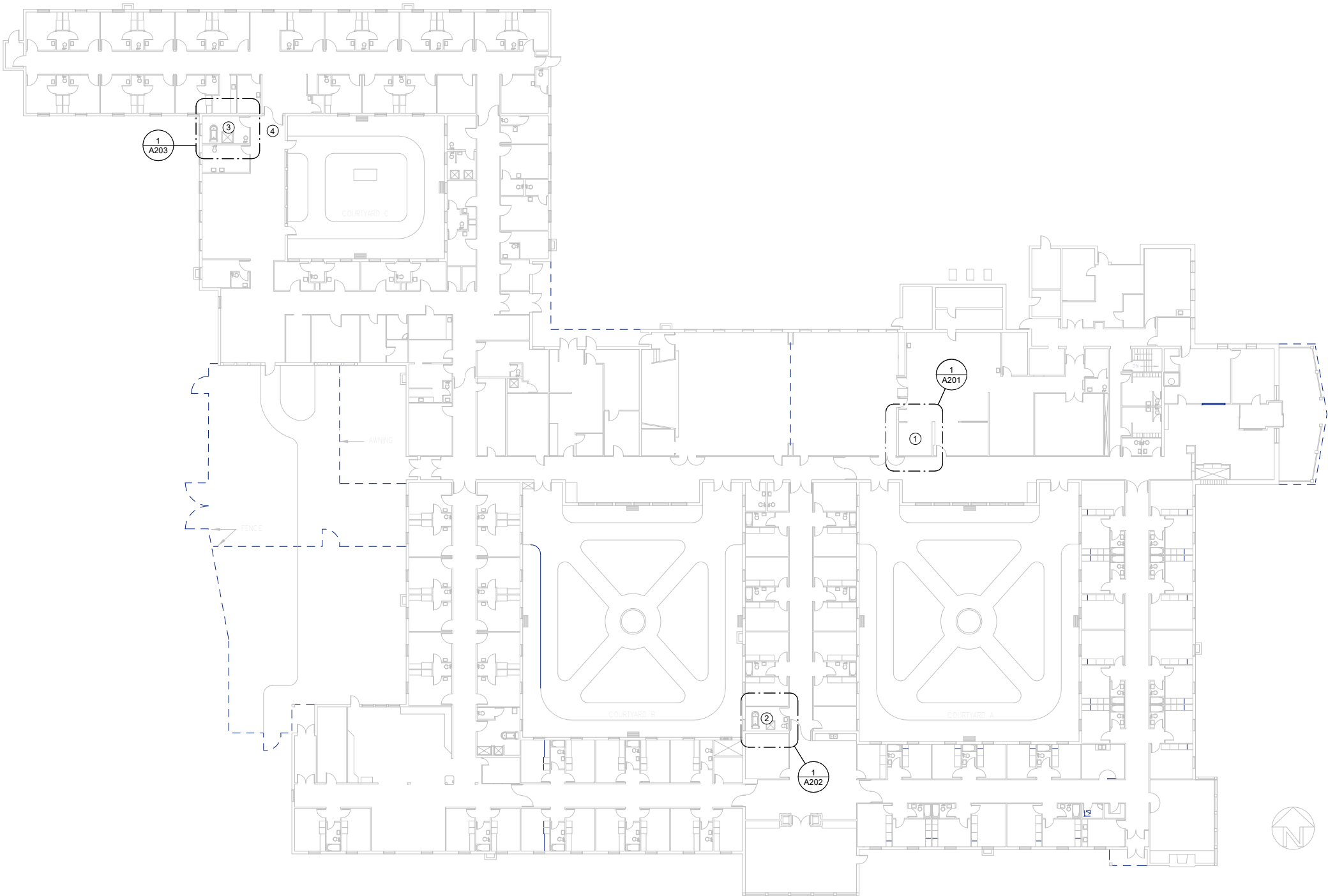
- A. COORDINATE ARCHITECTURAL WORK WITH OTHER DISCIPLINES WORK.
- B. FIELD VERIFY DIMENSIONS SHOWN TO EXISTING CONSTRUCTION. NOTIFY ARCHITECT WHERE DISCREPANCIES AFFECT DESIGN.
- C. DIMENSIONS AT EXISTING CONSTRUCTION ARE MEASURED FROM FACE OF EXISTING FINISH UNLESS NOTED OTHERWISE.
- D. DIMENSIONS INDICATED AS 'CLEAR' REQUIRE CLEARANCE MEASURED TO FINISHED FACES.
- E. PATCH, REPAIR, AND REFINISH EXISTING SURFACES TO REMAIN, AFFECTED BY WORK.
- F. REINSTALL CASEWORK AND WALL MOUNTED ITEMS TO REMAIN, AFFECTED BY WORK.

TYPICAL DEMOLITION NOTES

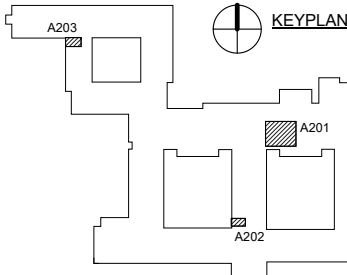
- A. PROVIDE DEMOLITION REQUIRED TO ACCOMMODATE NEW WORK.
- B. EXISTING STRUCTURAL SYSTEMS INCLUDING COLUMNS, BEAMS, AND STRUCTURAL WALLS TO REMAIN UNLESS OTHERWISE INDICATED IN STRUCTURAL DOCUMENTS.
- C. SAW CUT AROUND PERIMETER OF LOCATIONS REQUIRING CONCRETE REMOVAL.
- D. REMOVE EXISTING LOOSE LAID CARPETS AND MATS WITHIN THE WORK AREA FOR THE DURATION OF WORK AND REINSTALL.
- E. UNLESS OTHERWISE INDICATED, REMOVE MATERIALS NOT REUSED IN NEW CONSTRUCTION. THIS INCLUDES INTERIOR WALLS, CASEWORK, FIXTURES, FLOOR FINISHES, WALL MOUNTED ITEMS, AND FLOOR MOUNTED ITEMS.

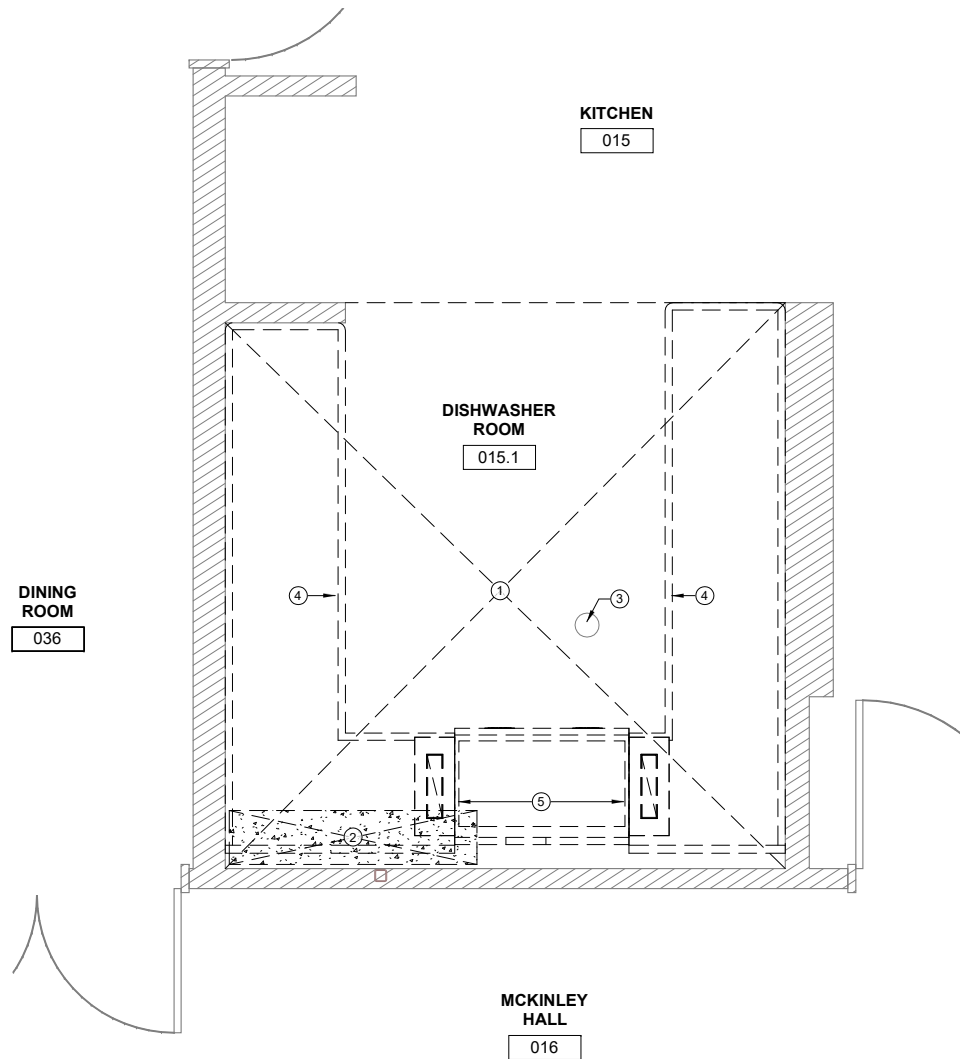
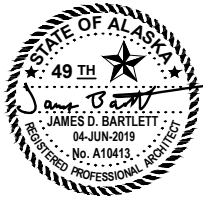
KEYNOTES

- ① DISHWASHER ROOM WORK AREA
- ② MOOSEWOOD TUB ROOM WORK AREA
- ③ AURORA TUB ROOM WORK AREA
- ④ PIPE REPAIR AT CRAWLSPACE WORK AREA



1 OVERALL FIRST FLOOR - AREA OF WORK PLAN
A200 3/64" = 1'-0"





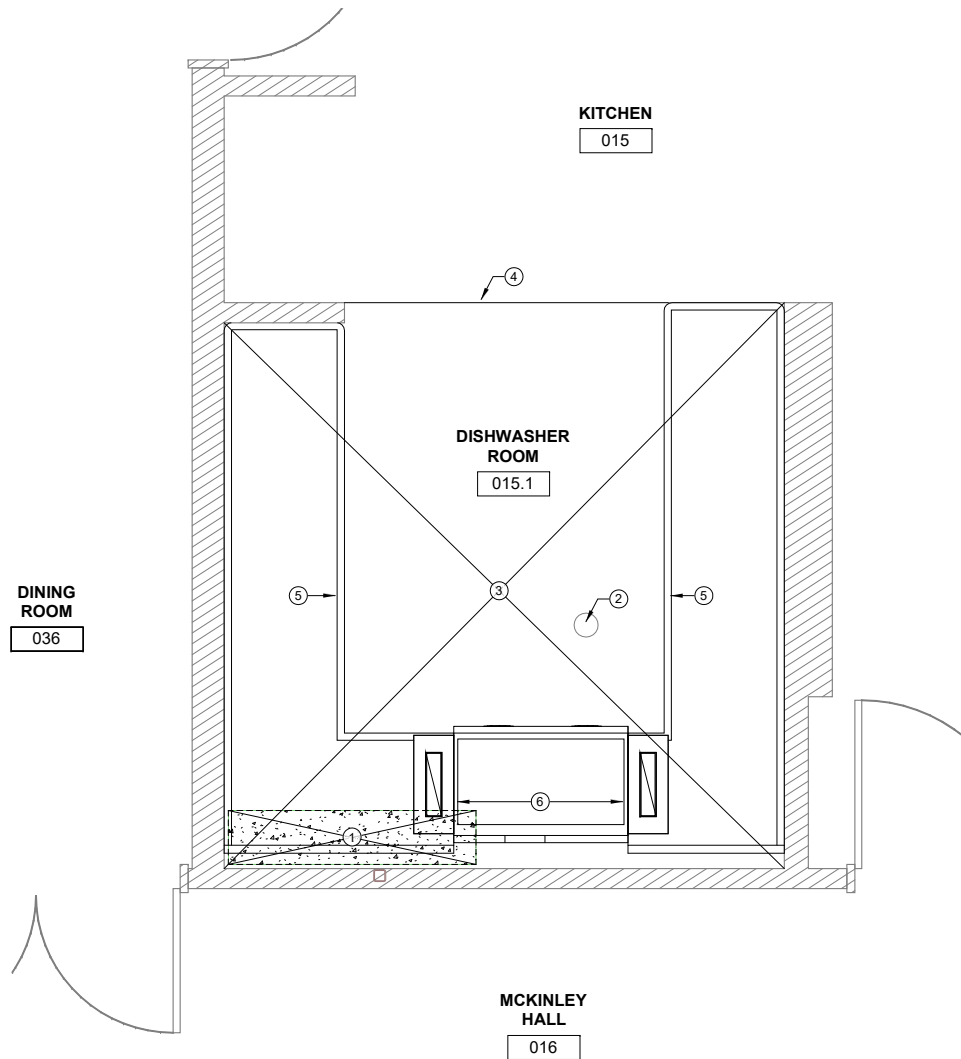
1 DISHWASHER ROOM - DEMO PLAN
A201 1/2" = 1'-0" REFERENCE: 1/ A200

DEMOLITION NOTES

A. SEE A200 FOR TYPICAL DEMOLITION NOTES.

DEMOLITION KEYNOTES

- 1 REMOVE EXISTING QUARRY TILE WALL BASE AND QUARRY TILE FLOORING DOWN TO FACE OF EXISTING CONCRETE ON METAL DECK
- 2 REMOVE FAILING CONCRETE SLAB AT CORNER OF ROOM PER S201
- 3 REMOVE FLOOR DRAIN PER M101
- 4 REMOVE EXISTING STAINLESS STEEL COUNTERS, SHELVING, AND BACKSPLASH AS REQUIRED TO REPAIR FLOOR. SALVAGE FOR REINSTALLATION.
- 5 ALTERNATE WORK: REMOVE EXISTING DISHWASHER AND COMPONENTS. SEE M101 FOR ADDITIONAL INFORMATION.



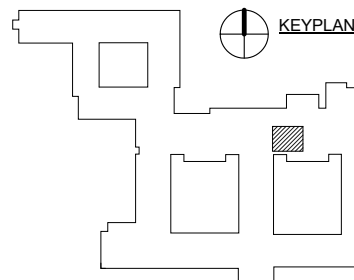
2 DISHWASHER ROOM - RENO PLAN
A201 1/2" = 1'-0" REFERENCE: 1/ A200

RENOVATION NOTES

A. SEE A200 FOR TYPICAL RENOVATION NOTES.
B. SEE A600 FOR ENLARGED PLAN AND ASSEMBLY TYPES.

RENOVATION KEYNOTES

- 1 PROVIDE CONCRETE SLAB PER S201
- 2 FLOOR DRAIN PER M101
- 3 PROVIDE RESILIENT SHEET FLOORING AND INTEGRAL COVE BASE TO 5" A.F.F. PREP EXISTING CONCRETE FLOOR AND PROVIDE LEVELING COMPOUND SLOPED TO DRAIN PRIOR TO INSTALLATION OF FLOORING.
- 4 PROVIDE TRANSITION STRIP
- 5 REINSTALL SALVAGED STAINLESS STEEL COUNTERS, SHELVING, AND BACKSPLASH TO ENSURE A WATERTIGHT INSTALLATION. COORDINATE INSTALLATION WITH AWARDED ALTERNATE WORK.
- 6 ALTERNATE WORK: PROVIDE DISHWASHER PER M101

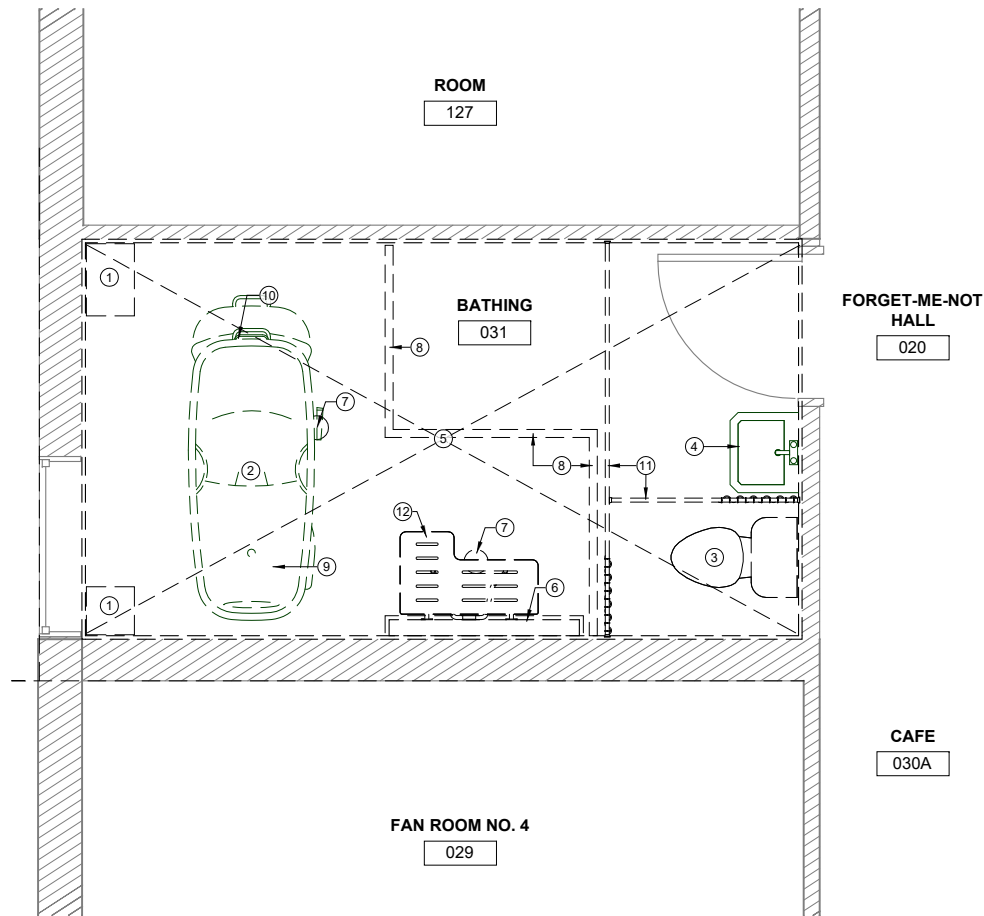


FAIRBANKS
PIONEER HOME -
TUB ROOM AND
KITCHEN
UPGRADES

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DISHWASHER
ROOM - DEMO
AND RENO

A201



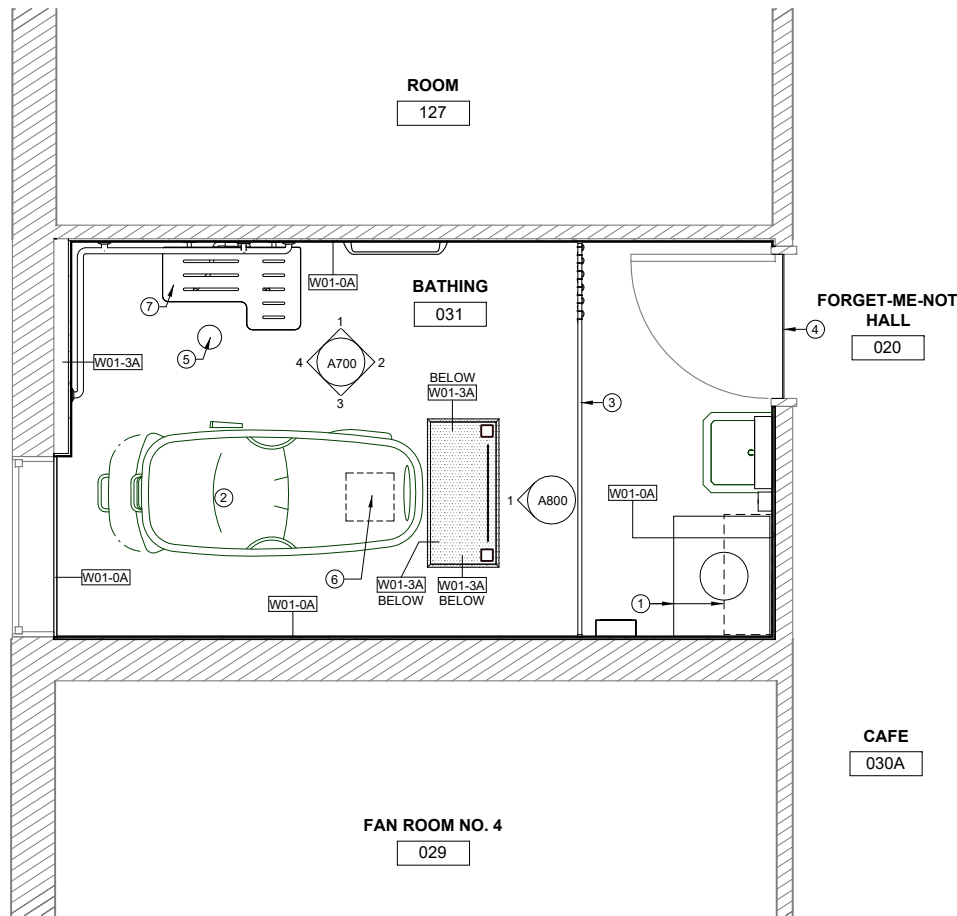
1 MOOSEWOOD TUB ROOM - DEMO PLAN
A202 1/2" = 1'-0" REFERENCE: 1/ A200

DEMOLITION NOTES

A. SEE A200 FOR TYPICAL DEMOLITION NOTES.

DEMOLITION KEYNOTES

- 1 REMOVE EXISTING CABINETS AND TURN OVER TO OWNER
- 2 REMOVE EXISTING TUB AND SALVAGE FOR REINSTALLATION
- 3 REMOVE EXISTING TOILET PER M200 AND M201
- 4 REMOVE WALL MOUNTED LAVATORY PER M200 AND M201
- 5 REMOVE FRP WALL FINISH DOWN TO FACE OF STUDS AND REMOVE SHEET FLOORING DOWN TO FACE OF CONCRETE ON METAL DECK. CEILING FINISH TO REMAIN
- 6 REMOVE SHOWER CHASE WALL, SHOWER HEAD, AND VALVES. SEE M200 FOR ADDITIONAL INFORMATION.
- 7 SAW CUT CONCRETE AND METAL DECK AT DEMOLISHED OR NEW ITEM, APPROXIMATELY 1 SF PER LOCATION
- 8 REMOVE EXISTING TRENCH DRAIN PER M200 AND M201
- 9 REMOVE EXISTING FLOOR SINK PER M200 AND M201
- 10 REMOVE FLOOR DRAIN PER M200 AND M201
- 11 REMOVE EXISTING CEILING MOUNTED PARTITION TRACKS AND CURTAINS
- 12 REMOVE SHOWER SEAT AND SALVAGE FOR REINSTALLATION



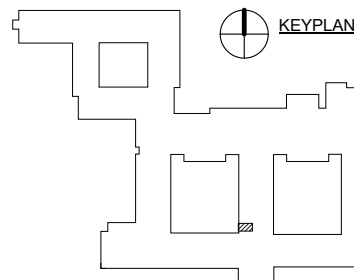
2 MOOSEWOOD TUB ROOM - RENO PLAN
A202 1/2" = 1'-0" REFERENCE: 1/ A200

RENOVATION NOTES

A. SEE A200 FOR TYPICAL RENOVATION NOTES.
B. SEE A600 FOR ENLARGED PLAN AND ASSEMBLY TYPES.

RENOVATION KEYNOTES

- 1 PROVIDE SOILED LINEN BASE CABINET AND UPPER WALL CABINET, PROVIDE BLOCKING AND SECURE TO WALL
- 2 REINSTALL SALVAGED TUB
- 3 PROVIDE CEILING MOUNTED PARTITION TRACK AND CURTAIN
- 4 PROVIDE FLOORING TRANSITION
- 5 FLOOR DRAIN PER M200 AND M201
- 6 FLOOR SINK PER M200 AND M201
- 7 REINSTALL SALVAGED FOLDING SHOWER SEAT, PROVIDE BLOCKING AND SECURE TO WALL

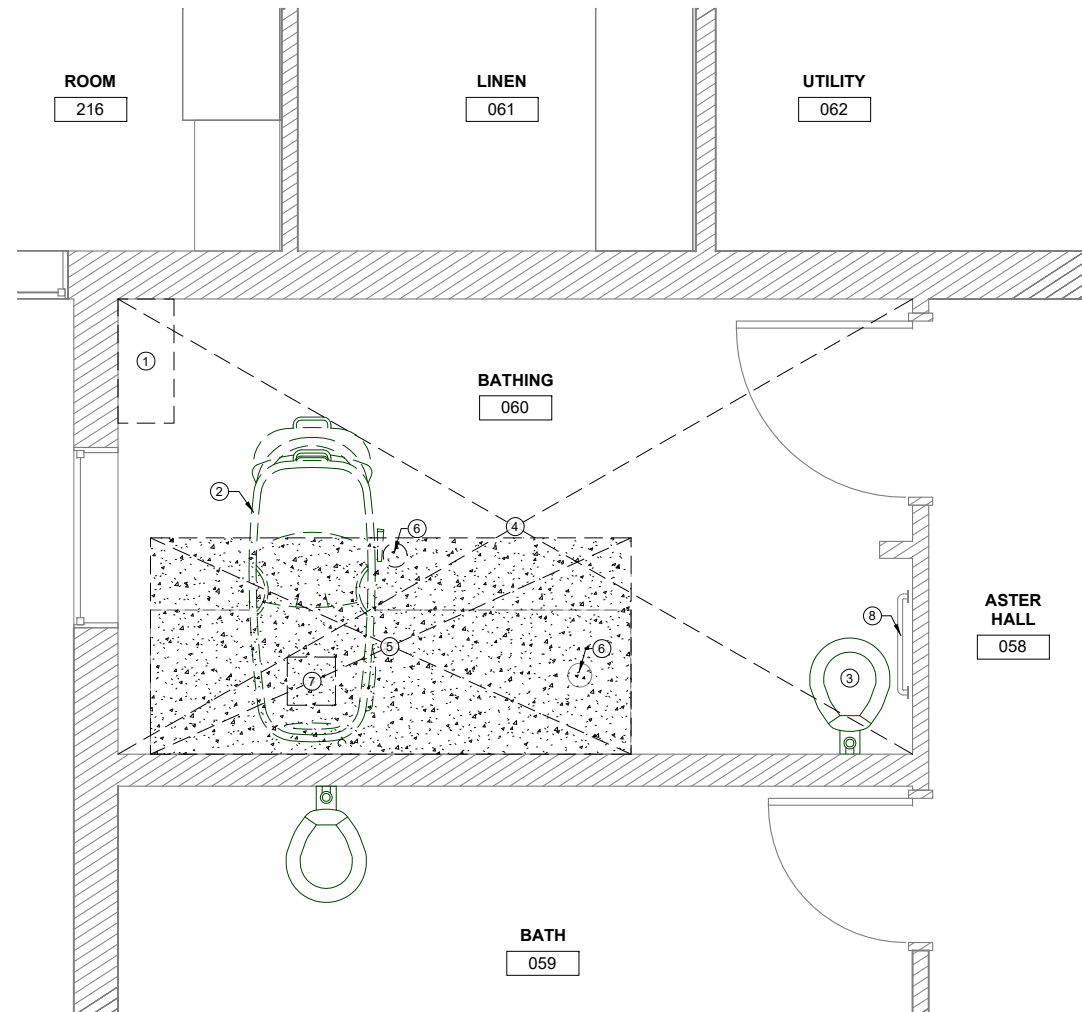
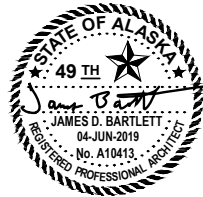


FAIRBANKS PIONEER HOME - TUB ROOM AND KITCHEN UPGRADES

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MOOSEWOOD TUB ROOM - DEMO AND RENO

A202



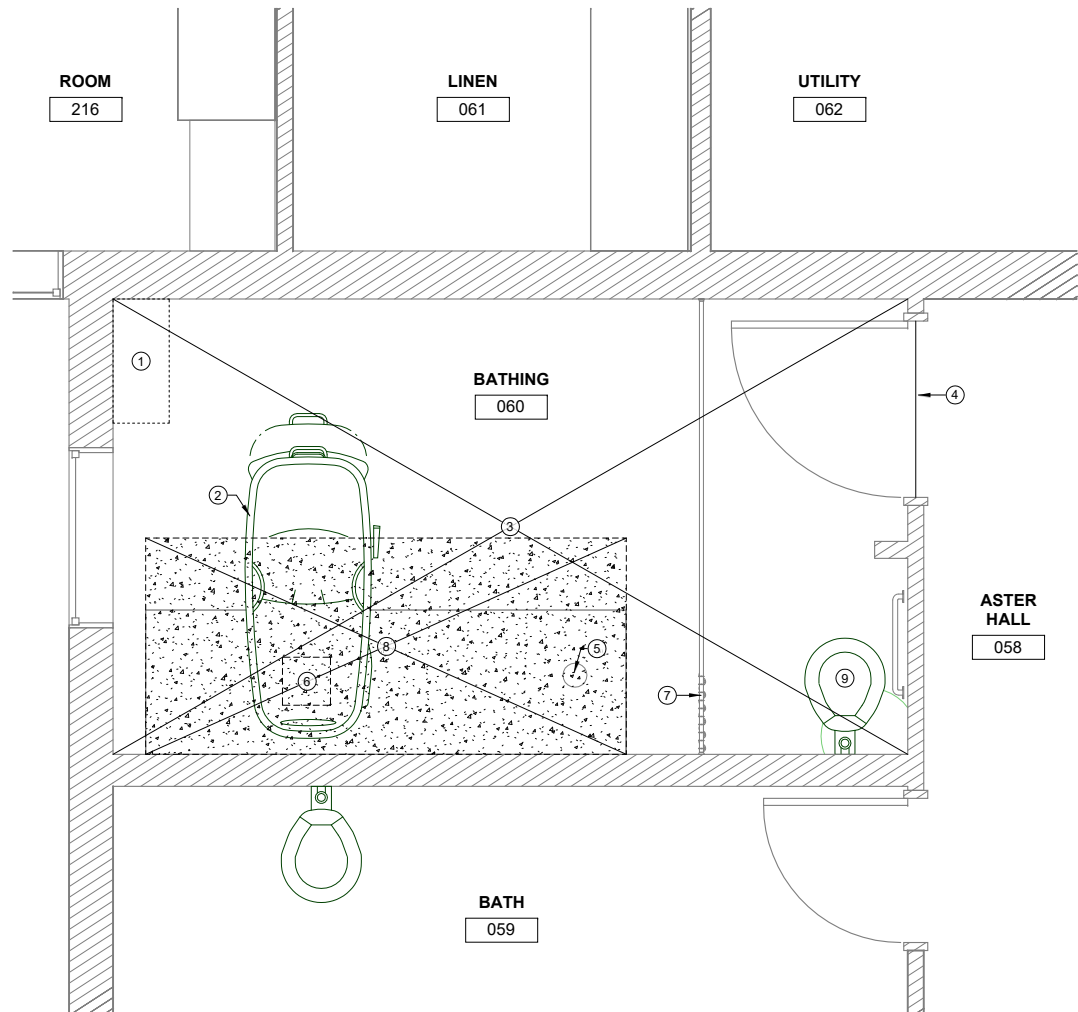
1 AURORA TUB ROOM - DEMO PLAN
A203 1/2" = 1'-0" REFERENCE: 1/ A200

DEMOLITION NOTES

A. SEE A200 FOR TYPICAL DEMOLITION NOTES.

DEMOLITION KEYNOTES

- 1 REMOVE EXISTING SHELVING AND SALVAGE FOR REINSTALLATION
- 2 REMOVE EXISTING TUB AND SALVAGE FOR REINSTALLATION
- 3 REMOVE EXISTING TOILET PER M300 AND M301
- 4 REMOVE EXISTING CERAMIC WALL BASE AND TILE FLOOR DOWN TO EXISTING CONCRETE ON METAL DECK; EXISTING CERAMIC TILE AND SOLID SURFACE WALL FINISHES TO REMAIN.
- 5 REMOVE SLAB AND METAL DECK PER S203
- 6 DEMOLISHED FLOOR DRAIN LOCATION, SEE M300 AND M301
- 7 DEMOLISHED FLOOR SINK LOCATION, SEE M300 AND M301
- 8 EXISTING GRAB BAR TO REMAIN



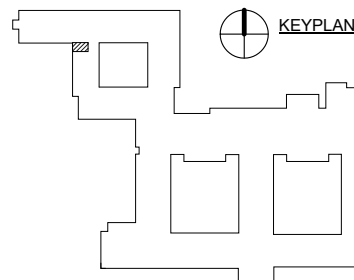
2 AURORA TUB ROOM - RENO PLAN
A203 1/2" = 1'-0" REFERENCE: 1/ A200

RENOVATION NOTES

A. SEE A200 FOR TYPICAL RENOVATION NOTES.
B. SEE A600 FOR ENLARGED PLAN AND ASSEMBLY TYPES.

RENOVATION KEYNOTES

- 1 REINSTALL SALVAGED SHELVING, SECURE TO WALL
- 2 REINSTALL SALVAGED TUB
- 3 PROVIDE RESILIENT SHEET FLOORING AND INTEGRAL COVE BASE TO 5" A.F.F. PREP EXISTING CONCRETE FLOOR AND PROVIDE LEVELING COMPOUND SLOPED TO DRAIN PRIOR TO INSTALLATION OF FLOORING.
- 4 PROVIDE FLOORING TRANSITION
- 5 FLOOR DRAIN PER M300 AND M301
- 6 FLOOR SINK PER M300 AND M301
- 7 EXISTING CURTAIN AND OVERHEAD CEILING MOUNTED TRACK TO REMAIN
- 8 PROVIDE CONCRETE SLAB PER S203
- 9 WATER CLOSET PER M300 AND M301

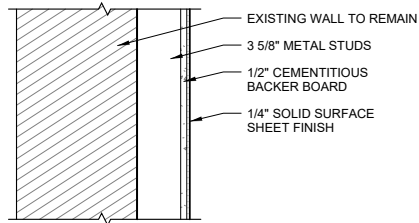


FAIRBANKS
PIONEER HOME -
TUB ROOM AND
KITCHEN
UPGRADES

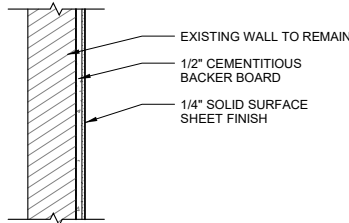
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AURORA TUB
ROOM - DEMO
AND RENO

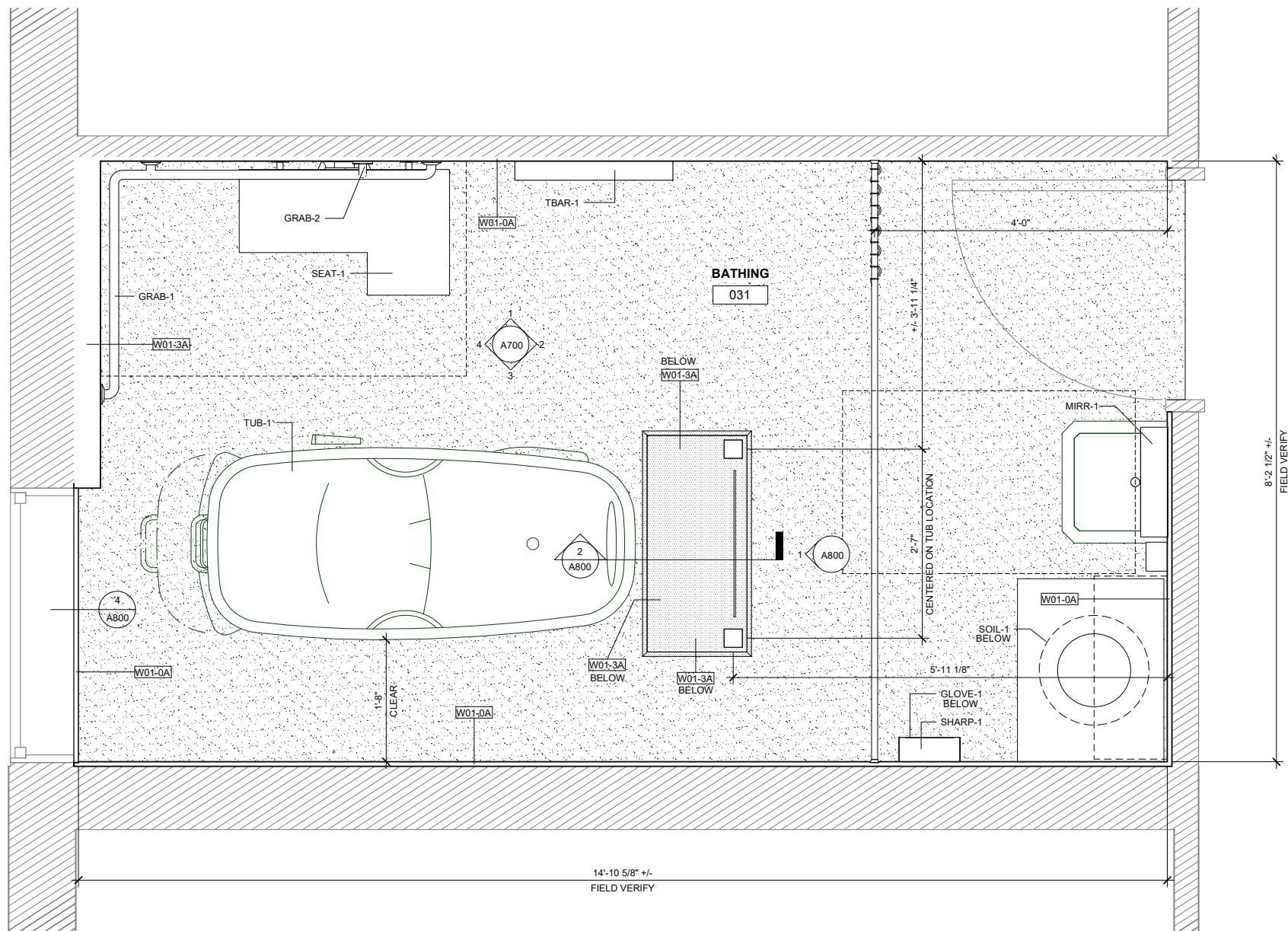
A203



W01-3A WALL INTERIOR 3 5/8" STUD BACKER BOARD ONE SIDE



W01-0A WALL INTERIOR EXISTING STUD BACKER BOARD ONE SIDE



1 INTERIOR PLAN - FINISHES AND SIGNAGE - 1ST FLOOR
A600 1" = 1'-0"

INTERIOR ASSEMBLY NOTES

- 1 - TYPICAL
A. SEE A8 SHEETS FOR INTERIOR DETAILS.
B. COORDINATE ABOVE CEILING WORK.
- 2 - INTERIOR FINISHES
A. SEE ROOM SCHEDULE FOR WALL BASE AND APPLIED FINISHES NOT SHOWN ON ASSEMBLY TYPES.
B. SEE MATERIAL SCHEDULE AND SPECIFICATIONS FOR SUBSTRATES REQUIRED BY APPLIED FINISHES.
- 3 - WATER RESISTANT ASSEMBLIES
A. PROVIDE CEMENTITIOUS BACKER BOARD FOR SOLID SURFACE WALL FINISH AT ENTIRE PERIMETER OF MOOSEWOOD TUB ROOM.

FINISH PLAN NOTES

- A. FURNITURE, EQUIPMENT, SOME CASEWORK, AND OTHER ELEMENTS MAY NOT BE SHOWN FOR CLARITY OF FLOOR FINISHES.
B. CHANGE IN FLOOR MATERIAL TO OCCUR AT CENTERLINE OF DOOR IN CLOSED POSITION.

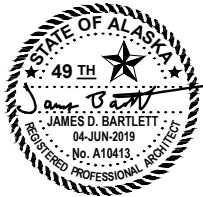
FINISH PLAN LEGEND



RESILIENT SHEET FLOORING,
RSL-1 PER A900

Design
Alaska

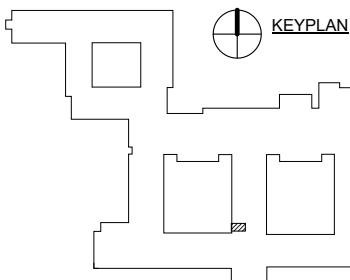
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601 College Road Fairbanks AK 99701
907.452.1241 AECC511 designalaska.com



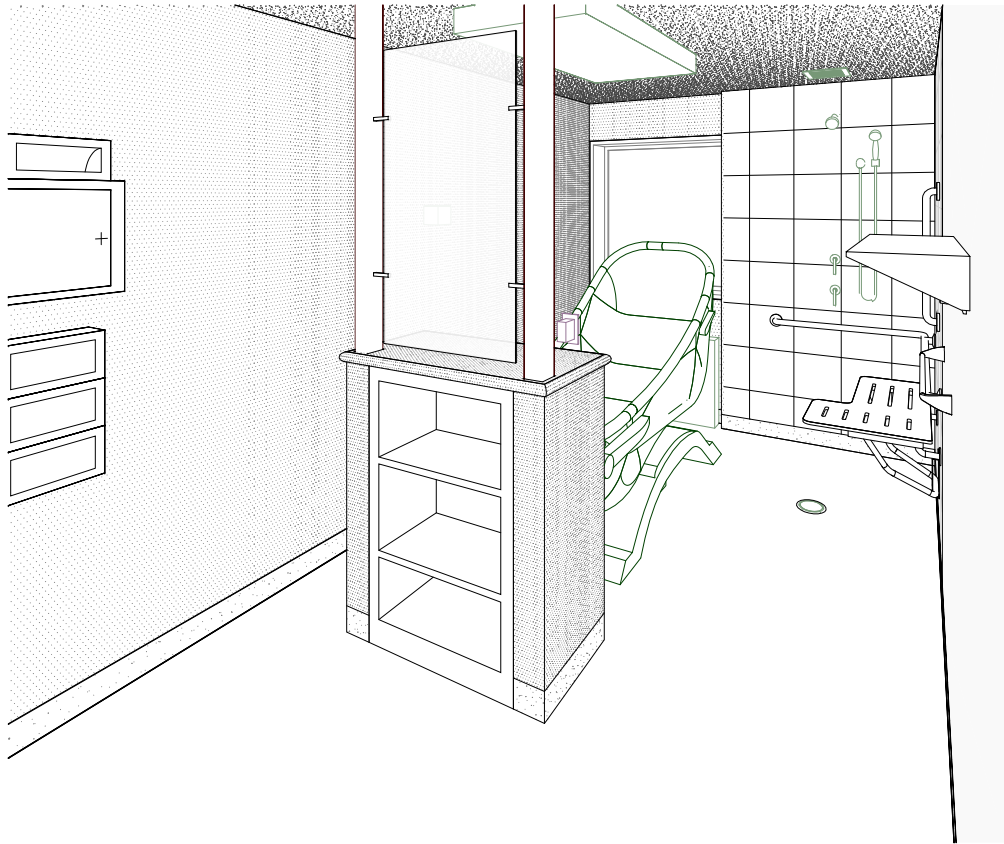
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INTERIOR PLAN -
ENLARGED
MOOSEWOOD TUB
ROOM



A600



SPECIALTY EQUIPMENT SCHEDULE		
ITEM NAME	DESCRIPTION	COMMENTS
GLOVE-1	(E) MEDICAL GLOVE DISPENSER	
GRAB-1	GRAB BAR, HORIZONTAL ELBOW	
GRAB-2	(E) GRAB BAR, VERTICAL 24 INCHES	
HOOK-1	ROBE HOOK, SINGLE	
MIRR-1	(E) MIRROR	
SEAT-1	(E) SHOWER SEAT	
SHARP-1	(E) SHARPS DISPOSAL	
SHLF-1	SHELF, 8 INCHES X 24 INCHES	
SOAP-1	(E) SOAP DISPENSER	
SOIL-1	SOILED LINEN CART, 18" ROUND	
TBAR-1	TOWEL BAR, 24 INCHES LONG	

INTERIOR ELEVATION NOTES

- A. SEE INTERIOR ACCESSORY AND FIXTURE NOTES ON A700.
B. PAINT INTERIOR LOUVERS, REGISTERS, DIFFUSERS, AND OTHER EXPOSED MATERIALS TO MATCH ADJACENT FINISHES. NOTIFY ARCHITECT, PRIOR TO INSTALLATION, IF DIMENSIONS SHOWN CREATE CONFLICT WITH CODES AND STANDARDS, MANUFACTURER RECOMMENDATIONS, OR FIELD CONDITIONS.

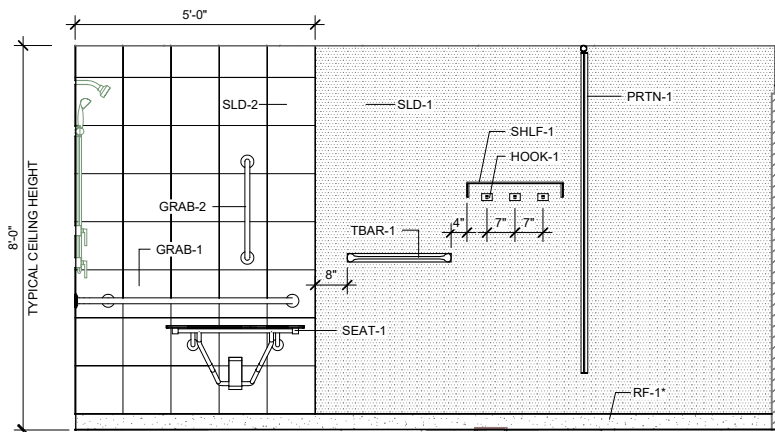
INTERIOR ACCESSORY AND FIXTURE NOTES

- A. ACCESSORY AND FIXTURE MOUNTING LOCATIONS ARE INTENDED AS A GUIDELINE BASED ON ACCESSIBILITY, SAFETY, AND CONFORMANCE WITH CODES AND STANDARDS. ANY CONFLICTS IN INFORMATION SHOWN HERE SHALL BE SUPERSEDED BY APPLICABLE CODES, STANDARDS, OR AUTHORITIES HAVING JURISDICTION.
B. NOTIFY ARCHITECT, PRIOR TO INSTALLATION, IF DIMENSIONS SHOWN CREATE CONFLICT WITH CODES AND STANDARDS, MANUFACTURER RECOMMENDATIONS, OR FIELD CONDITIONS.
C. DIMENSIONS SHOWN ARE INTENDED TO BE APPLIED AS TYPICAL THROUGHOUT THE PROJECT UNLESS NOTED OTHERWISE.
D. LOCATE OPERABLE PARTS NO MORE THAN 48" ABOVE FINISHED FLOOR.
E. WHERE ACCESSORIES ARE MOUNTED OVER OBSTRUCTIONS, SUCH AS COUNTERS, LOCATE OPERABLE PARTS PER OBSTRUCTED REACH TABLE BELOW.
F. PROVIDE CLEAR FLOOR AREA FOR SIDE AND FORWARD APPROACHES AT ACCESSORIES.
G. SEE SPECIFICATIONS FOR ACCESSORIES, FIXTURES, AND EQUIPMENT PRODUCT / INSTALLATION REQUIREMENTS. COORDINATE LAYOUT AND CLEARANCES TO ACCOMMODATE SIZE VARIATIONS BETWEEN MANUFACTURES.
H. PROVIDE CONCEALED WALL BACKING PER MANUFACTURER AT ACCESSORIES, FIXTURES, AND EQUIPMENT.
I. WHERE MORE THAN ONE ACCESSORY OR FIXTURE IS LOCATED ADJACENT TO ONE ANOTHER, ALIGN ITEMS HORIZONTALLY OR VERTICALLY UNLESS NOTED OTHERWISE.
J. SEE MECHANICAL FOR PLUMBING FIXTURES.



5 MOOSEWOOD TUB ROOM PERSPECTIVE

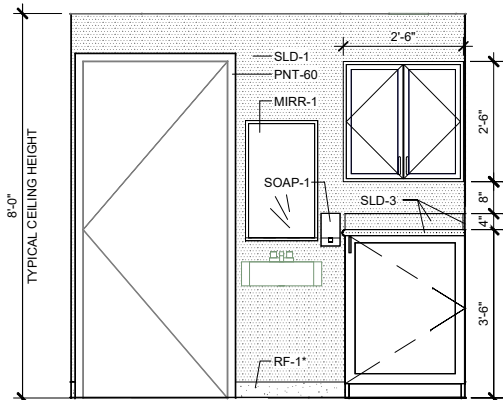
A700



1 MOOSEWOOD TUB ROOM - NORTH ELEVATION

A700

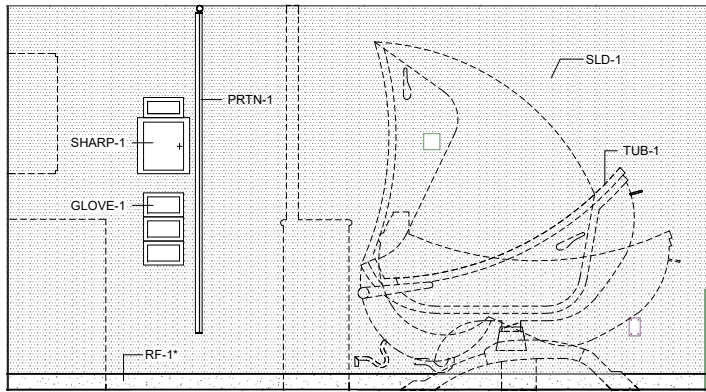
1/2" = 1'-0" REFERENCE: 2/ A202



2 MOOSEWOOD TUB ROOM - EAST ELEVATION

A700

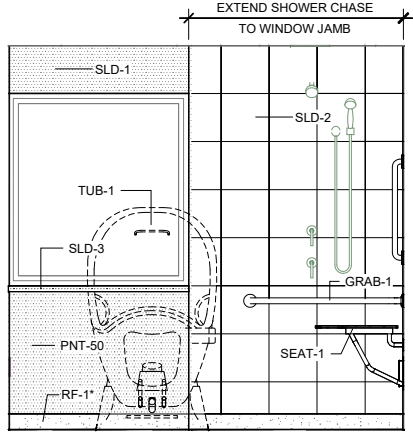
1/2" = 1'-0" REFERENCE: 2/ A202



3 MOOSEWOOD TUB ROOM - SOUTH ELEVATION

A700

1/2" = 1'-0" REFERENCE: 2/ A202

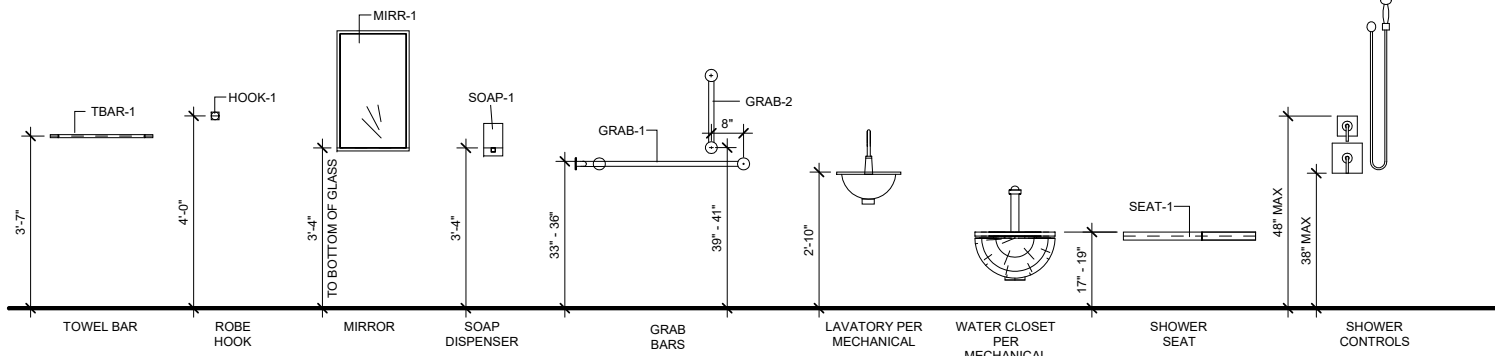


4 MOOSEWOOD TUB ROOM - WEST ELEVATION

A700

1/2" = 1'-0" REFERENCE: 2/ A202

INTERIOR ACCESSORY AND FIXTURE MOUNTING HEIGHTS



FAIRBANKS PIONEER HOME - TUB ROOM AND KITCHEN UPGRADES

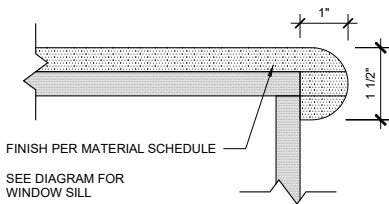
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ACCESSORY/ FIXTURE TYPES AND INTERIOR ELEVATIONS

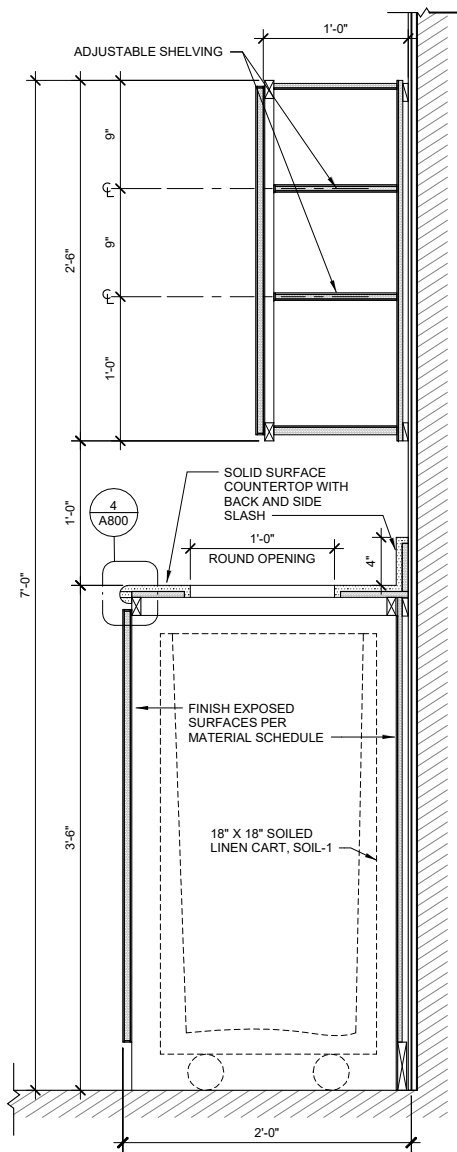
A700

INTERIOR ELEVATION NOTES

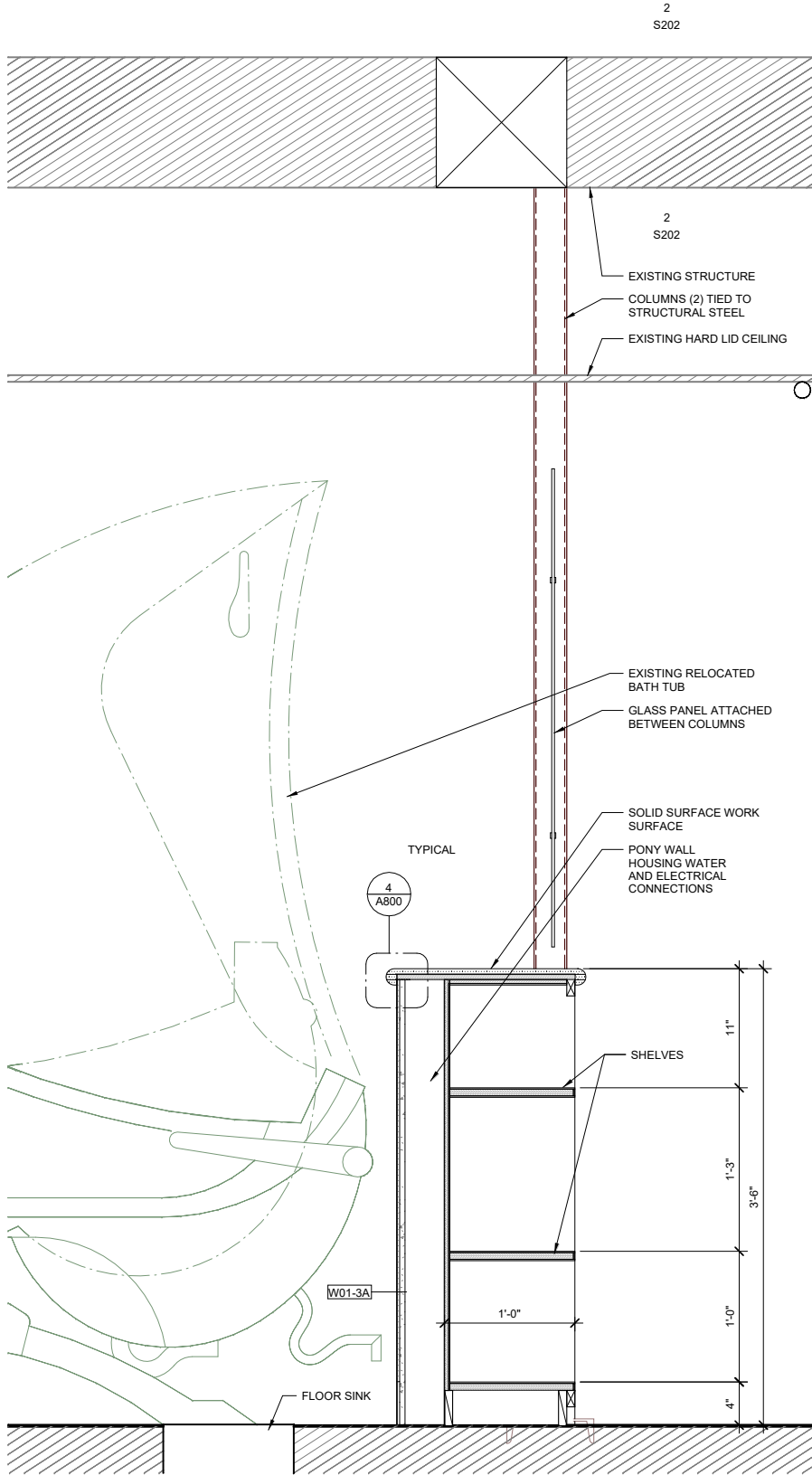
- A. SEE INTERIOR ACCESSORY AND FIXTURE NOTES ON A700.
B. PAINT INTERIOR LOUVERS, REGISTERS, DIFFUSERS, AND OTHER EXPOSED MATERIALS TO MATCH ADJACENT FINISHES. NOTIFY ARCHITECT, PRIOR TO INSTALLATION, IF DIMENSIONS SHOWN CREATE CONFLICT WITH CODES AND STANDARDS, MANUFACTURER RECOMMENDATIONS, OR FIELD CONDITIONS.



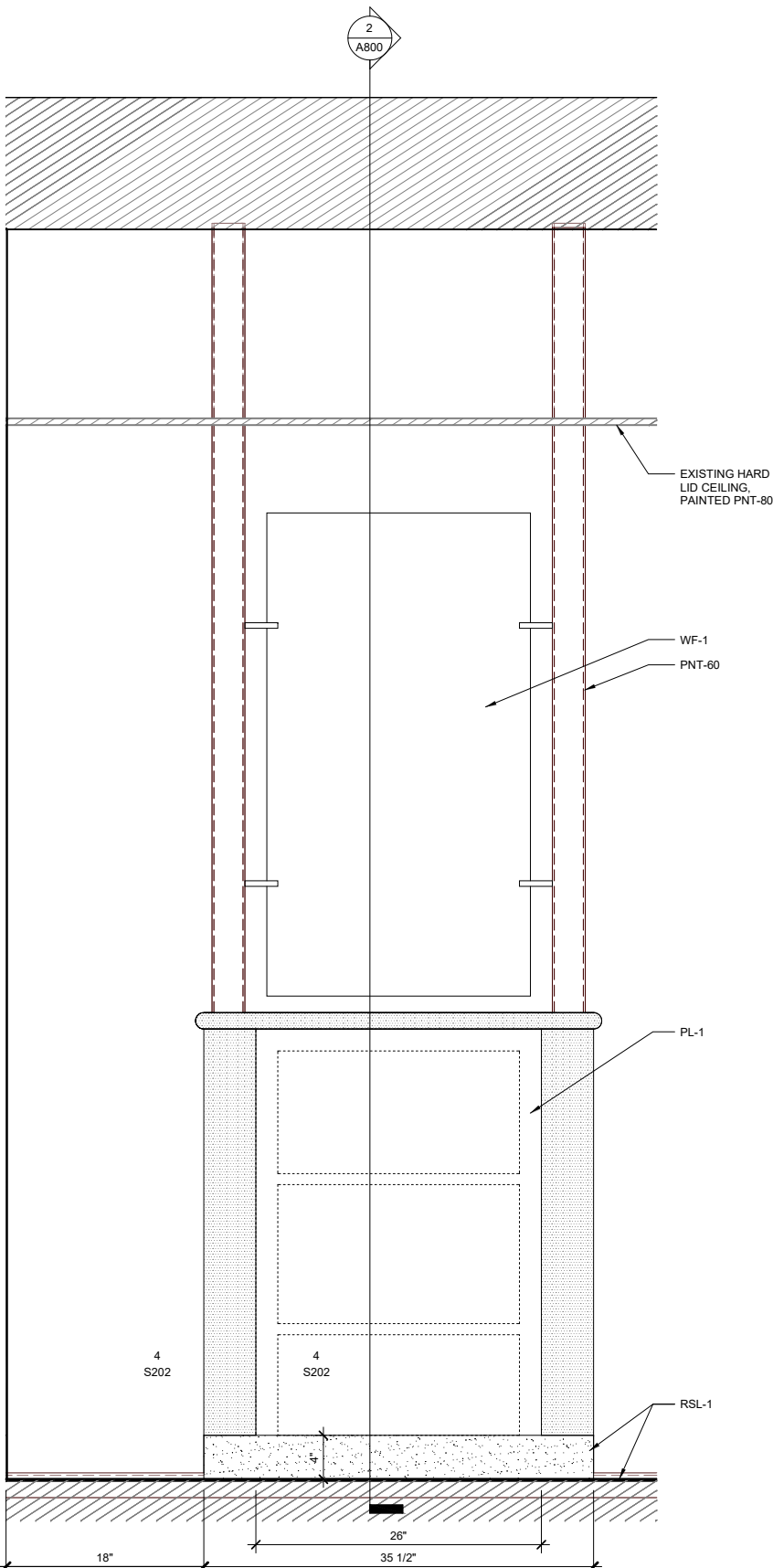
4
A800
INTERIOR CASEWORK DETAIL - SOLID SURFACE COUNTER
6" = 1'-0"



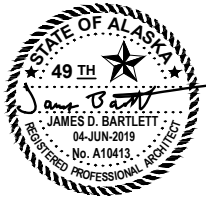
3
A800
INTERIOR CASEWORK DETAIL - TALL CABINET
1 1/2" = 1'-0"



2
A800
INTERIOR SECTION AT PONY WALL
1 1/2" = 1'-0"



1
A800
INTERIOR ELEVATION AT PONY WALL
1 1/2" = 1'-0"



FAIRBANKS
PIONEER HOME -
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INTERIOR DETAILS



ROOM SCHEDULE NOTES

- A. PROVIDE FINISHES TO FULL HEIGHT OF WALL UNLESS NOTED OTHERWISE.
B. SEE MATERIAL SCHEDULE FOR FINISH INFORMATION.
C. SEE ASSEMBLY TYPES FOR FINISH SUBSTRATES.
D. SEE FLOOR FINISH PLAN WHERE FLOOR FINISH VARIES.
E. SEE INTERIOR ELEVATIONS WHERE FLOOR BASE VARIES.
F. SEE INTERIOR ELEVATIONS WHERE WALL ACCENT VARIES.
G. SEE INTERIOR ELEVATIONS FOR LOCATION AND EXTENT OF WALL ACCENT FINISH.

ROOM SCHEDULE REMARKS

1. PATCH, PREP, AND PAINT ENTIRE CEILING.

ROOM SCHEDULE ABBREVIATIONS

SEE A001 FOR STANDARD ARCHITECTURAL ABBREVIATIONS
SEE MATERIAL SCHEDULE FOR MATERIAL TYPES

- | | |
|------|---|
| AFF | ABOVE FINISHED FLOOR |
| CFOI | CONTRACTOR FURNISHED CONTRACTOR INSTALLED |
| CFOI | CONTRACTOR FURNISHED OWNER INSTALLED |
| MFSD | MANUFACTURER'S STANDARD |
| NIC | NOT IN CONTRACT |
| OFOI | OWNER FURNISHED OWNER INSTALLED |
| OFCl | OWNER FURNISHED CONTRACTOR INSTALLED |
| SPEC | SPECIFICATION |

MATERIAL SCHEDULE NOTES

- A. FINISH PLANS, INTERIOR ELEVATIONS, AND ROOM SCHEDULE FOR LOCATION OF FINISHES.
B. THE MATERIAL SCHEDULE IS ORGANIZED BY SPEC NUMBER. MATERIALS WITH SPEC NUMBERS INCLUDING 'NA' ARE INTENDED AS A BASIS OF DESIGN WITH NO CORRELATING SPEC SECTION. SEE MATERIAL SCHEDULE INDEX BELOW TO QUICKLY FIND THE SPEC NUMBER FOR MATERIALS ORGANIZED BY TYPE.

MATERIAL SCHEDULE REMARKS

MISCELLANEOUS

1. NOT USED

MATERIAL SCHEDULE ABBREVIATIONS

SEE A001 FOR STANDARD ARCHITECTURAL ABBREVIATIONS
MATERIAL TYPES DEFINED IN MATERIAL SCHEDULE

- | | |
|------|-------------------------|
| MFSD | MANUFACTURER'S STANDARD |
| SPEC | SPECIFICATION |
| TYP | TYPICAL |

FAIRBANKS
PIONEER HOME -
TUB ROOM AND
KITCHEN
UPGRADES

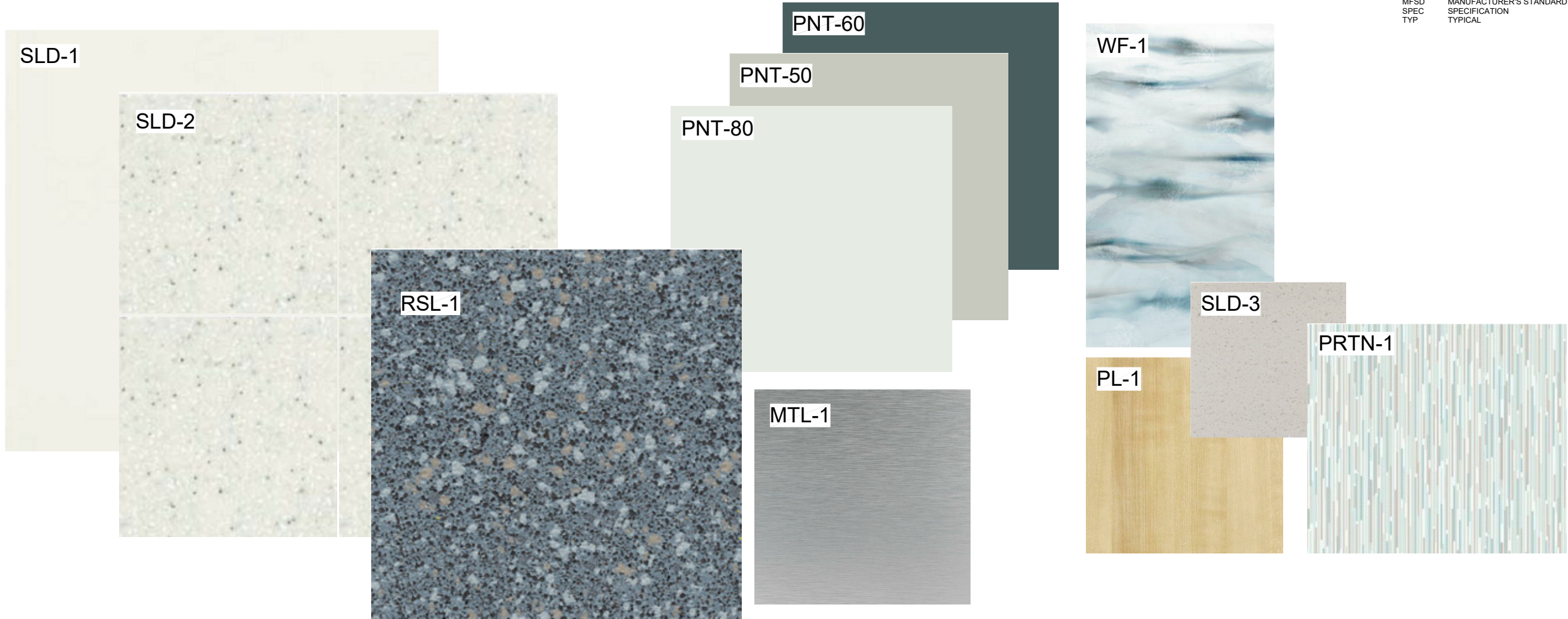
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SCHEDULES AND
TYPES - ROOM

A900

ROOM SCHEDULE												
ROOM		FLOOR		WALL			DOOR		CEILING		ROOM	
NUMBER	NAME	FINISH	BASE	FINISH	ACCENT		FINISH	FRAME FINISH	FINISH	HEIGHT	REMARKS	NUMBER
					FINISH	LOCATION						
015	KITCHEN	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING		015
015.1	DISHWASHER ROOM	RSL-1	RSL-1	EXISTING	EXISTING	EXISTING	--	--	EXISTING	EXISTING		015.1
016	MCKINLEY HALL	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING		016
020	FORGET-ME-NOT HALL	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING		020
029	FAN ROOM NO. 4	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING		029
030A	CAFE	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING		030A
031	BATHING	RSL-1	RSL-1	SLD-1	SLD-2	SEE A700	EXISTING	PNT-60	PNT-80	EXISTING	1.	031
036	DINING ROOM	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING		036
058	ASTER HALL	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING		058
059	BATH	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING		059
060	BATHING	RSL-1	RSL-1	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING		060
061	LINEN	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING		061
062	UTILITY	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING		062
127	ROOM	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING		127
216	ROOM	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING		216

MATERIAL COLOR BOARD				
TYPE	DESCRIPTION	BASIS OF DESIGN		
		MANUFACTURER	MODEL	COLOR
MTL-1	METAL FINISH - BATH ACCESSORIES	TBD	TBD	STAINLESS STEEL SATIN FINISH
PL-1	PLASTIC LAMINATE - CASEWORK	FORMICA	LAMINATE WOOD GRAINS	PLANKED DELUXE PEAR 6206-43
PNT-50	INTERIOR PAINT - WALL HEATER	SHERWIN WILLIAMS	PROMAR 200 INTERIOR LATEX	SW 6197 ALOOF GRAY
PNT-60	INTERIOR PAINT - DOOR FRAME AND COLUMNS	SHERWIN WILLIAMS	PROMAR 200 INTERIOR LATEX	SW 6223 STILL WATER
PNT-80	INTERIOR PAINT - CEILING	SHERWIN WILLIAMS	PROMAR 200 INTERIOR LATEX	SW 7007 CEILING BRIGHT WHITE
PRTN-1	PARTITION TRACK AND CURTAIN	INPRO	CLICKEZE WITH ANTIMICROBIAL FABRIC	CURTAIN: ARRAY, EUCALYPTUS; TRACK: WHITE
RSL-1	RESILIENT SHEET FLOORING	CENTAUR FLOOR SYSTEMS	SLIP RESISTANT KITCHEN SINK	PEARL GRANITE
SLD-1	SOLID SURFACE - TYPICAL WALL COVERING	INPRO	BIOPRISM	POLAR ICE
SLD-2	SOLID SURFACE - SHOWER WALL COVERING	INPRO	BIOPRISM - 12" SQUARE	LUNAR
SLD-3	SOLID SURFACE - COUNTERTOP	LG HAUSY	HI-MACS	COCONUT G170
WF-1	WINDOW FILM - TRANSLUCENT	TROVE	WINDOW FILM - TRANSLUCENT	DRIFT



GENERAL STRUCTURAL NOTES

- A. DESIGN CRITERIA
1. BUILDING CODE 2015 IBC (INTERNATIONAL BUILDING CODE)
GOVERNING JURISDICTION CITY OF FAIRBANKS
2. LIVE LOADS
- FLOOR LIVE LOAD (BASIC) 50 PSF
FLOOR LIVE LOAD (STAIRS AND CORRIDORS) 100 PSF

- B. CONCRETE
1. GENERAL:
- A. ALL CAST-IN-PLACE CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH (F_c) OF 4000 PSI.
- B. CONCRETE SHALL MEET ALL REQUIREMENTS OF ACI 301 SPECIFICATION FOR STRUCTURAL CONCRETE BUILDINGS.
- C. DIMENSIONS SHOWN ON DRAWING SHALL SUPERCEDE THOSE SHOWN ON GENERAL NOTES.
2. REINFORCING:
- A. REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60, UNLESS OTHERWISE NOTED, EXCEPT #3 BARS WHICH MAY BE GRADE 40. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
- B. DETAIL REINFORCING BARS IN ACCORDANCE WITH THE ACI DETAILING MANUAL AND THE ACI BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, LATEST EDITION.
- C. PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT REINFORCING AT POSITIONS SHOWN ON THE DRAWINGS. PROVIDE SUFFICIENT TIE BARS TO SUPPORT ALL REINFORCING.
- D. DO NOT CUT ANY REINFORCEMENT AT OPENINGS.
- E. UNLESS A REINFORCING SPLICE, CLEAR DISTANCE BETWEEN REINFORCING SHALL NOT BE LESS THAN 1.5 BAR DIAMETERS NOR LESS THAN 1 1/2"
- F. MINIMUM LAP SPLICE LENGTHS FOR REINFORCING BARS SHALL BE AS FOLLOWS:
- a. SPLICES WITH 12" OR MORE OF FRESH CONCRETE PLACED BENEATH: 80 BAR DIAMETERS
- b. ALL OTHER SPLICES: 62 BAR DIAMETERS
- G. PROVIDE REINFORCEMENT COVER AS FOLLOWS (ACI 7.7), UNLESS NOTED OTHERWISE ON DRAWINGS:
- a. CONCRETE POURED AGAINST EARTH 3" ±3/8"
- b. CONCRETE EXPOSED TO EARTH OR WEATHER:
- NO. 6 OR LARGER 2" ±3/8"
- NO. 5 OR SMALLER 1 1/2" ±3/8"
- c. CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
- NO. 14 OR LARGER 1 1/2" ±3/8"
- NO. 11 OR SMALLER 3/4" ±3/8"
- d. CONCRETE SLABS ON GRADE PLACE REINFORCING AT SLAB MID-DEPTH

- C. STRUCTURAL STEEL
1. ALL STRUCTURAL STEEL WIDE FLANGE MEMBERS AND CHANNELS SHALL BE ASTM A572 - GRADE 50 (F_y = 50 KSI) OR A992.
2. SQUARE/ RECTANGULAR HOLLOW STRUCTURAL SECTIONS (HSS) SHALL CONFORM TO ASTM A500 GRADE B (F_y = 46 KSI).
3. ROUND HSS SHALL CONFORM TO ASTM A500 GRADE B (F_y = 42 KSI).
4. PIPE SHALL CONFORM TO ASTM A53 GRADE B (F_y = 35 KSI).
5. ANGLES AND PLATES SHALL BE ASTM A36 (F_y = 36 KSI).
6. ALL STRUCTURAL STEEL SHALL BE DETAILED AND FABRICATED IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC STEEL CONSTRUCTION MANUAL.
7. NON-SHRINK GROUT SHALL BE 5,000 PSI DAYTON SUPERIOR 1107 ADVANTAGE GROUT OR EQUIVALENT.
8. BOLTED CONNECTIONS SHALL BE ACCOMPLISHED WITH HIGH-STRENGTH BOLTS CONFORMING TO ASTM A325 IN STANDARD HOLES UNLESS NOTED OTHERWISE.
9. ALL BOLTED CONNECTIONS SHALL BE PRE-TENSIONED UNLESS NOTED OTHERWISE.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF ALL ERECTION PROCEDURES AND SEQUENCES WITH REGARD TO TEMPERATURE DIFFERENTIALS.
11. WELDING SHALL BE PERFORMED WITH E70XX ELECTRODES. WELDING SHALL BE DONE BY QUALIFIED WELDERS AND SHALL CONFORM TO THE AWS D1.1 STRUCTURAL WELDING CODE-STEEL, LATEST EDITION. ALL WELDS ARE INTENDED TO BE CONTINUOUS UNLESS NOTED OTHERWISE. FIELD WELDS NOTED THROUGHOUT THE CONTRACT DOCUMENTS ARE ACCEPTABLE LOCATIONS FOR FIELD WELDING AT THE CONTRACTOR'S OPTION. FIELD WELDS MAY BE PERFORMED IN THE SHOP.

- D. GENERAL
1. CONTRACTOR IS TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS TO MATCH NEW CONSTRUCTION TO EXISTING CONSTRUCTION.
2. THE STRUCTURAL CONSTRUCTION DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OR SEQUENCE OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO: BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. THE STRUCTURAL ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS, METHODS, TECHNIQUES, SEQUENCES FOR PROCEDURE OF CONSTRUCTION, OR THE SAFETY PRECAUTIONS AND THE PROGRAMS INCIDENT THERETO (NOR SHALL OBSERVATION VISITS TO THE SITE INCLUDE INSPECTION OF THESE ITEMS.)
3. STRUCTURAL DRAWINGS ARE A PORTION OF THE CONTRACT DOCUMENTS AND ARE INTENDED TO BE USED WITH ARCHITECTURAL, CIVIL, MECHANICAL, AND ELECTRICAL DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE REQUIREMENTS FROM THESE DISCIPLINES INTO THEIR SHOP DRAWINGS AND WORK.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL SCAFFOLDING, BRACING AND SHORING.
5. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED CONSTRUCTION. LOADS SHALL NOT EXCEED THE DESIGN LIVE LOAD.
6. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL WITH THE APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION.
7. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT.
8. DO NOT USE SCALED DIMENSIONS TAKEN FROM STRUCTURAL DRAWINGS. CONTACT STRUCTURAL ENGINEER IF DIMENSIONAL INFORMATION IS MISSING.
9. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL STRUCTURAL NOTES AND SPECIFICATIONS, THE GREATER REQUIREMENTS SHALL GOVERN.
10. ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF ALASKA.

- E. SHOP DRAWINGS
1. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS IN ADDITION TO ITEMS REQUIRED BY SPECIFICATIONS. CONSTRUCTION DOCUMENTS SHALL NOT BE REPRODUCED FOR USE AS SHOP DRAWINGS. NO MORE THAN THREE SETS OF PRINTS AND ONE SET OF REPRODUCIBLES WILL BE REVIEWED FOR ANY SUBMITTAL.
2. THE CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMITTAL. ITEMS NOT IN ACCORDANCE WITH CONTRACT DOCUMENTS SHALL BE FLAGGED UPON HIS REVIEW. VERIFY ALL DIMENSIONS WITH CONTRACT DOCUMENTS.
3. ANY CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM CONTRACT DOCUMENTS SHALL BE CLOUDED BY MANUFACTURER OR FABRICATOR. ANY OF THE AFOREMENTIONED WHICH ARE NOT CLOUDED OR FLAGGED BY SUBMITTING PARTIES SHALL NOT BE CONSIDERED ALLOWED AFTER ENGINEER'S REVIEW UNLESS PREVIOUSLY NOTED AS ACCEPTABLE BY ENGINEER OR RECORD.
4. THE ENGINEER HAS THE RIGHT TO APPROVE OR DISAPPROVE ANY CHANGES TO CONTRACT DOCUMENTS AT ANY TIME BEFORE OR AFTER SHOP DRAWING REVIEW.
5. SHOP DRAWINGS DO NOT REPLACE THE CONTRACT DOCUMENTS. ITEMS OMITTED OR SHOWN INCORRECTLY AND ARE NOT FLAGGED BY THE STRUCTURAL ENGINEER OR ARCHITECT ARE NOT TO BE CONSIDERED CHANGES TO CONTRACT DOCUMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE SURE ITEMS ARE CONSTRUCTED TO CONTRACT DOCUMENTS.
6. THE ADEQUACY OF ENGINEERING DESIGNS AND LAYOUT PERFORMED BY OTHERS RESTS WITH THE DESIGNING OR SUBMITTING AUTHORITY.
7. REVIEWING IS ONLY AS AN AID TO THE CONTRACTOR IN OBTAINING CORRECT SHOP DRAWINGS. RESPONSIBILITY FOR CORRECTNESS AND COMPLETENESS SHALL REST WITH THE CONTRACTOR.
8. SHOP DRAWINGS WILL BE RETURNED FOR RESUBMITTAL IF MAJOR ERRORS ARE FOUND DURING REVIEW.

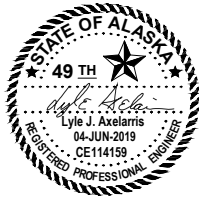
SPECIAL INSPECTIONS

THE FOLLOWING STRUCTURAL ITEMS REQUIRE SPECIAL INSPECTION PER IBC SECTIONS 1704-1707. THESE INSPECTIONS SHALL BE PERFORMED BY A SPECIAL INSPECTOR APPROVED BY THE CONTRACTING OFFICER TO PERFORM THE TYPES OF INSPECTIONS SPECIFIED. SEE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR INSPECTION AND TESTING THAT ARE NOT PART OF SPECIAL INSPECTIONS.

HIGH STRENGTH BOLTING	100% INSPECTION OF FIELD BOLTED CONNECTIONS USING HIGH STRENGTH BOLTS
WELDING	WEEKLY VISUAL INSPECTION OF FIELD WELDS AND ASSOCIATED NON- DESTRUCTIVE TESTING

Design
Alaska

Architects • Engineers • Surveyors
601 College Road Fairbanks AK 99701
907.452.1241 AECC511 designalaska.com



FAIRBANKS
PIONEER HOME -
TUB ROOM AND
KITCHEN
UPGRADES

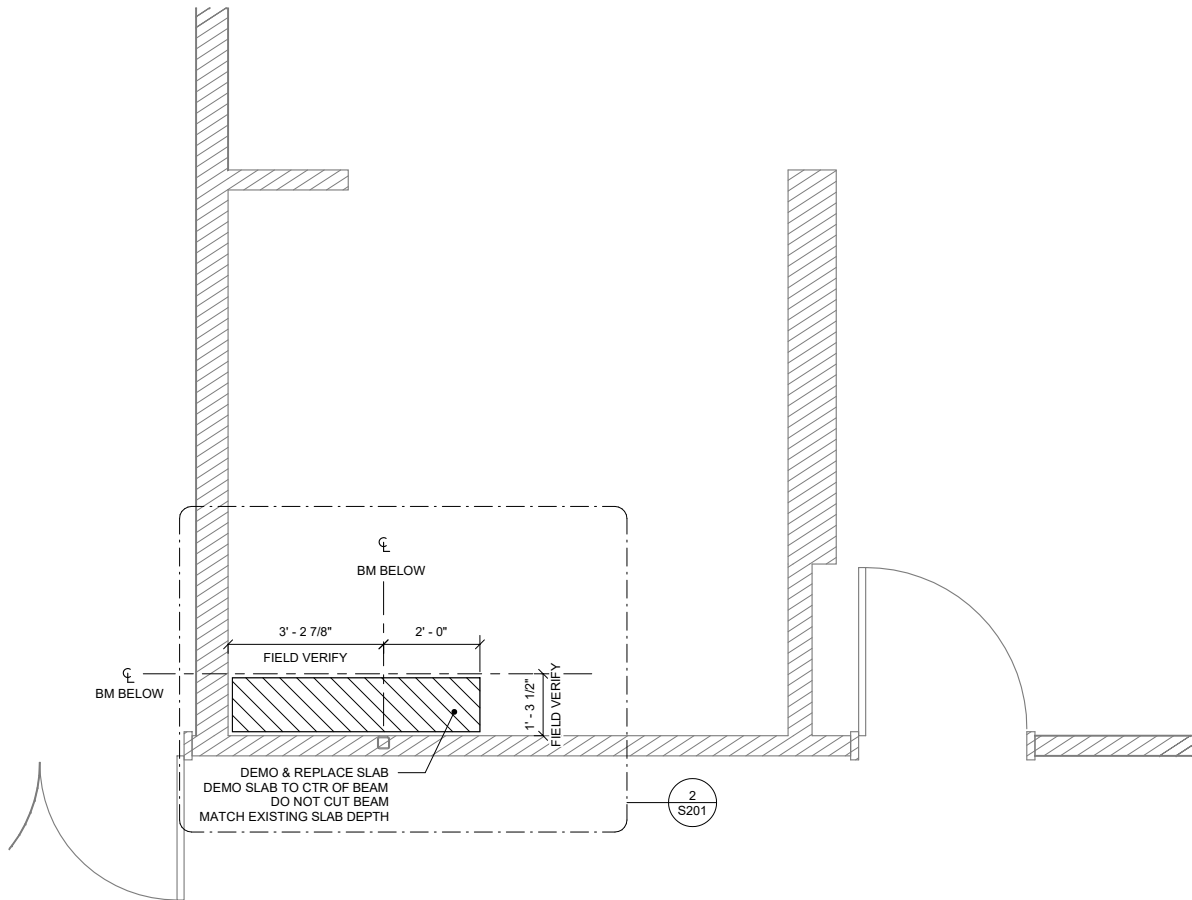
ISSUE DATE 07 JUN 2019
COMM. NUMBER 381701
DESIGNED BY LJA
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SCALE 0" 1"

STRUCTURAL
GENERAL NOTES

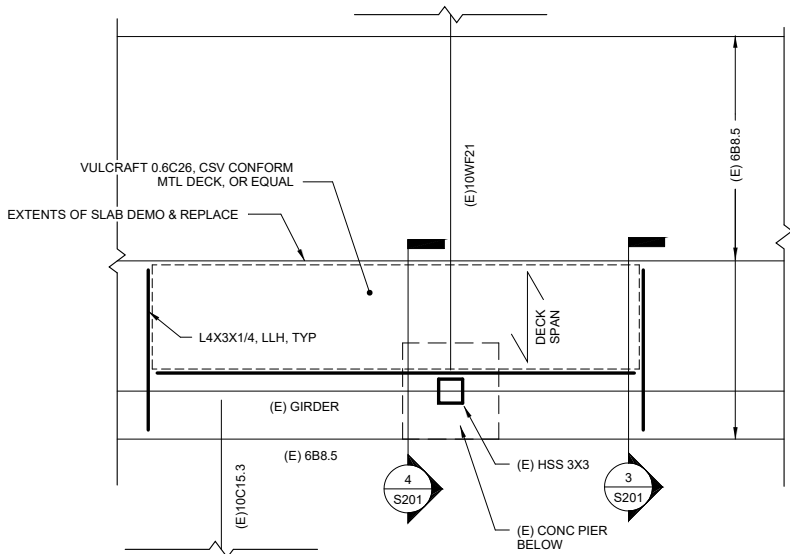
S001

SLAB REHABILITATION NOTES

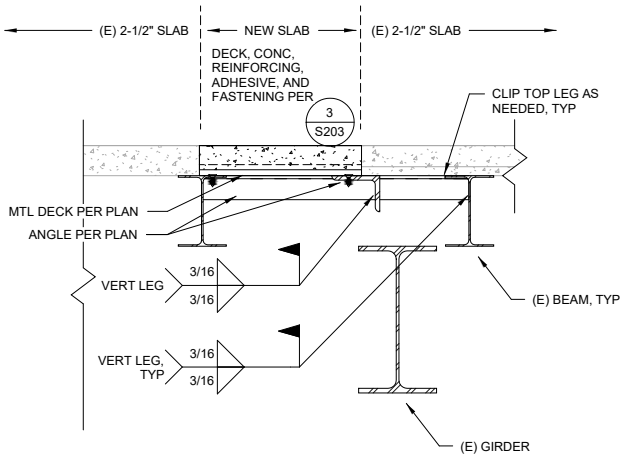
- 1. REMOVE SURFACE CORROSION FROM ACCESSIBLE PORTIONS OF STEEL FRAMING BELOW THIS ROOM.
- 2. APPLY ANTI-CORROSION COATING ON SURFACE OF (E) SLAB, ENTIRE ROOM. SIKA ARMATEC 110 EPO CEM. OR APPROVED EQUAL.
- 3. PROVIDE OWNER WITH MINIMUM 5-DAY NOTICE PRIOR TO EXPOSING EXISTING SLAB.
- 4. ENGINEER TO PERFORM A SLAB CONDITION ASSESSMENT IMMEDIATELY AFTER DEMO OF (E) FLOORING AND LEVELING COMPOUND. ADDITIONAL SLAB REPAIR OR REPLACEMENT MAY BE RECOMMENDED AT THAT TIME.



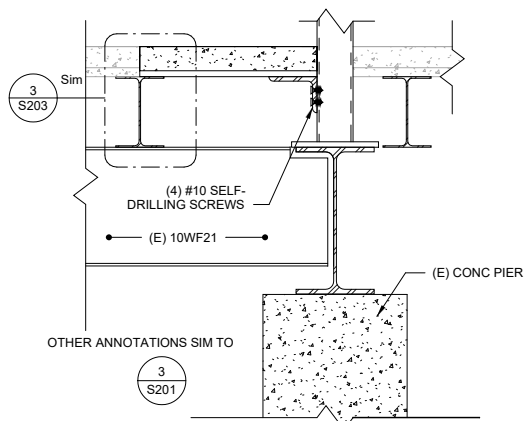
1 DISHWASHER ROOM - SLAB PLAN
NOT TO SCALE



2 DISHWASHER ROOM - FLOOR FRAMING
NOT TO SCALE



3 DISHWASHER SLAB SUPPORT SECTION
NOT TO SCALE



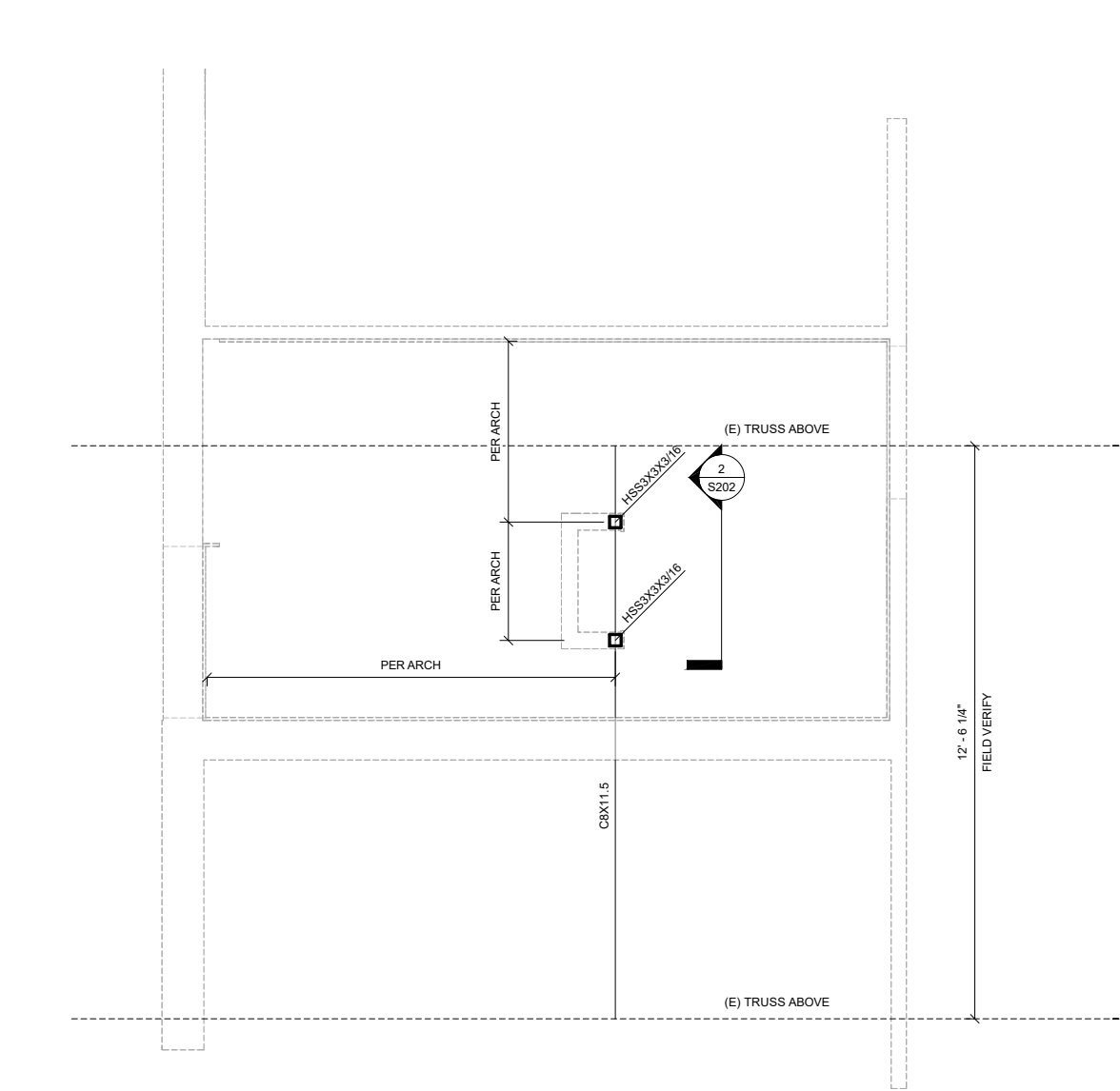
4 DISHWASHER SLAB SUPPORT AT COLUMN
NOT TO SCALE

FAIRBANKS
PIONEER HOME -
TUB ROOM AND
KITCHEN
UPGRADES

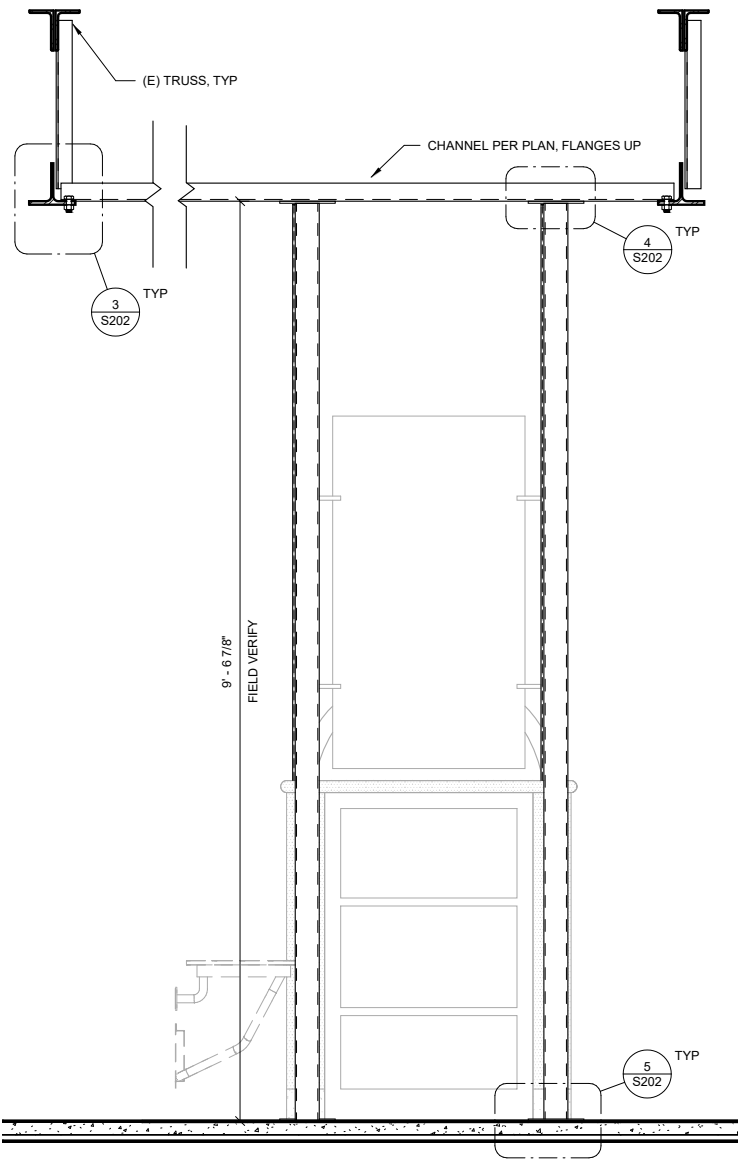
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SCALE 0" 1"

DISHWASHER
ROOM -
STRUCTURAL
DETAILS

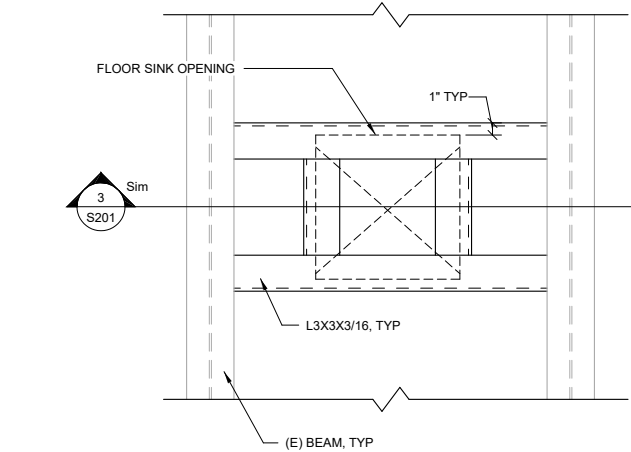
S201



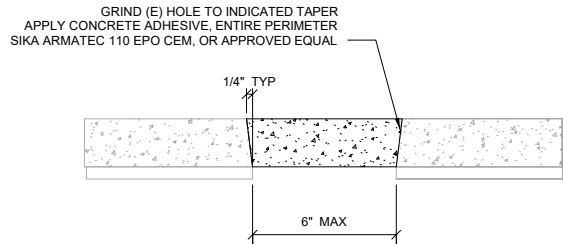
1 MOOSEWOOD TUB ROOM - PLAN
S202 NOT TO SCALE



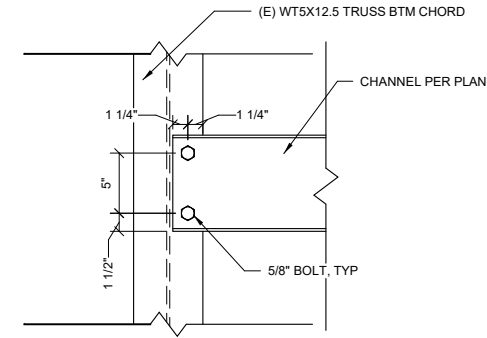
2 SCREEN WALL ELEVATION
S202 NOT TO SCALE



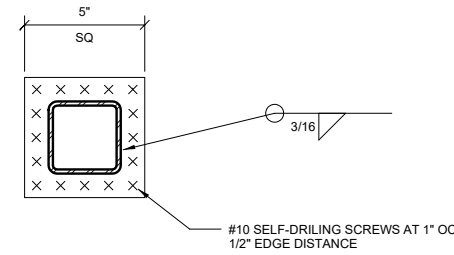
6 TYPICAL FLOOR SINK PATCH DETAIL
S202 NOT TO SCALE



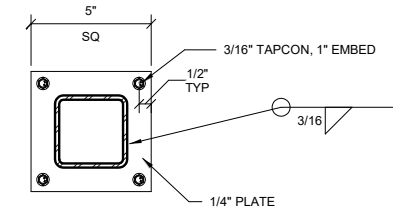
7 TYPICAL FLOOR DRAIN PATCH
S202 NOT TO SCALE



3 CHANNEL-TO-TRUSS CONNECTION
S202 NOT TO SCALE



4 BASEPLATE DETAIL - TOP OF COLUMN
S202 NOT TO SCALE



5 BASEPLATE DETAIL - BASE OF COLUMN
S202 NOT TO SCALE

FAIRBANKS PIONEER HOME - TUB ROOM AND KITCHEN UPGRADES

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MOOSEWOOD TUB ROOM - STRUCTURAL DETAILS

S202



SLAB REHABILITATION NOTES

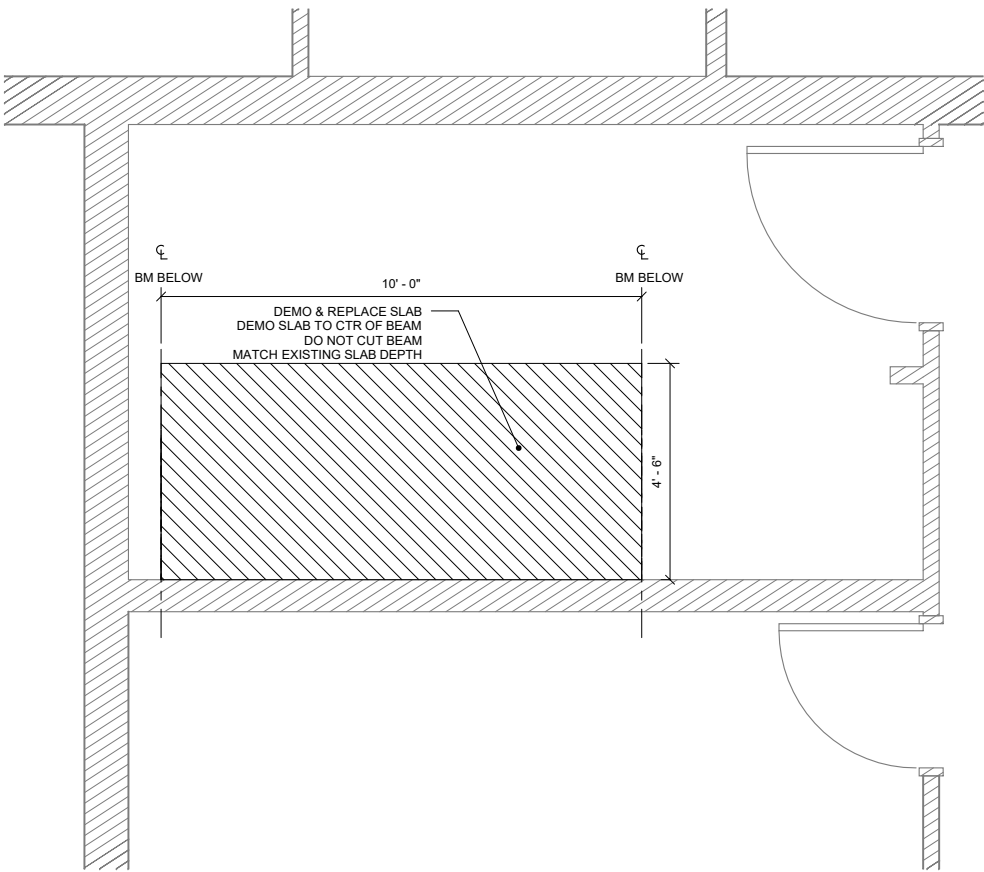
1. REMOVE SURFACE CORROSION FROM ACCESSIBLE PORTIONS OF STEEL FRAMING BELOW THIS ROOM.
2. APPLY ANTI-CORROSION COATING ON SURFACE OF (E) SLAB, ENTIRE ROOM. SIKA ARMATEC 110 EPO CEM, OR APPROVED EQUAL.
3. PROVIDE OWNER WITH MINIMUM 5-DAY NOTICE PRIOR TO EXPOSING EXISTING SLAB.
4. ENGINEER TO PERFORM A SLAB CONDITION ASSESSMENT IMMEDIATELY AFTER DEMO OF (E) FLOORING AND LEVELING COMPOUND. ADDITIONAL SLAB REPAIR OR REPLACEMENT MAY BE RECOMMENDED AT THAT TIME.

FAIRBANKS
PIONEER HOME -
TUB ROOM AND
KITCHEN
UPGRADES

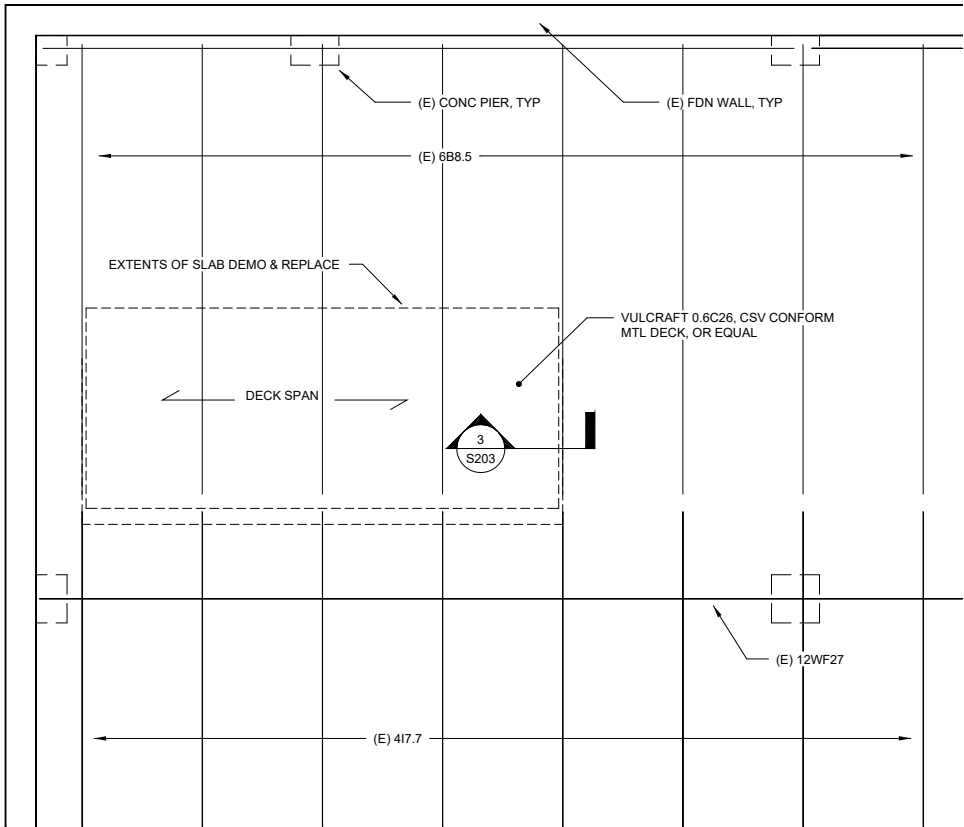
ISSUE DATE 07 JUN 2019
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AURORA TUB
ROOM
STRUCTURAL
DETAILS

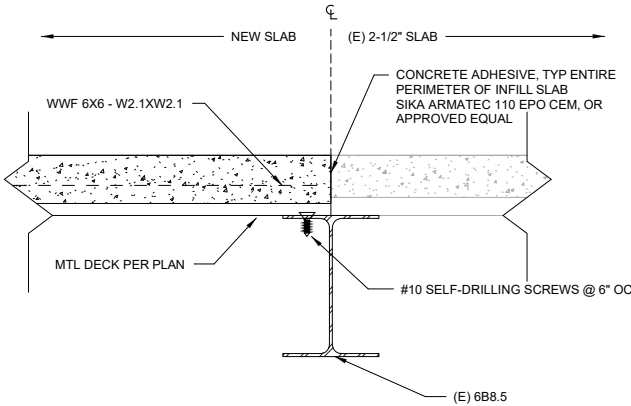
S203



1 AURORA TUB ROOM - SLAB PLAN
NOT TO SCALE



2 AURORA TUB ROOM - FLOOR FRAMING
NOT TO SCALE



3 TYP EDGE OF SLAB REPLACEMENT
NOT TO SCALE

MECHANICAL ABBREVIATIONS

KEY NAME	MECHANICAL ABBREVIATIONS
#	NUMBER
&	AND
@	AT
A	AIR
AFF	ABOVE FINISHED FLOOR
AGT	AVERAGE GLYCOL TEMPERATURE
AHU	AIR HANDLING UNIT
APD	AIR PRESSURE DROP
APPR	APPROVED
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASSOC	ASSOCIATED
AUTO	AUTOMATIC
BAL	BALANCING
BFF	BELOW FINISHED FLOOR
BFP	BACKFLOW PREVENTOR
C	COMMON
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CI	CAST IRON
CLG	COOLING
CO	CLEAN OUT
CR	CONDENSATE RETURN
Cv	VALVE COEFFICIENT
CW	COLD WATER
DB	DECIBEL
DB	DRYBULB
DI	DUCTILE IRON
DIA	DIAMETER
DN	DOWN
DWDI	DOUBLE WIDTH, DOUBLE INLET
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
EGT	ENTERING GLYCOL TEMPERATURE
ELEC	ELECTRICAL
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
EXIST	EXISTING
FC	FORWARD CURVED
FD	FLOOR DRAIN
FLA	FULL LOAD AMPERAGE
FLEX	FLEXIBLE
FP	FIRE PROTECTION
GA	GAUGE
GALV	GALVANIZED
GHR	GLYCOL HEATING RETURN
GHS	GLYCOL HEATING SUPPLY
GI	GALVANIZED IRON
HB	HOSE BIBB
HW	HOT WATER
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
INSUL	INSULATION
IPS	IRON PIPE SIZE
LAT	LEAVING AIR TEMPERATURE

MECHANICAL ABBREVIATIONS

KEY NAME	MECHANICAL ABBREVIATIONS
LGT	LEAVING GLYCOL TEMPERATURE
MAX	MAXIMUM
MECH	MECHANICAL
MIN	MINIMUM
MTR	MOTOR
NC	NORMALLY CLOSED
NC	NOISE CRITERIA
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NPSH	NET PUMP SUCTION HEAD
NTS	NOT TO SCALE
OAT	OUTSIDE AIR TEMPERATURE
OBVD	OPPOSED BLADE VOLUME DAMPER
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
ORD	OVERFLOW ROOF DRAIN
ORL	OVERFLOW RAIN LEADER
OSA	OUTSIDE AIR
P&T	PRESSURE AND TEMPERATURE
PD	PRESSURE DROP
PH	PHASE
PRDV	PRESSURE REDUCING VALVE
PRV	PRESSURE RELIEF VALVE
RA	RETURN AIR
RD	ROOD DRAIN
RHW	RECIRCULATING HOT WATER
RL	RAIN LEADER
RP	RADIANT PANEL
RPM	REVOLUTIONS PER MINUTE
S/M	SHEET METAL
S/S	START/STOP
SA	SUPPLY AIR
SH	SHOWER
SIM	SIMILAR
SP	STATIC PRESSURE
SPEC	SPECIFICATIONS
SS	STAINLESS STEEL
ST	STEAM
SWSI	SINGLE WIDTH, SINGLE INLET
TDH	TOTAL DYNAMIC HEAD
THW	TEMPERED HOT WATER
TP	TRAP PRIMER
TYP	TYPICAL
V	VENT
VAV	VARIABLE AIR VOLUME
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
VTR	VENT THROUGH ROOF
W	WASTE
W/	WITH
W/O	WITHOUT
WB	WETBULB
WCO	WALL CLEAN OUT
WHA	WATER HAMMER ARRESTOR

MECHANICAL - LINETYPES

ABBREVIATION	FULL NAME	LINETYPE
W	WASTE	_____
V	VENT	-----
CW	COLD WATER	-----
HW	HOT WATER	-----
RHW	RECIRCULATED HOT WATER	-----
NG	NATURAL GAS	_____
	EXISTING	-----
	EXISTING TO BE REMOVED	=====

MECHANICAL SYMBOLS

	PRESSURE REDUCING VALVE		PIPE CONNECTION
	DRAIN VALVE		PIPE ELBOW TURNED DOWN
	PRESSURE RELIEF VALVE		PIPE ELBOW TURNED UP
	UNION		PIPE TEE DOWN
	HOSE BIBB		PIPE FLOW ARROW
	2-WAY CONTROL VALVE		BALANCING COCK
	3-WAY CONTROL VALVE		GLOBE VALVE
	STRAINER WITH BLOWDOWN		CHECK VALVE
	THERMOMETER		NON-SLAM CHECK VALVE
	PRESSURE GAUGE		ISOLATION VALVE
			FLOW CONTROL VALVE
			AIR VENT
			CONNECTION TO EXISTING
			PRESSURE & TEMPERATURE TEST PORT
			PIPE GUIDE
			PIPE ANCHOR

ANNOTATION LEGEND

	SPECIFIC NOTE
	SENSOR
	THERMOSTAT - LOCAL
	BYPASS TIMER
	PIPE FLOW ARROW
	DUCT FLOW ARROW

PLUMBING SCHEDULE

FIXTURE NUMBER	FIXTURE DESCRIPTION	FAUCET	-----ROUGH IN SIZE-----				-- CONNECTION SIZE --			REMARKS
			WASTE (IN)	VENT (IN)	COLD WATER (IN)	HOT WATER (IN)	WASTE (IN)	COLD WATER (IN)	HOT WATER (IN)	
WC-1	FLUSH VALVE WATER CLOSET	----	3	2	1-1/4	----	3	1	----	1. 1.28 GPF
L-1 (1)	WALL-HUNG LAVATORY (ADA)	E-1	1-1/2	1-1/4	1/2	1/2	1-1/4	1/2	1/2	1. 0.3 GPM
SH-1	SINGLE SHOWER	----	----	----	3/4	3/4	----	1/2	1/2	1. 1.5 GPM
FD-1	FLOOR DRAIN	----	3	----	----	----	3	----	----	
FD-2	FLOOR DRAIN	----	2	1-1/2	----	----	2	----	----	
FS-1	FLOOR SINK	----	3	----	----	----	3	----	----	
FS-2	FLOOR SINK	----	2	1-1/2	----	----	2	----	----	
HB-1	HOSE BIBB	----	----	----	----	3/4	----	----	3/4	
HB-2	HOSE BIBB	----	----	----	3/4	----	----	3/4	----	
DW-1	DISHWASHER	----	----	----	----	----	2	----	1/2	1. ALTERNATE #1 ONLY 2. 208V/60/3 3. NATURAL GAS HEAT, WITHOUT INTERNAL BOOSTER 4. HOBART CL44eN-BAS, OR EQUAL

{1} 1/2 INCH ROUGH IN FOR SINGLE FIXTURE ONLY. FOR ALL ELSE USE 3/4 INCH.

DUCT LEGEND

INSULATED DUCTWORK
DIMENSION SHOWN IS INTERIOR FACE OF SHEET METAL
NUMBER INSIDE PARENTHESIS IS THICKNESS OF INSULATION IN INCHES

X/Y (+2)

LINED DUCTWORK
DIMENSION SHOWN IS INTERIOR FACE OF SHEET METAL
NUMBER INSIDE PARENTHESIS IS THICKNESS OF LINING IN INCHES

X/Y (-2)

RECTANGULAR DUCTWORK - X*Y
X = DIMENSION ON THE PAGE
Y = DIMENSION INTO THE PAGE

SUPPLY RETURN EXHAUST

ROUND DUCTWORK - X*Ø
X = DUCT DIAMETER

RECTANGULAR MITERED ELBOW WITH TURNING VANES

RECTANGULAR ELBOW DOWN (INTO THE PAGE)

RECTANGULAR ELBOW UP (OUT OF THE PAGE)

ROUND RADIUS ELBOW

ROUND ELBOW DOWN (INTO THE PAGE)

ROUND ELBOW UP (OUT OF THE PAGE)

FLAT OVAL GORED ELBOW

FLAT OVAL ELBOW DOWN (INTO THE PAGE)

FLAT OVAL ELBOW UP (OUT OF THE PAGE)

FLEXIBLE DUCTWORK

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FAIRBANKS PIONEER HOME - TUB ROOM AND KITCHEN UPGRADES

ISSUE DATE 07 JUN 2019

COMM. NUMBER 381701

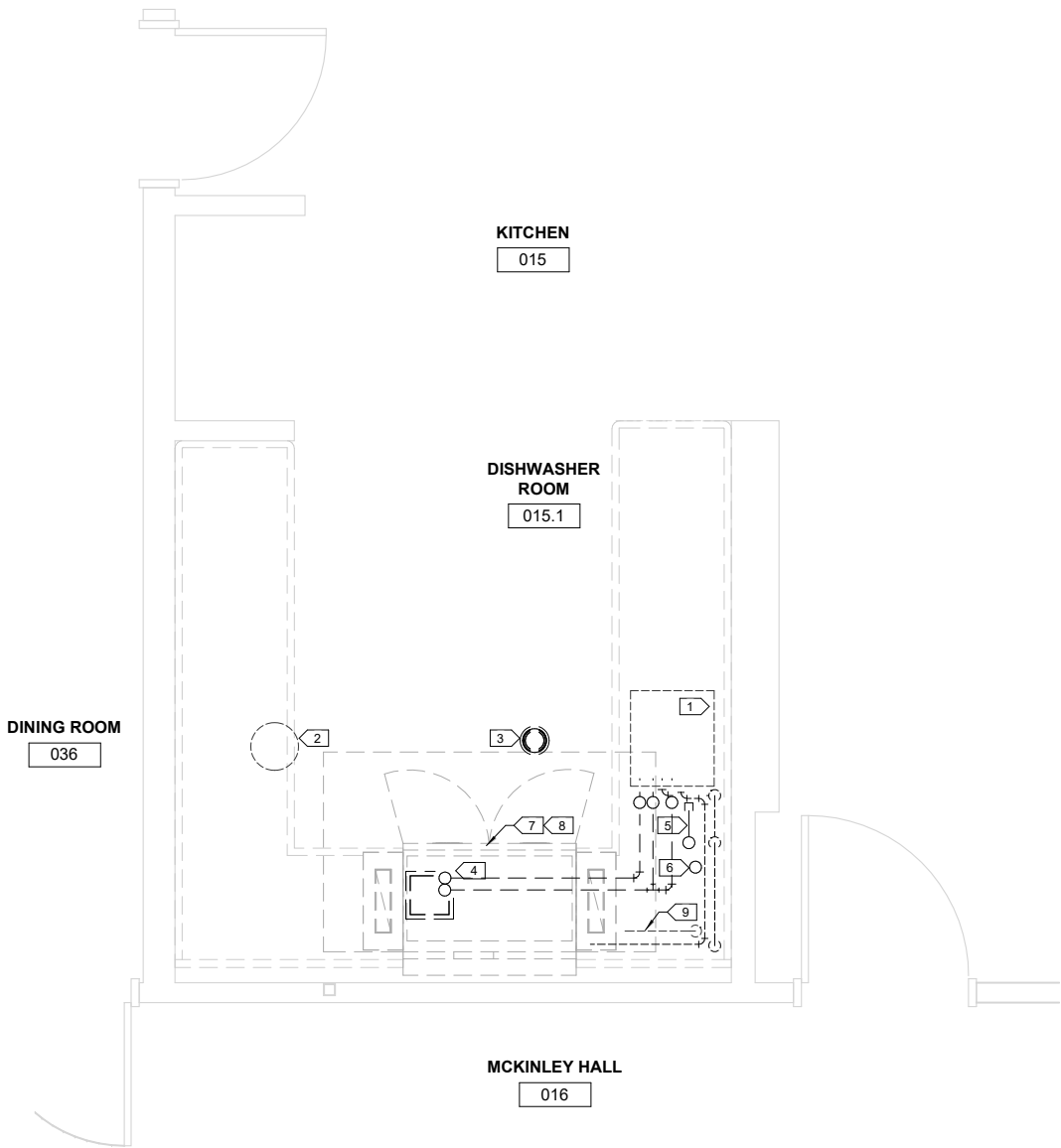
DESIGNED BY MJN

DRAWN BY MJN

SCALE 0" 1"

MECHANICAL ABBREVIATIONS, LEGENDS, AND SCHEDULES

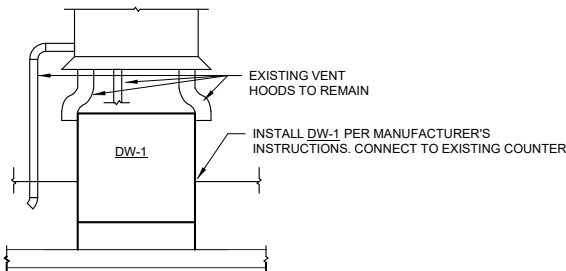
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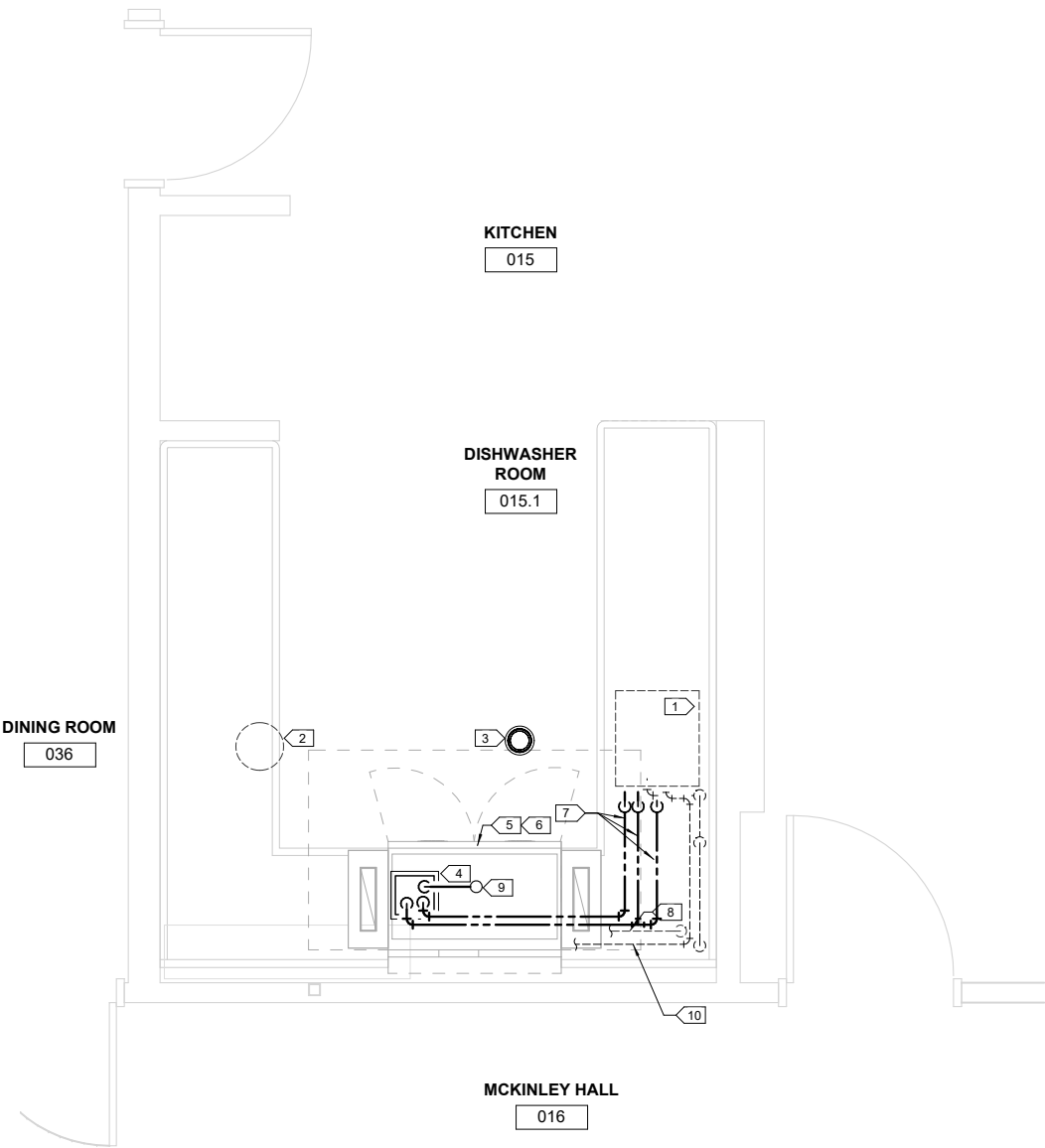
1 DISHWASHER ROOM - DEMO
M101 1/2" = 1'-0"

DEMOLITION SPECIFIC NOTES

- 1 REMOVE ELECTRIC DISHWASHER BOOSTER HEATER FOR REINSTALLATION. DISCONNECT AND TEMPORARILY CAP HW SUPPLY TO AND FROM HEATER. DEMOLISH DRAIN PIPING TO FLOOR SINK.
- 2 REMOVE GARBAGE DISPOSAL FOR REINSTALLATION. TEMPORARILY CAP HW AND WASTE BELOW SINK.
- 3 DEMOLISH FLOOR DRAIN, WASTE PIPING BELOW TO REMAIN FOR RECONNECTION.
- 4 DEMOLISH FLOOR SINK, WASTE PIPING BELOW TO REMAIN FOR RECONNECTION.
- 5 DEMOLISH CAPPED 3/4" NG BRANCH, CAP AT MAIN BELOW IN CRAWLSPACE.
- 6 DEMOLISH ABANDONED 3/4" CW CUT AT FLOOR. DEMOLISH BRANCH BELOW FLOOR, CAP AT MAIN IN CRAWLSPACE.
- 7 BASE BID: REMOVE DISHWASHER FOR REINSTALLATION. WATER AND ELECTRICAL SERVICE TO REMAIN FOR RECONNECTION.
- 8 ALTERNATE #1 ONLY: DEMOLISH DISHWASHER. WATER AND ELECTRICAL SERVICE TO REMAIN FOR RECONNECTION.
- 9 1/2" NG AND PRESSURE REGULATOR TO REMAIN FOR RECONNECTION.



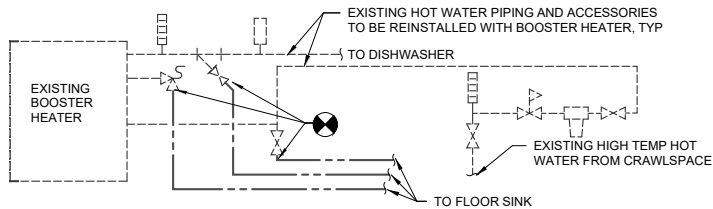
3 ALTERNATE #1 DISHWASHER HOOD DETAIL
M101 NO SCALE



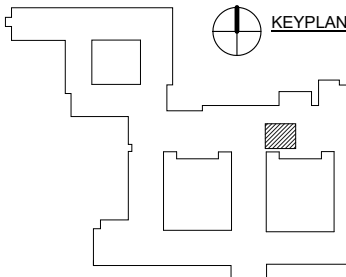
2 DISHWASHER ROOM - RENO
M101 1/2" = 1'-0"

RENOVATION SPECIFIC NOTES

- 1 REINSTALL ELECTRIC DISHWASHER BOOSTER HEATER. RECONNECT TO HW SUPPLY TO AND FROM HEATER. ROUTE DRAIN PIPING TO FLOOR SINK.
- 2 REINSTALL GARBAGE DISPOSAL. RECONNECT TO EXISTING HW AND WASTE BELOW SINK.
- 3 ED-1, RECONNECT TO EXISTING 3" W BELOW.
- 4 FS-1, RECONNECT TO EXISTING 3" W BELOW.
- 5 BASE BID ONLY: REINSTALL EXISTING DISHWASHER, CONNECT TO EXISTING WATER, ELECTRICAL, AND NG SERVICE. ROUTE INDIRECT WASTE TO FLOOR SINK.
- 6 ALTERNATE #1 ONLY: DW-1, RECONNECT TO EXISTING WATER, ELECTRICAL, AND NG SERVICE. ROUTE INDIRECT WASTE TO FLOOR SINK.
- 7 ROUTE 3/4" DRAINS TO FLOOR SINK, ROUTE TIGHT TO WALL.
- 8 RECONNECT 1/2" NG AND PRESSURE REGULATOR TO DISHWASHER.
- 9 WASTE FROM DISHWASHER.
- 10 EXISTING HW TO DISHWASHER.



4 BOOSTER HEATER PIPING DIAGRAM
M101 1/4" = 1'-0"

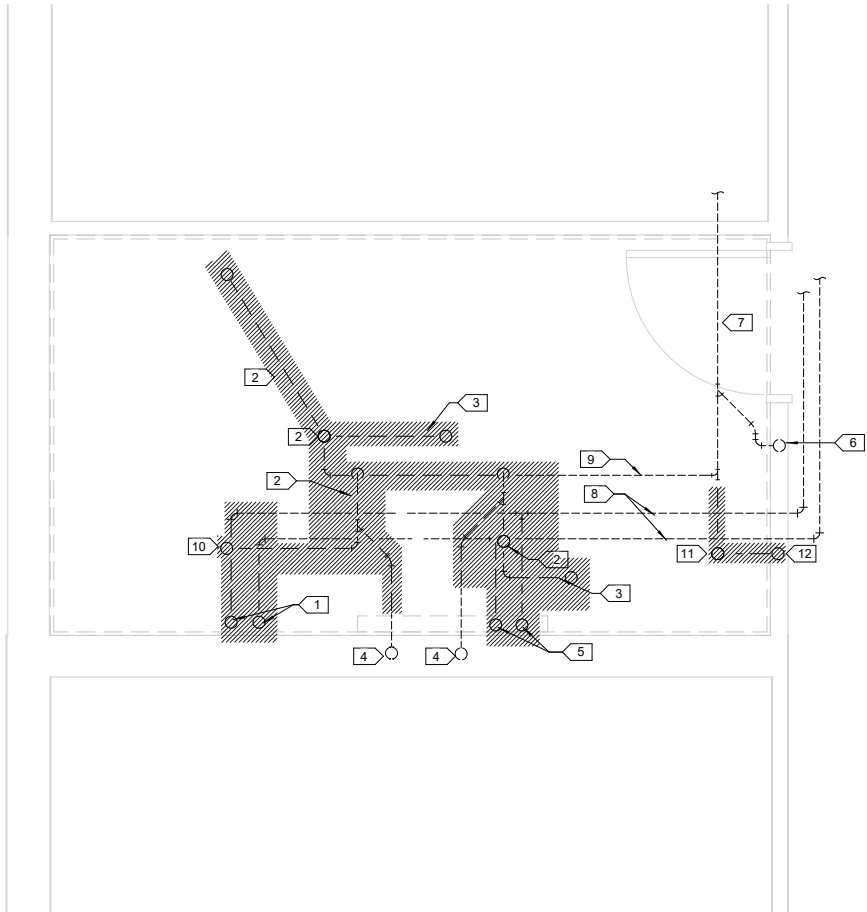


FAIRBANKS
PIONEER HOME -
TUB ROOM AND
KITCHEN
UPGRADES

ISSUE DATE 07 JUN 2019
COMM. NUMBER 381701
DESIGNED BY MJN
DRAWN BY MJN
SCALE 0" 1"

DISHWASHER
ROOM -
MECHANICAL
DEMO AND RENO

M101



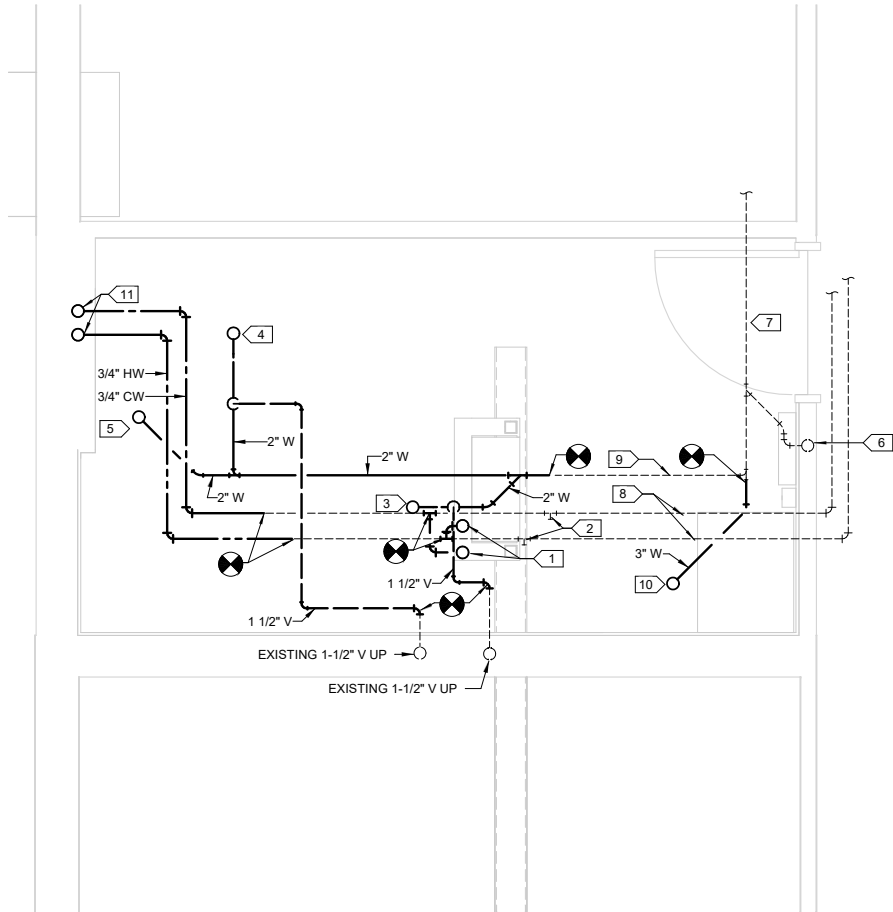
1 MOOSEWOOD TUB ROOM UNDERFLOOR - DEMO
1/2" = 1'-0"

DEMOLITION SPECIFIC NOTES

- 1 DEMOLISH 3/4" HW, 3/4" CW UP TO BATHTUB.
- 2 DEMOLISH 2" W, 1-1/2" V FROM FLOOR DRAIN.
- 3 DEMOLISH 1-1/2" W FROM TRENCH DRAIN.
- 4 EXISTING 1-12" V UP TO REMAIN.
- 5 DEMOLISH 3/4" HW, 3/4" CW UP TO SHOWER.
- 6 EXISTING 2" W UP TO LAVATORY TO REMAIN.
- 7 EXISTING 3" W TO REMAIN.
- 8 EXISTING 3/4" HW, 3/4" CW TO REMAIN.
- 9 EXISTING 2" W TO REMAIN.
- 10 DEMOLISH 2" W FROM FLOOR SINK.
- 11 DEMOLISH 3" W FROM WATER CLOSET, AND 2" V.
- 12 DEMOLISH 2" V UP.

GENERAL NOTES

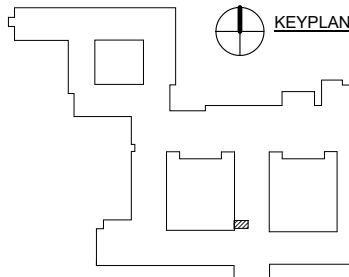
1. ABOVE FLOOR WALLS SHOWN FOR REFERENCE ONLY.
2. WASTE AND VENT PIPING SERVING THE MOOSEWOOD TUB ROOM IS COMPRISED OF COPPER DWV PIPE AND FITTINGS.



2 MOOSEWOOD TUB ROOM UNDERFLOOR - RENO
1/2" = 1'-0"

RENOVATION SPECIFIC NOTES

- 1 3/4" HW, 3/4" CW UP TO HB-1, HB-2.
- 2 CAP AT MAIN.
- 3 2" W UP TO FS-2.
- 4 2" W UP TO FD-2.
- 5 UP TO 2" CO.
- 6 EXISTING 2" W UP TO LAVATORY.
- 7 EXISTING 3" W.
- 8 EXISTING 3/4" HW, 3/4" CW.
- 9 EXISTING 2" W.
- 10 UP TO 3" CO.
- 11 UP TO SH-1, LOCATE IN FURRED OUT WALL.

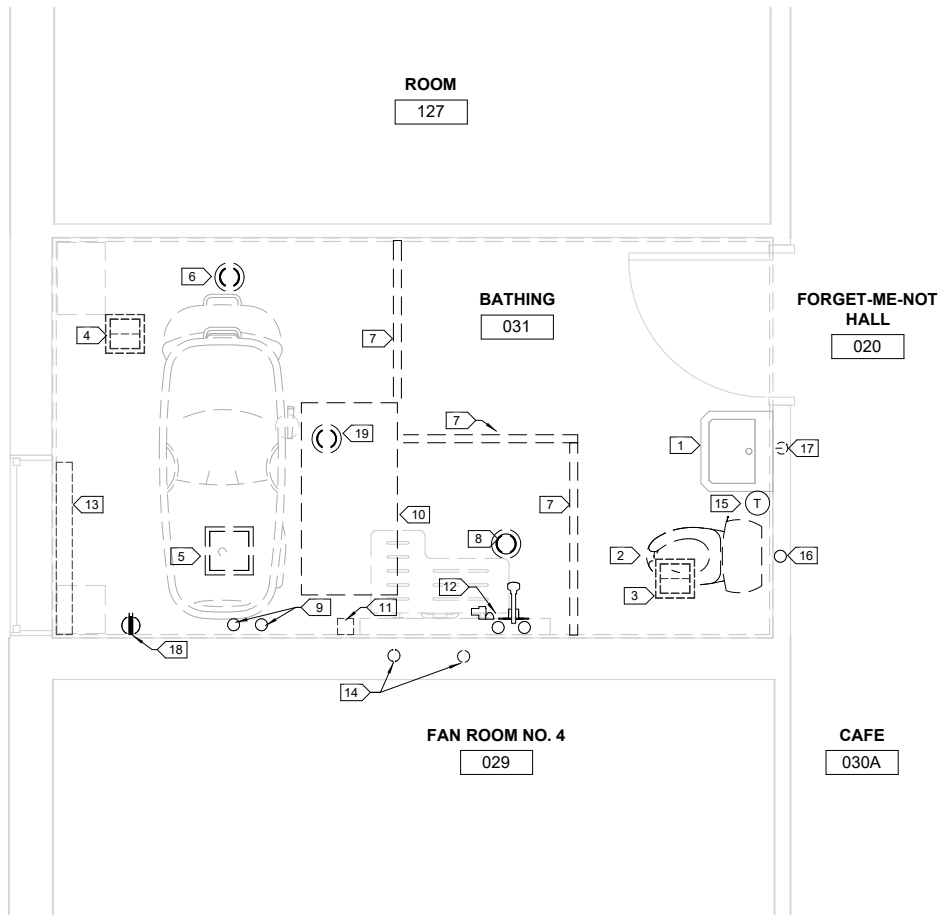


FAIRBANKS PIONEER HOME - TUB ROOM AND KITCHEN UPGRADES

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SCALE 0" 1"

MOOSEWOOD TUB ROOM -UNDERFLOOR - MECHANICAL DEMO AND RENO

M200



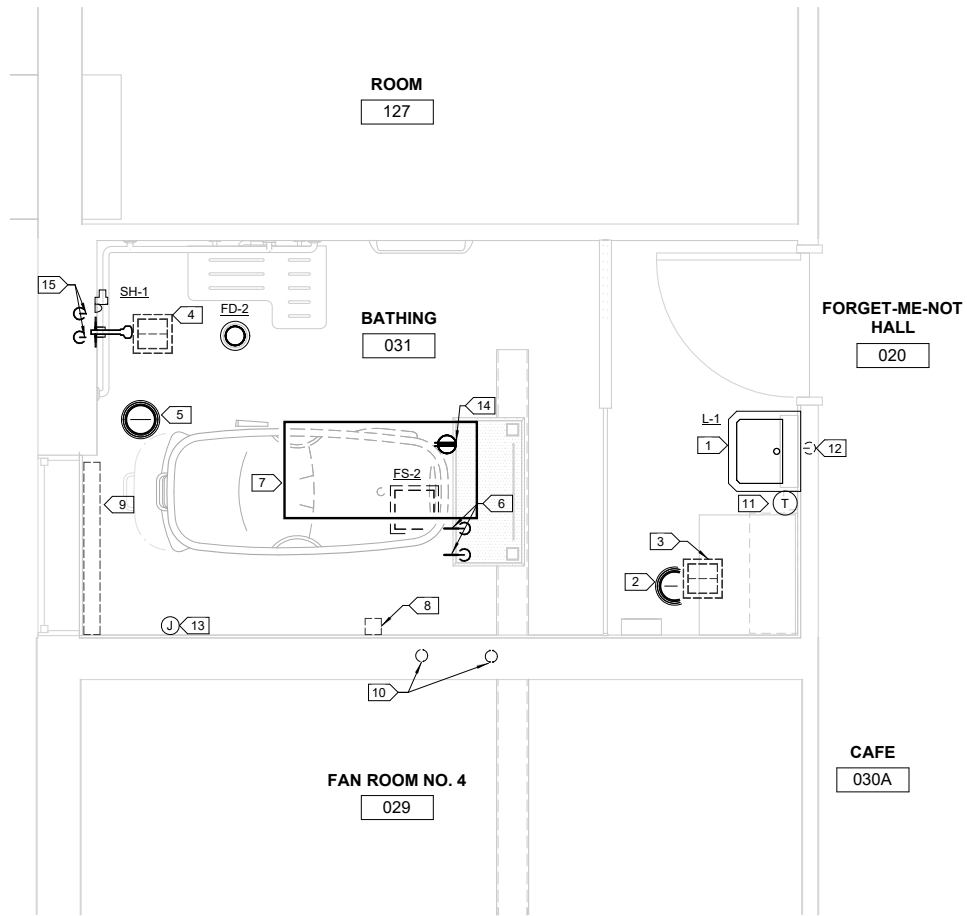
1 MOOSEWOOD TUB ROOM - DEMO
M201 1/2" = 1'-0"

DEMOLITION SPECIFIC NOTES

- 1 DEMOLISH LAVATORY. W, HW, CW, AND V TO REMAIN FOR RECONNECTION.
- 2 DEMOLISH FLOOR MOUNTED WATER CLOSET.
- 3 EXISTING 8/8 EA CEILING GRILLE TO REMAIN.
- 4 EXISTING 8/8 SA CEILING GRILLE TO REMAIN.
- 5 DEMOLISH FLOOR SINK.
- 6 DEMOLISH FLOOR DRAIN.
- 7 DEMOLISH TRENCH DRAIN TO TOP OF SLAB ELEVATION WITHOUT DAMAGING EXISTING SLAB.
- 8 DEMOLISH FLOOR DRAIN.
- 9 DEMOLISH 3/4" HW, 3/4" CW TUB CONNECTION DOWN THROUGH FLOOR.
- 10 REMOVE RADIANT PANEL FOR REINSTALLATION.
- 11 EXISTING RADIANT PANEL TIMER SWITCH TO REMAIN.
- 12 DEMOLISH SHOWER FIXTURES, CONTROLS, AND 3/4" HW, 3/4" CW SUPPLY.
- 13 EXISTING CABINET UNIT HEATER TO REMAIN.
- 14 EXISTING 1-1/2 V TO REMAIN.
- 15 EXISTING THERMOSTAT TO REMAIN.
- 16 DEMOLISH 2" V, CAP AT MAIN IN CEILING.
- 17 EXISTING LAVATORY WASTE AND VENT TO REMAIN.
- 18 DEMOLISH GFCI RECEPTACLE AND WEATHERPROOF COVER. CIRCUIT TO REMAIN FOR RECONNECTION.
- 19 DEMOLISH FLOOR DRAIN.

GENERAL NOTES

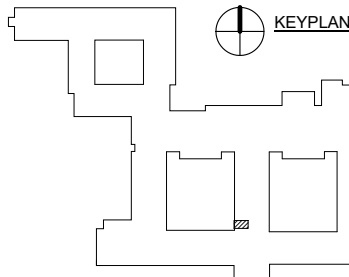
1. COORDINATE FIXTURE LOCATIONS WITH ARCHITECTURAL PLANS.
2. PATCH FLOOR TO MATCH SURROUNDING AT ALL DEMOLISHED FLOOR DRAINS, FLOOR SINKS, AND TRENCH DRAINS, SEE STRUCTURAL S202.



2 MOOSEWOOD TUB ROOM - RENO
M201 1/2" = 1'-0"

RENOVATION SPECIFIC NOTES

- 1 CONNECT TO EXISTING W, HW, CW, AND V. REPLACE HW, AND CW ANGLE STOPS. INSTALL WITH POINT OF USE TEMPERING VALVE.
- 2 3" CO.
- 3 EXISTING 8/8 EA CEILING GRILLE.
- 4 EXISTING 8/8 SA CEILING GRILLE.
- 5 2" CO.
- 6 3/4" HW, 3/4" CW TO HB-1, HB-2.
- 7 REINSTALL CEILING RADIANT HEATING PANEL, PATCH AND FINISH CEILING TO MATCH SURROUNDING.
- 8 EXISTING RADIANT PANEL TIMER SWITCH TO REMAIN.
- 9 EXISTING CABINET UNIT HEATER TO REMAIN.
- 10 EXISTING 1-1/2 V TO REMAIN.
- 11 EXISTING THERMOSTAT TO REMAIN.
- 12 EXISTING LAVATORY WASTE AND VENT TO REMAIN
- 13 REPLACE COVER WITH JUNCTION BOX COVER PLATE, SPLICE AND EXTEND CIRCUIT TO TUB RECEPTACLE.
- 14 DUPLEX GFCI RECEPTACLE WITH STAINLESS STEEL WEATHERPROOF WHILE IN USE COVER, SERVING TUB.
- 15 3/4" HW, 3/4" CW, TO SH-1.

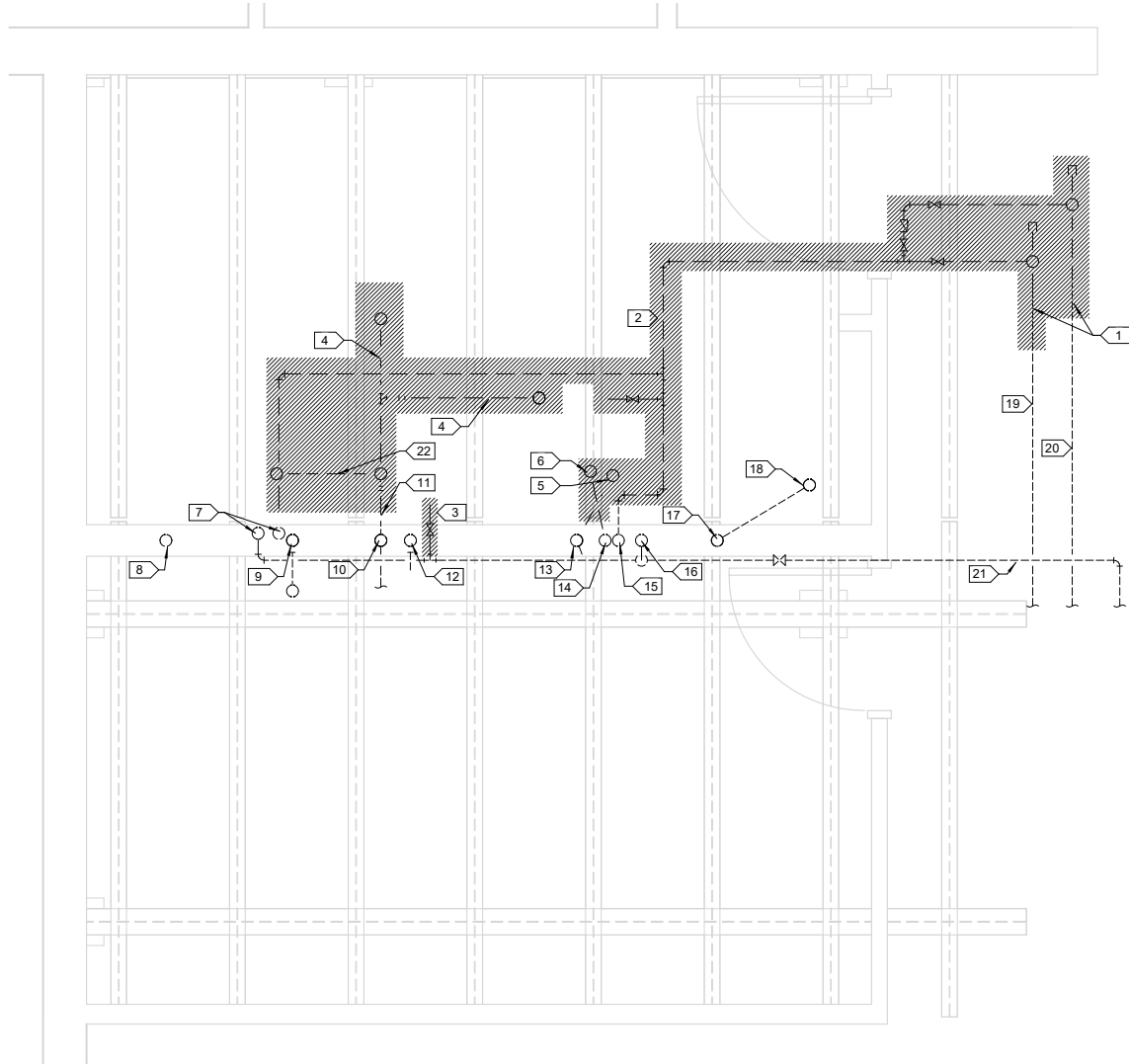


FAIRBANKS PIONEER HOME - TUB ROOM AND KITCHEN UPGRADES

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MOOSEWOOD TUB ROOM - MECHANICAL DEMO AND RENO

M201



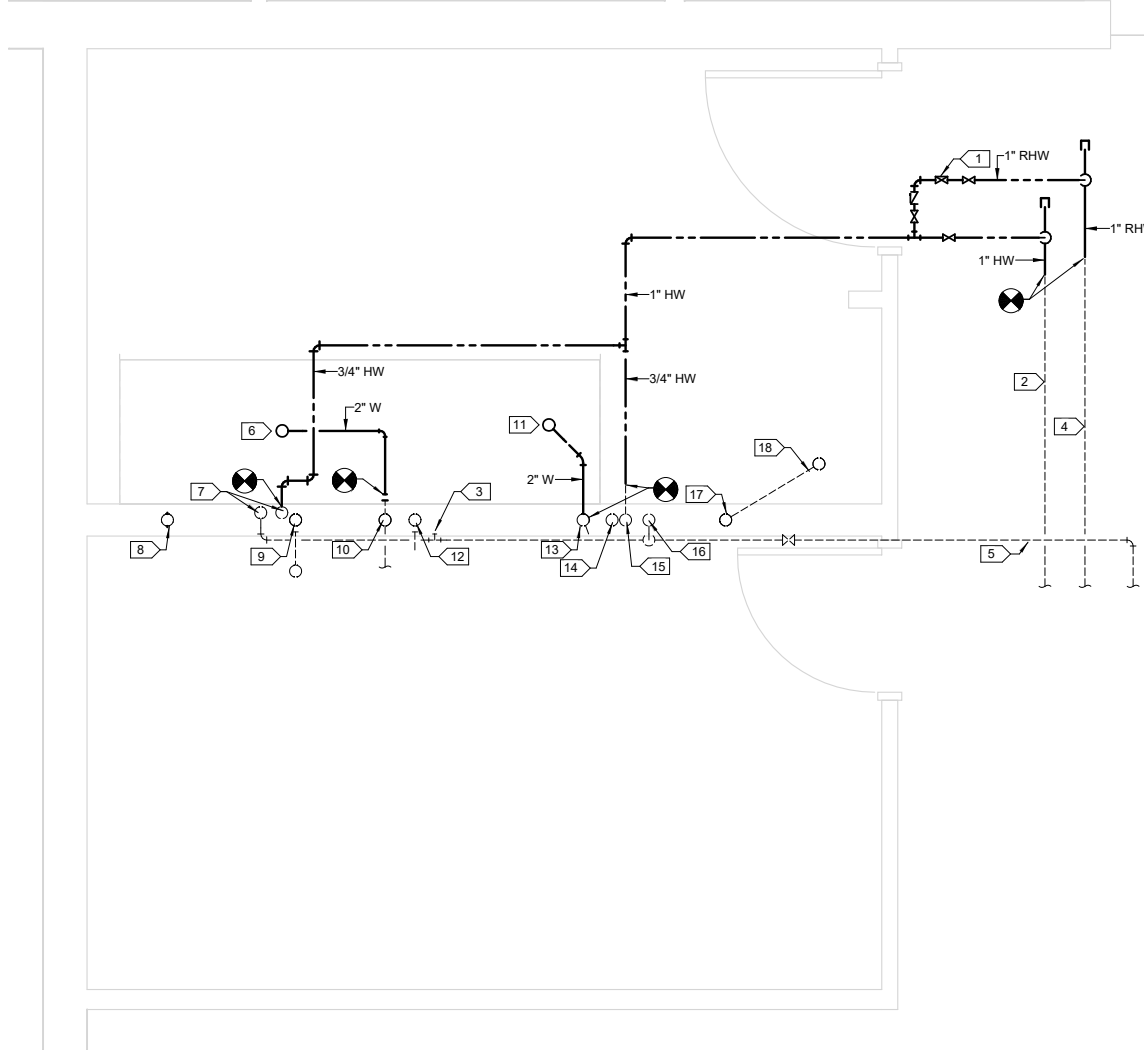
1 AURORA TUB ROOM UNDERFLOOR - DEMO
M300 1/2" = 1'-0"

DEMOLITION SPECIFIC NOTES

- | | |
|--|--|
| 1 DEMOLISH 1" HW, 1" RHW, APPROX. 5 FEET FROM END OF RUN. | 18 EXISTING 3" W UP TO WATER CLOSET TO REMAIN. |
| 2 DEMOLISH 1" HW, 3/4" HW BRANCHES IN CRAWLSPACE. | 19 EXISTING 1" HW TO REMAIN. |
| 3 DEMOLISH 1" CW BRANCH WITH OPEN END. | 20 EXISTING 1" RHW TO REMAIN. |
| 4 DEMOLISH 2" W FROM FLOOR DRAIN. | 21 EXISTING 2" CW TO REMAIN. |
| 5 DEMOLISH ABANDONED FLOOR DRAIN BODY AND 3" W BACK TO RISER. | 22 DEMOLISH 2" W FROM TUB CONNECTION. |
| 6 DEMOLISH HW CONNECTION AT FLOOR AND 3/4" HW BACK TO RISER THROUGH FLOOR. | |
| 7 EXISTING 3/4" HW, 3/4" CW UP TO REMAIN. | |
| 8 EXISTING 4" W DOWN, 2" V UP TO REMAIN. | |
| 9 EXISTING 3" W DOWN, 2" V UP TO REMAIN. | |
| 10 EXISTING 3" W DOWN, 2" V UP TO REMAIN. | |
| 11 DEMOLISH 3" W, UP TO DOUBLE SANITARY TEE, TEE TO REMAIN. | |
| 12 EXISTING 3" W DOWN, 2" V UP TO REMAIN. | |
| 13 EXISTING 3" W DOWN, 2" V UP TO REMAIN. | |
| 14 EXISTING 3/4" HW UP TO REMAIN. | |
| 15 EXISTING 3/4" HW UP TO REMAIN. | |
| 16 EXISTING 3/4" CW UP TO REMAIN. | |
| 17 EXISTING 3" W DOWN, 2" V UP TO REMAIN. | |

GENERAL NOTES

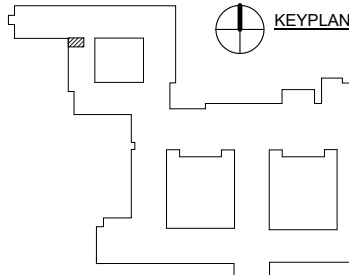
1. ABOVE FLOOR WALLS SHOWN FOR REFERENCE ONLY.



2 AURORA TUB ROOM UNDERFLOOR - RENO
M300 1/2" = 1'-0"

RENOVATION SPECIFIC NOTES

- 1 SET TO 1 GPM.
- 2 EXISTING 1" HW.
- 3 CAP CW AT MAIN.
- 4 EXISTING 1" RHW.
- 5 EXISTING 2" CW.
- 6 2" W UP TO ES-2.
- 7 EXISTING 3/4" HW, 3/4" CW UP.
- 8 EXISTING 4" W DOWN, 2" V UP.
- 9 EXISTING 3" W DOWN, 2" V UP.
- 10 EXISTING 3" W DOWN, 2" V UP.
- 11 2" W UP TO ED-2.
- 12 EXISTING 3" W DOWN, 2" V UP.
- 13 EXISTING 3" W DOWN, 2" V UP.
- 14 CAP EXISTING 3/4" HW AT FLOOR.
- 15 EXISTING 3/4" HW UP.
- 16 EXISTING 3/4" CW UP.
- 17 EXISTING 3" W DOWN, 2" V.
- 18 EXISTING 3" W UP TO WC-1.

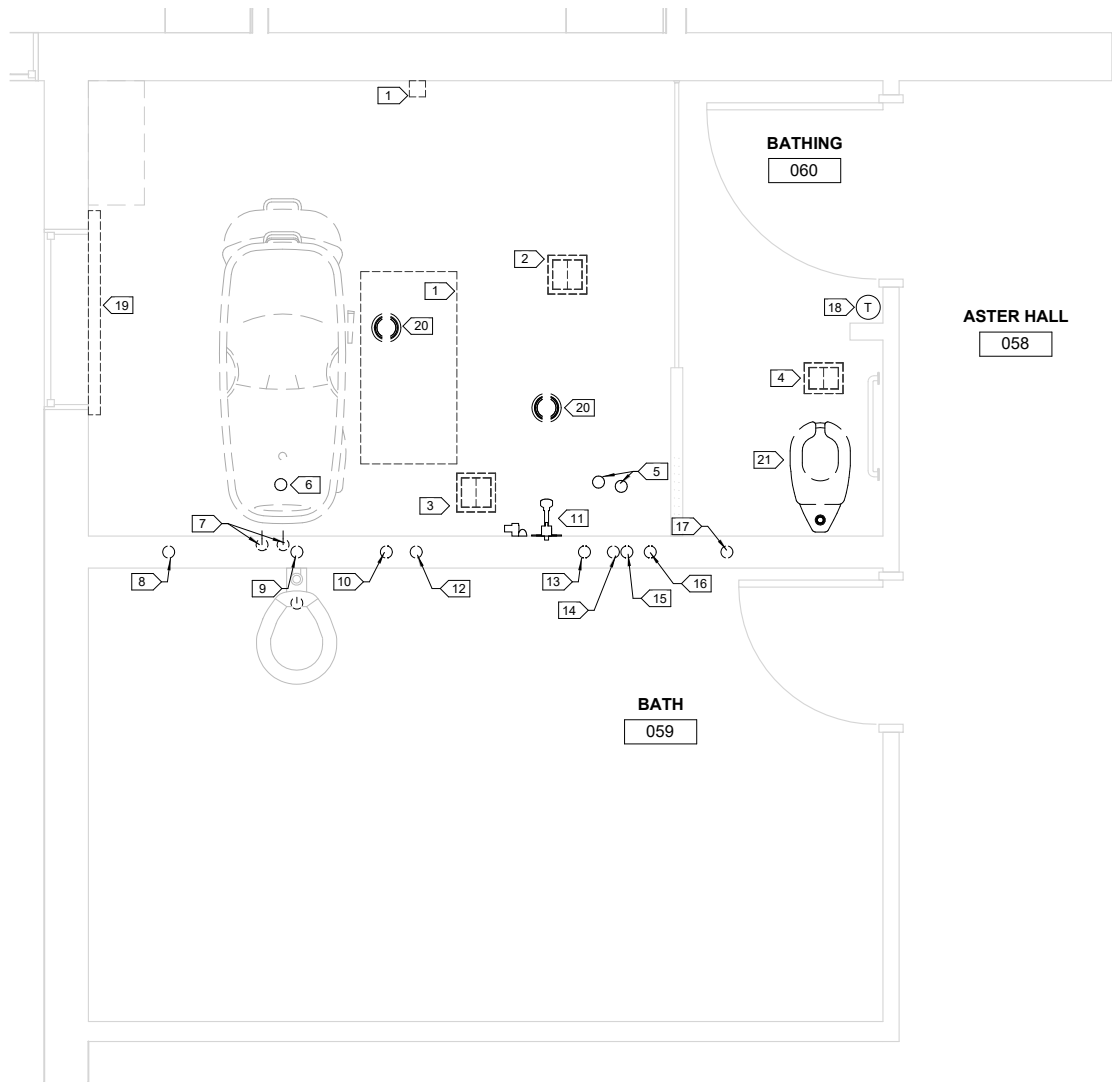


FAIRBANKS
PIONEER HOME -
TUB ROOM AND
KITCHEN
UPGRADES

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AURORA TUB
ROOM -
UNDERFLOOR -
MECHANICAL
DEMO AND RENO

M300



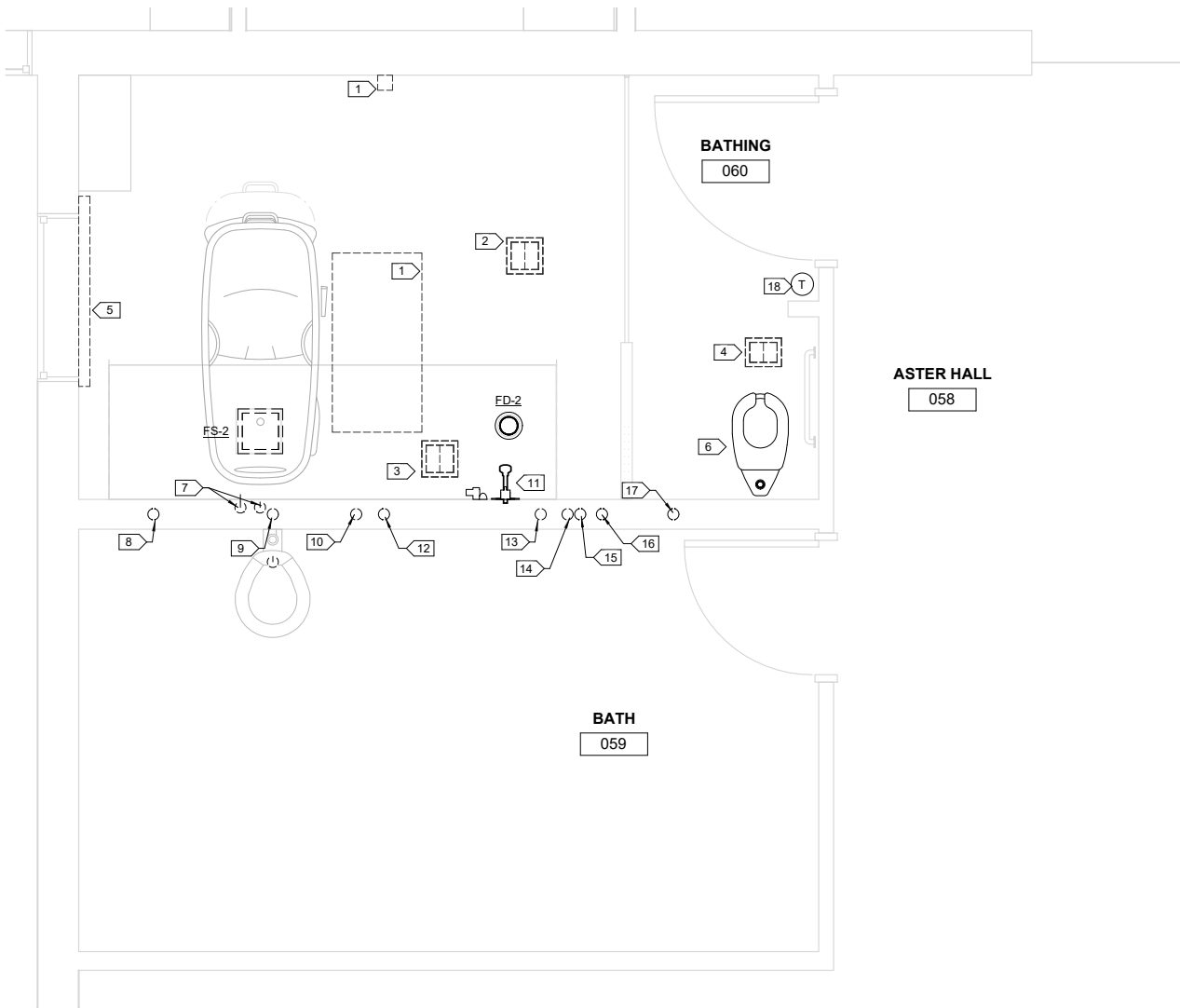
1 AURORA TUB ROOM - DEMO
M301 1/2" = 1'-0"

DEMOLITION SPECIFIC NOTES

- | | |
|--|--|
| 1 EXISTING CEILING RADIANT PANEL AND WALL MOUNTED TIMER SWITCH TO REMAIN. | 18 EXISTING THERMOSTAT TO REMAIN. |
| 2 EXISTING 8/8 SA CEILING GRILLE TO REMAIN. | 19 EXISTING CABINET UNIT HEATER TO REMAIN. |
| 3 EXISTING 8/8 EA CEILING GRILLE TO REMAIN. | 20 DEMOLISH FLOOR DRAIN, PATCH FLOOR TO MATCH SURROUNDING. |
| 4 EXISTING 4/8 EA CEILING GRILLE TO REMAIN. | 21 DEMOLISH WATER CLOSET, W AND CW TO REMAIN FOR RECONNECTION. |
| 5 DEMOLISH ABANDONED FLOOR DRAIN BODY AND HW CONNECTION. | |
| 6 DEMOLISH 2" W TUB CONNECTION. | |
| 7 EXISTING 3/4" HW, 3/4" CW UP TO REMAIN. DEMOLISH ISOLATION VALVES IN ROOM. | |
| 8 EXISTING 2" V UP TO REMAIN. | |
| 9 EXISTING 2" V UP TO REMAIN. | |
| 10 EXISTING 2" V UP TO REMAIN. | |
| 11 DEMOLISH SHOWER FIXTURES AND CONTROLS. 3/4" HW, 3/4" CW TO REMAIN. | |
| 12 EXISTING 2" V UP TO REMAIN. | |
| 13 EXISTING 2" V UP TO REMAIN. | |
| 14 EXISTING 3/4" HW TO REMAIN. | |
| 15 EXISTING 3/4" HW TO REMAIN. | |
| 16 EXISTING 3/4" CW TO REMAIN. | |
| 17 EXISTING 2" V UP TO REMAIN. | |

GENERAL NOTES

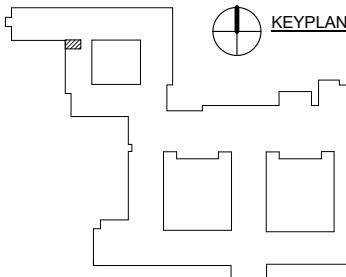
- COORDINATE FIXTURE LOCATIONS WITH ARCHITECTURAL PLANS.
- PATCH FLOOR TO MATCH SURROUNDING AT ALL DEMOLISHED FLOOR DRAINS, SEE STRUCTURAL S202.



2 AURORA TUB ROOM - RENO
M301 1/2" = 1'-0"

RENOVATION SPECIFIC NOTES

- | | |
|--|-------------------------|
| 1 EXISTING CEILING RADIANT PANEL, AND WALL MOUNTED TIMER SWITCH. | 18 EXISTING THERMOSTAT. |
| 2 EXISTING 8/8 SA CEILING GRILLE. | |
| 3 EXISTING 8/8 EA CEILING GRILLE. | |
| 4 EXISTING 4/8 EA CEILING GRILLE. | |
| 5 EXISTING CABINET UNIT HEATER. | |
| 6 WC-1. CONNECT TO EXISTING WASTE AND CW. | |
| 7 EXISTING 3/4" HW AND 3/4" CW, TO CONNECT TO HB-1 AND HB-2. | |
| 8 EXISTING 2" V UP. | |
| 9 EXISTING 2" V UP. | |
| 10 EXISTING 2" V UP. | |
| 11 CONNECT SH-1 TO EXISTING 3/4" HW, 3/4" CW. | |
| 12 EXISTING 2" V UP. | |
| 13 EXISTING 2" V UP. | |
| 14 EXISTING 3/4" HW. | |
| 15 EXISTING 3/4" HW. | |
| 16 EXISTING 3/4" CW. | |
| 17 EXISTING 2" V UP. | |



FAIRBANKS PIONEER HOME - TUB ROOM AND KITCHEN UPGRADES

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AURORA TUB ROOM - MECHANICAL DEMO AND RENO

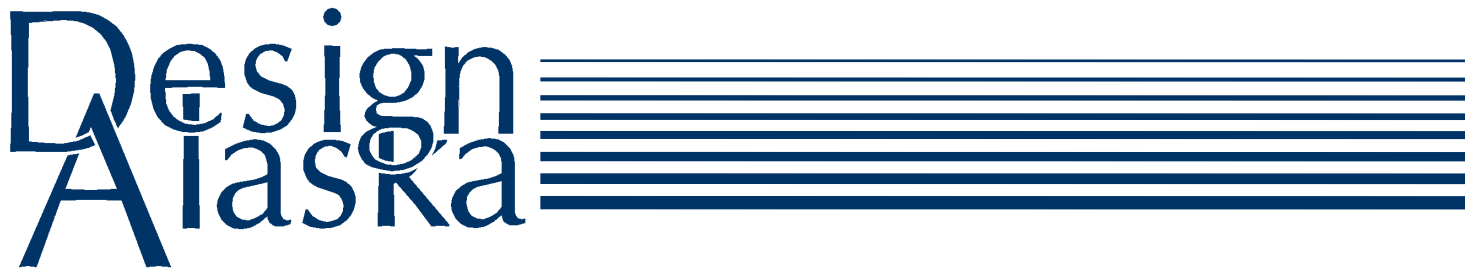
M301

**Fairbanks Pioneer Home -
Tub Room and Kitchen Upgrades
Fairbanks, Alaska
Project No.: AJF 20-02C**

Final Construction Documents

**For:
State of Alaska/DHSS/FMS Facilities
3601 C Street, Suite 578
Anchorage, Alaska 99503**

June 7, 2019



Fairbanks Pioneer Home - Tub Room and Kitchen Upgrades Fairbanks, Alaska Project No.: AJF 20-02C

Final Construction Documents

Table of Contents

- **Specifications**
- **Catalog Cut Sheets**

**By:
Design Alaska, Inc.
601 College Road
Fairbanks, Alaska 99701**

June 7, 2019

PART 1 GENERAL

1.1 SCOPE: SECTION 02 41 00 - DEMOLITION

- A. Building demolition excluding removal of hazardous materials and toxic substances.
- B. Selective demolition of building elements for alteration purposes.

1.2 RELATED REQUIREMENTS

- A. Section 01 10 00 - Summary: Limitations on Contractor's use of site and premises.
- B. Section 01 50 00 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
- C. Section 01 70 00 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.

1.3 REFERENCE STANDARDS

- A. 29 CFR 1926 - U.S. Occupational Safety and Health Standards; current edition.
- B. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2013.

PART 2 PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ASSE A10.6 and NFPA 241.

PART 3 EXECUTION

3.1 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with other requirements specified in Section.
- B. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Obtain required permits.
 - 2. Comply with applicable requirements of NFPA 241.
 - 3. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
 - 4. Provide, erect, and maintain temporary barriers and security devices.
 - 5. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
 - 6. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
 - 7. Do not close or obstruct roadways or sidewalks without permit.
 - 8. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
- C. Do not begin removal until receipt of notification to proceed from.
- D. Do not begin removal until built elements to be salvaged or relocated have been removed.
- E. Protect existing structures and other elements that are not to be removed.
 - 1. Provide bracing and shoring.
 - 2. Prevent movement or settlement of adjacent structures.
 - 3. Stop work immediately if adjacent structures appear to be in danger.

- F. Minimize production of dust due to demolition operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
- G. If hazardous materials are discovered during removal operations, stop work and notify and; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.
- H. Perform demolition in a manner that maximizes salvage and recycling of materials.
 - 1. Dismantle existing construction and separate materials.
 - 2. Set aside reusable, recyclable, and salvageable materials; store and deliver to collection point or point of reuse.

3.2 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 - 1. Verify that construction and utility arrangements are as indicated.
 - 2. Report discrepancies to before disturbing existing installation.
 - 3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Separate areas in which demolition is being conducted from other areas that are still occupied.
 - 1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 50 00 in locations indicated on drawings.
- C. Remove existing work as indicated and as required to accomplish new work.
 - 1. Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction specified.
 - 2. Remove items indicated on drawings.
- D. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove existing systems and equipment as indicated.
 - 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.

2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 3. See Section 01 10 00 for other limitations on outages and required notifications.
 4. Verify that abandoned services serve only abandoned facilities before removal.
 5. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.
- E. Protect existing work to remain.
1. Prevent movement of structure; provide shoring and bracing if necessary.
 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 3. Repair adjacent construction and finishes damaged during removal work.
 4. Patch as specified for patching new work.

3.3 DEBRIS AND WASTE REMOVAL

- A. Remove debris, junk, and trash from site.
- B. Leave site in clean condition, ready for subsequent work.
- C. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 03 30 00 - CAST-IN-PLACE CONCRETE

- A. Section includes cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes, for the following:
 - 1. Suspended slabs.

1.2 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag, and silica fume; subject to compliance with requirements.

1.3 ACTION SUBMITTALS

- A. Product Data: For the following, as applicable:
 - 1. Steel reinforcing.
 - 2. Admixtures.
- B. Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

1.4 INFORMATIONAL SUBMITTALS

- A. Field quality-control reports.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
- B. Testing Agency Qualifications: An independent agency, acceptable to authorities having jurisdiction, qualified according to ASTM C 1077 and ASTM E 329 for testing indicated. Agency shall be qualified and shall meet all requirements to operate in the state of Alaska.

- C. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:
 - 1. ACI 301, "Specifications for Structural Concrete," Sections 1 through 5.
 - 2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."
- D. Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Steel Reinforcement: Deliver, store, and handle steel reinforcement to prevent bending and damage.

PART 2 PRODUCTS

2.1 FORM-FACING MATERIALS

- A. Form surfaces may be of any material which provides the required structural strength and surface properties to produce specified finish.

2.2 STEEL REINFORCEMENT

- A. Plain-Steel Welded Wire Reinforcement: ASTM A 185/A 185M, plain, fabricated from as-drawn steel wire into flat sheets.

2.3 CONCRETE MIXTURES

- A. Plant Mix:
 - 1. Strength:
 - a. Interior structural application (elevated floor slabs, housekeeping pads, etc.): 4000 psi concrete with zero air entrainment additives.
 - 2. Proportions: ACI 211:1.
 - 3. Cement:
 - a. Use Portland Cement, ASTM C 150, of the same type, brand, and source, throughout Project:
 - b. Quantity as needed for concrete strength.

4. Aggregates:
 - a. ASTM C 33, coarse aggregate or better, graded. Provide aggregates from a single source
 - b. Maximum aggregate size to be 3/8-inch minus for finished slabs and curbs, 75 percent of minimum clear space between steel or between steel and forms in formed concrete and 3/8-inch for grouting concrete masonry.
 - c. Fine Aggregate to be free of materials with deleterious reactivity to alkali in cement.
5. Water:
 - a. ASTM C 94/C 94M and potable.
 - b. Maximum Water/Cement ratio: 0.45.
6. Slump of concrete: Slump of concrete shall not be changed by addition of water at the jobsite unless indicated on batch ticket, added water shall not exceed that indicated on batch ticket. Super-plasticizers shall be used to change the slump as indicated on the concrete plant batch ticket.
 - a. Structural applications: 6 inches maximum at truck chute discharge point.

2.4 ADMIXTURES

- A. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.
 1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.

2.5 CURING MATERIALS

- A. Water: Potable.

2.6 FABRICATING REINFORCEMENT

- A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

2.7 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M, and furnish batch ticket information.
 - 1. When air temperature is between 85 and 90 degrees Fahrenheit, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 degrees Fahrenheit, reduce mixing and delivery time to 60 minutes.

PART 3 EXECUTION

3.1 FORMWORK

- A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.
- B. The sole responsibility for form design and for any resulting structural damage due to form failure rests with the Contractor.

3.2 STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that would reduce bond to concrete.
- C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.
- D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.
- E. Install welded wire reinforcement in longest practicable lengths on bar supports spaced to minimize sagging. Lap edges and ends of adjoining sheets at least one mesh spacing. Offset laps of adjoining sheet widths to prevent continuous laps in either direction. Lace overlaps with wire.

3.3 JOINTS

- A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.

B. Construction Joints:

1. Use a bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.

3.4 CONCRETE PLACEMENT

- A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.
- B. Water is to be added per instructions as written on the batch ticket.
- C. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301.
- D. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. Place sections continuously. Deposit concrete to avoid segregation.
 1. Deposit concrete in horizontal layers of depth to not exceed formwork design pressures and in a manner to avoid inclined construction joints.
 2. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.
 3. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.
- E. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.
 1. Consolidate concrete during placement operations so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
 2. Maintain reinforcement in position on chairs during concrete placement.
 3. Screed slab surfaces with a straightedge and strike off to correct elevations.
 4. Slope surfaces uniformly to drains where required.

5. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface. Do not further disturb slab surfaces before starting finishing operations.

3.5 FINISHING FLOORS AND SLABS

- A. General: Comply with ACI 302.1R recommendations for screeding, re-straightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.
- B. Float Finish: Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power driven floats. Re-straighten, cut down high spots, and fill low spots. Repeat float passes and re-straightening until surface is left with a uniform, smooth, granular texture.
- C. Trowel Finish: After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel. Continue troweling passes and re-straighten until surface is free of trowel marks and uniform in texture and appearance. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.
 1. Apply a trowel finish to all surfaces.
 2. Finish and measure surface so gap at any point between concrete surface and an unlevelled, freestanding, 10 feet long straightedge resting on two high spots and placed anywhere on the surface does not exceed 3/16-inch.

3.6 CONCRETE PROTECTING AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.
- B. Formed Surfaces: Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces. If forms remain during curing period, moist cure after loosening forms. If removing forms before end of curing period, continue curing for the remainder of the curing period.
- C. Unformed Surfaces: Begin curing immediately after finishing concrete. Cure unformed surfaces, including floors and slabs, concrete floor toppings, and other surfaces.
- D. Cure concrete according to ACI 308.1, by one or a combination of the following methods:
 1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
 - a. Water.

- b. Continuous water-fog spray.
 - c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.
- 2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than 7 days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
 - a. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive floor coverings.
 - b. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive penetrating liquid floor treatments.
 - c. Cure concrete surfaces to receive floor coverings with either a moisture-retaining cover or a curing compound that the manufacturer certifies will not interfere with bonding of floor covering used on Project.
- 3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.
 - a. Removal: After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer.

3.7 CONCRETE SURFACE REPAIRS

- A. Defective Concrete: Repair and patch defective areas when approved by Engineer. Remove and replace concrete that cannot be repaired and patched to Engineer's approval.
- B. Repair materials and installation may be used, subject to Engineer's approval.

3.8 FIELD QUALITY CONTROL

- A. Testing and Inspecting: Engage a qualified testing and inspecting agency to perform tests and inspections and to submit reports.

- B. Inspections:
 - 1. Verification of use of required design mixture.
 - 2. Verification of concrete strength before removal of shores and forms from beams and slabs.
- C. Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:
 - 1. Testing Frequency: Obtain one composite sample.
 - 2. Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample.
 - 3. Air Content: ASTM C 231, pressure method, for normal-weight concrete; one test for each composite sample.
 - 4. Concrete Temperature: ASTM C 1064/C 1064M; one test for each composite sample.
 - 5. Compression Test Specimens: ASTM C 31/C 31M.
 - a. Cast and laboratory cure two sets of two standard cylinder specimens for each composite sample.
 - 6. Compressive-Strength Tests: ASTM C 39/C 39M; test one set of two laboratory-cured specimens at 7 days and one set of two specimens at 28 days.
 - a. A compressive-strength test shall be the average compressive strength from a set of two specimens obtained from same composite sample and tested at age indicated.
 - 7. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.
 - 8. Test results shall be reported in writing to Engineer, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7 and 28-day tests.

9. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Engineer but will not be used as sole basis for approval or rejection of concrete.
 10. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Engineer. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42/C 42M or by other methods as directed by Engineer.
 11. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
 12. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.
- D. Measure floor and slab flatness and levelness according to ASTM E 1155 within 24 hours of finishing.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 05 12 00 - STRUCTURAL STEEL FRAMING

A. Section Includes:

1. Structural steel.
2. Steel Decking.

1.2 ACTION SUBMITTALS

A. Product Data: For the following, as applicable:

1. Primer.

B. Shop Drawings: Show fabrication of structural-steel components.

1. Include details of cuts, connections, splices, camber, holes, and other pertinent data.
2. Include embedment drawings.
3. Indicate welds by standard AWS symbols, distinguishing between shop and field welds, and show size, length, and type of each weld. Show backing bars that are to be removed and supplemental fillet welds where backing bars are to remain.
4. Indicate type, size, and length of bolts, distinguishing between shop and field bolts. Identify pretensioned and slip-critical high-strength bolted connections.

1.3 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified installer, fabricator, and testing agency.
- B. Welding certificates.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced Installer who has completed structural steel work similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance.

- B. Fabricator Qualifications: Engage a firm experienced in fabricating structural steel similar to that indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to fabricate structural steel without delaying the Work.
- C. Comply with applicable provisions of the following specifications and documents:
 - 1. AISC's "Specification for Structural Steel Buildings--Allowable Stress Design and Plastic Design."
 - 2. AISC's "Load and Resistance Factor Design (LFRD) Specification for Structural Steel Buildings."
 - 3. AISC's "Seismic Provisions for Structural Steel Buildings."
 - 4. ASTM A 6 "Specification for General Requirements for Rolled Steel Plates, Shapes, Sheet Piling, and Bars for Structural Use."
 - 5. Research Council on Structural Connections' (RCSC) "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."
 - 6. Research Council on Structural Connections' (RCSC) "Load and Resistance Factor Design Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."
- D. Welding Standards: Comply with applicable provisions of AWS D1.1 "Structural Welding Code--Steel."
 - 1. Present evidence that each welder has satisfactorily passed AWS qualification tests for welding processes involved and, if pertinent, has undergone rectification.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver structural steel to Project site in such quantities and at such times to ensure continuity of installation.
- B. Store materials to permit easy access for inspection and identification. Keep steel members off ground and spaced by using pallets, dunnage, or other supports and spacers. Protect steel members and packaged materials from corrosion and deterioration.
 - 1. Do not store materials on structure in a manner that might cause distortion, damage, or overload to members or supporting structures. Repair or replace damaged materials or structures as directed.

- C. Store fasteners in a protected place in sealed containers with manufacturer's labels intact.
 - 1. Fasteners may be repackaged provided Owner's testing and inspecting agency observes repackaging and seals containers.

PART 2 PRODUCTS

2.1 STRUCTURAL-STEEL MATERIALS

- A. W-Shapes and Channels: ASTM A 992/A 992M or ASTM A 572/A 572M, Grade 50.
- B. Angles, Plates, and Bar: ASTM A 36/A 36M.
- C. Square/Rectangular HSS: ASTM A500 Grade B.
- D. Welding Electrodes: Comply with AWS requirements.

2.2 BOLTS, CONNECTORS, AND ANCHORS

- A. High-Strength Bolts, Nuts, and Washers: ASTM A 325, Type 1, heavy-hex steel structural bolts; ASTM A 563, Grade C, heavy-hex carbon-steel nuts; and ASTM F 436, Type 1, hardened carbon-steel washers; all with plain finish.
- B. Threaded Bolts: ASTM A 449.
 - 1. Nuts: ASTM A 563 heavy-hex carbon steel.
 - 2. Washers: ASTM F 436, Type 1, hardened carbon steel.
 - 3. Finish: Plain.

2.3 NONCOMPOSITE FORM DECK

- A. Non-composite Form Deck: Fabricate ribbed-steel sheet non-composite form-deck panels to comply with "SDI Specifications and Commentary for Non-composite Steel Form Deck," in SDI Publication No. 31, with the minimum section properties indicated, and with the following:
 - 1. Galvanized-Steel Sheet: ASTM A 653/A 653M, Structural Steel (SS), Grade 33, G30 zinc coating.
 - 2. Profile Depth: 9/16-inch.
 - 3. Design Uncoated-Steel Thickness: 0.0179-inch.

4. Span Condition: As indicated.

5. Side Laps: Overlapped.

2.4 PRIMER

- A. Primer: Steel shall be delivered shop primed, except for surfaces to be galvanized, fireproofed, field welded, or bolted in slip critical connection.

2.5 FABRICATION

- A. Column Splices are not permitted without prior approval by Engineer, except at locations noted in drawings.
- B. Structural Steel: Fabricate and assemble in shop to greatest extent possible. Fabricate according to AISC's "Code of Standard Practice for Steel Buildings and Bridges" and AISC 360.
1. Identify high-strength structural steel according to ASTM A 6/A 6M and maintain markings until structural steel has been erected.
 2. Mark and match-mark materials for field assembly.
 3. Complete structural-steel assemblies, including welding of units, before starting shop-priming operations.
- C. Thermal Cutting: Perform thermal cutting by machine to greatest extent possible.
1. Plane thermally cut edges to be welded to comply with requirements in AWS D1.1/D1.1M.
- D. Bolt Holes: Cut, drill, or punch standard bolt holes perpendicular to metal surfaces.
- E. Finishing: Accurately finish ends of columns and other members transmitting bearing loads.

2.6 SHOP CONNECTIONS

- A. High-Strength Bolts: Shop install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for type of bolt and type of joint specified.
1. Joint Type: Snug tightened unless indicated as pre-tensioned or slip-critical in drawings.

- B. Weld Connections: Comply with AWS D1.1/D1.1M for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.

2.7 SHOP PRIMING

- A. Surface Preparation: Clean surfaces to be painted. Remove loose rust and mill scale and spatter, slag, or flux deposits. Prepare surfaces according to the coating manufacturer's requirements but not less than following specifications and standards:
 - 1. SSPC-SP 3, "Power Tool Cleaning."
- B. Priming: Immediately after surface preparation, apply primer according to manufacturer's written instructions and at rate recommended by SSPC to provide a minimum dry film thickness of 1.5 mils. Use priming methods that result in full coverage of joints, corners, edges, and exposed surfaces.
 - 1. Apply two coats of shop paint to surfaces that are inaccessible after assembly or erection. Change color of second coat to distinguish it from first.

2.8 SOURCE QUALITY CONTROL

- A. Correct deficiencies in Work that test reports and inspections indicate does not comply with the Contract Documents.
 - 1. Additional testing, at Contractor's expense, will be performed to determine compliance of corrected Work with specified requirements.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Before erection proceeds, and with steel Erector present, verify elevations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments for compliance with requirements.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

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

3.3 ERECTION

- A. Set structural steel accurately in locations and to elevations indicated and according to AISC 303 and AISC 360.
- B. Base and Bearing Plates: Clean concrete- and masonry-bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting plates. Clean bottom surface of plates.
- C. Maintain erection tolerances of structural steel within AISC's "Code of Standard Practice for Steel Buildings and Bridges."
- D. Align and adjust various members that form part of complete frame or structure before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that will be in permanent contact with members. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.
 - 1. Level and plumb individual members of structure.
- E. Splice members only where indicated.
- F. Do not use thermal cutting during erection.
- G. Do not enlarge unfair holes in members by burning or using drift pins. Ream holes that must be enlarged to admit bolts.

3.4 FIELD CONNECTIONS

- A. No column splices will be permitted unless prior approval is obtained from Engineer.
- B. High-Strength Bolts: Install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for type of bolt and type of joint specified.
 - 1. Joint Type: Snug tightened unless indicated on drawings as pre-tensioned or slip-critical.
- C. Weld Connections: Comply with AWS D1.1/D1.1M for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.
 - 1. Comply with AISC 303 and AISC 360 for bearing, alignment, adequacy of temporary connections, and removal of paint on surfaces adjacent to field welds.

3.5 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to inspect field welds and high-strength bolted connections.
- B. Bolted Connections: Bolted connections will be inspected according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."
- C. Welded Connections: Field welds will be visually inspected according to AWS D1.1/D1.1M.
- D. Correct deficiencies in Work that test reports and inspections indicate does not comply with the Contract Documents.

3.6 REPAIRS AND PROTECTION

- A. Touchup Painting: Immediately after rust removal of existing steel and erection of new steel, clean exposed areas where primer is damaged or missing and paint with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.
 - 1. Clean and prepare surfaces by SSPC-SP 2 hand-tool cleaning or SSPC-SP 3 power-tool cleaning.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 06 10 00 - ROUGH CARPENTRY

- A. This section includes the following:
 - 1. Non-structural dimension lumber framing.
 - 2. Concealed wood blocking, nailers, and supports.
 - 3. Miscellaneous wood nailers, furring, and grounds.

1.2 REFERENCE STANDARDS

- A. AWC (WFCM) - Wood Frame Construction Manual for One- and Two-Family Dwellings; 2015.
- B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2009.
- C. PS 20 - American Softwood Lumber Standard; 2010.

1.3 SUBMITTALS

- A. Product Data: Provide technical data on wood preservative materials and application instructions.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.

PART 2 PRODUCTS

2.1 GENERAL REQUIREMENTS

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.

1. If no species is specified, provide any species graded by the agency specified; if no grading agency is specified, provide lumber graded by any grading agency meeting the specified requirements.
 2. Grading Agency: Any grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee (www.alsc.org) and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.
- B. Lumber fabricated from old growth timber is not permitted.

2.2 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Sizes: Nominal sizes as indicated on drawings, S4S.
- B. Moisture Content: S-dry or MC19.
- C. Stud Framing (2 by 2 through 2 by 6):
1. Grade: No. 2.
- D. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
1. Lumber: S4S, No. 2 or Standard Grade.
 2. Boards: Standard or No. 3.

2.3 ACCESSORIES

- A. Fasteners and Anchors:
1. Metal and Finish: Hot-dipped galvanized steel complying with ASTM A153/A153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.

PART 3 EXECUTION

3.1 PREPARATION

- A. Coordinate installation of rough carpentry members specified in other sections.

3.2 INSTALLATION - GENERAL

- A. Select material sizes to minimize waste.
- B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.

3.3 FRAMING INSTALLATION

- A. Set structural members level, plumb, and true to line. Discard pieces with defects that would lower required strength.
- B. Make provisions for temporary construction loads, and provide temporary bracing sufficient to maintain structure in true alignment and safe condition until completion of erection and installation of permanent bracing.
- C. Install structural members full length without splices unless otherwise specifically detailed.
- D. Comply with member sizes, spacing, and configurations indicated, and fastener size and spacing indicated, but not less than required by applicable codes and AWC (WFCM) Wood Frame Construction Manual.

3.4 BLOCKING, NAILERS, AND SUPPORTS

- A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.
- B. In framed assemblies that have concealed spaces, provide solid wood fireblocking as required by applicable local code, to close concealed draft openings between floors and between top story and roof/attic space; other material acceptable to code authorities may be used in lieu of solid wood blocking.
- C. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is explicitly indicated.
- D. Where ceiling-mounting is indicated, provide blocking and supplementary supports above ceiling, unless other method of support is explicitly indicated.
- E. Provide the following specific non-structural framing and blocking:
 - 1. Cabinets and shelf supports.
 - 2. Grab bars.

3. Towel and bath accessories.
4. Wall-mounted door stops.
5. Joints of rigid wall coverings that occur between studs.

3.5 TOLERANCES

- A. Framing Members: 1/4-inch from true position, maximum.
- B. Variation from Plane (Other than Floors): 1/4-inch in 10 feet maximum, and 1/4-inch in 30 feet maximum.

3.6 FIELD QUALITY CONTROL

- A. See Section 01 40 00 - Quality Requirements, for additional requirements.

3.7 CLEANING

- A. Do not leave any wood, shavings, sawdust, etc. on the ground or buried in fill.
- B. Prevent sawdust and wood shavings from entering the storm drainage system.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 06 41 00 - ARCHITECTURAL WOOD CASEWORK

- A. This section includes the following:
 - 1. Specially fabricated cabinet units.
 - 2. Cabinet hardware.
 - 3. Preparation for installing utilities.

1.2 RELATED REQUIREMENTS

- A. Section 01 61 16 - Volatile Organic Compound (VOC) Content Restrictions.
- B. Section 06 10 00 - Rough Carpentry: Support framing, grounds, and concealed blocking.
- C. Section 12 36 00 - Countertops.

1.3 REFERENCE STANDARDS

- A. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards; 2014.
- B. AWI (QCP) - Quality Certification Program; current edition at www.awiqcp.org.
- C. BHMA A156.9 - American National Standard for Cabinet Hardware; 2010.
- D. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.

1.4 SUBMITTALS

- A. See Section 01 33 00 - Submittal Procedures, for submittal procedures.
- B. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.
- C. Product Data: Provide data for hardware accessories.
- D. Samples: Submit actual sample items of proposed pulls, hinges, shelf standards, and locksets, demonstrating hardware design, quality, and finish.

1.5 QUALITY ASSURANCE

- A. Fabricator Qualifications: Company specializing in fabricating the products specified in this section with minimum five years of documented experience.
 - 1. Company with at least one project in the past 5 years with value of woodwork within 20 percent of cost of woodwork for this Project.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Protect units from moisture damage.

1.7 FIELD CONDITIONS

- A. During and after installation of custom cabinets, maintain temperature and humidity conditions in building spaces at same levels planned for occupancy.

PART 2 PRODUCTS

2.1 CABINETS

- A. Quality Standard: Custom Grade, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.
- B. Plastic Laminate Faced Cabinets: Custom grade.
- C. Cabinets at Moosewood Tub Room:
 - 1. Finish - Exposed Exterior Surfaces: Decorative laminate.
 - 2. Finish - Exposed Interior Surfaces: Solid phenolic.
 - 3. Finish - Semi-Exposed Surfaces: Solid phenolic
 - 4. Finish - Concealed Surfaces: Manufacturer's option.
 - 5. Door and Drawer Front Edge Profiles: Square edge with thin applied band.
 - 6. Casework Construction Type: Type B - Face-frame.
 - 7. Grained Face Layout for Cabinet and Door Fronts: Flush panel.
 - a. Custom Grade: Doors, drawer fronts and false fronts wood grain to run and match vertically within each cabinet unit.

8. Adjustable Shelf Loading: 50 pounds per square foot.

2.2 WOOD-BASED COMPONENTS

- A. Wood fabricated from old growth timber is not permitted.
- B. Wood fabricated from timber recovered from riverbeds or otherwise abandoned is permitted, unless otherwise noted, provided it is clean and free of contamination; identify source; provide lumber re-graded by an inspection service accredited by the American Lumber Standard Committee, Inc.

2.3 LAMINATE MATERIALS

- A. Manufacturers:
 1. Formica Corporation; Laminate: www.formica.com.
 2. Panolam Industries International, Inc; Nevamar; Laminate: www.nevamar.com.
 3. Wilsonart; Laminate: www.wilsonart.com/#sle.
- B. High Pressure Decorative Laminate (HPDL): NEMA LD 3, types as recommended for specific applications.
- C. Provide specific types as indicated.
 1. Horizontal Surfaces: HGL, 0.039-inch nominal thickness, through color, color as selected, finish as indicated.
 2. Vertical Surfaces: VGL, 0.020-inch nominal thickness, through color, color as selected, finish as indicated.

2.4 ACCESSORIES

- A. Adhesive: Type recommended by fabricator to suit application.

2.5 HARDWARE

- A. Hardware: BHMA A156.9, types as recommended by fabricator for quality grade specified.
- B. Adjustable Shelf Supports: Standard side-mounted system using recessed metal shelf standards or multiple holes for pin supports and coordinated self rests, satin chrome finish, for nominal 1-inch spacing adjustments.

- C. Drawer and Door Pulls: "U" shaped wire pull, steel with satin finish, 4-inch centers.
- D. Hinges: European style concealed self-closing type, steel with satin finish.
 - 1. Manufacturers:
 - a. Grass America Inc; Institutional Hinges: www.grassusa.com/#sle.
 - b. Grass America Inc; Tiomos Hinge System: www.grassusa.com/#sle.
 - c. Hardware Resources; www.hardwareresources.com.
 - d. Hettich America, LP; www.hettich.com/#sle.
 - e. Blum, Inc; www.blum.com.

2.6 SITE FINISHING MATERIALS

- A. Stain, Shellac, Varnish, and Finishing Materials: In compliance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.

2.7 FABRICATION

- A. Assembly: Shop assemble cabinets for delivery to site in units easily handled and to permit passage through building openings.
- B. Edging: Fit shelves, doors, and exposed edges with specified edging. Do not use more than one piece for any single length.
- C. Plastic Laminate: Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline; secure with concealed fasteners. Slightly bevel arises.
 - 1. Apply laminate backing sheet to reverse side of plastic laminate finished surfaces.
 - 2. Cap exposed plastic laminate finish edges with material of same finish and pattern.

2.8 SHOP FINISHING

- A. Finish work in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), Section 5 - Finishing for grade specified and as follows:

1. Opaque:
 - a. System - 2, Lacquer, Precatalyzed.
 - b. Color: As selected by Architect.
 - c. Sheen: Semigloss.
 - d. Products:
 - 1) Sherwin-Williams Sher-Wood F3 Kemvar Plus Conversion Varnish, AWI Finishing System 2.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify adequacy of backing and support framing.

3.2 INSTALLATION

- A. Install work in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS) requirements for grade indicated.
- B. Set and secure custom cabinets in place, assuring that they are rigid, plumb, and level.
- C. Use fixture attachments in concealed locations for wall mounted components.
- D. Carefully scribe casework abutting other components, with maximum gaps of 1/32-inch. Do not use additional overlay trim for this purpose.
- E. Secure cabinets to floor using appropriate angles and anchorages.
- F. Countersink anchorage devices at exposed locations. Conceal with solid wood plugs of species to match surrounding wood; finish flush with surrounding surfaces.

3.3 ADJUSTING

- A. Adjust installed work.
- B. Adjust moving or operating parts to function smoothly and correctly.

3.4 CLEANING

- A. Clean casework, counters, shelves, hardware, fittings, and fixtures.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 09 05 61 - COMMON WORK RESULTS FOR FLOORING PREPARATION

A. This section includes the following:

1. This section applies to all floors identified in the contract documents as to receive the following types of floor coverings:
 - a. Resilient sheet flooring.
2. Removal of existing floor coverings.
3. Preparation of new and existing concrete floor slabs for installation of floor coverings.
4. Testing of concrete floor slabs for moisture and alkalinity (pH).
5. Remediation of concrete floor slabs due to unsatisfactory moisture or alkalinity (pH) conditions.
 - a. Contractor shall perform all specified remediation of concrete floor slabs. If such remediation is indicated by testing agency's report and is due to a condition not under Contractor's control or could not have been predicted by examination prior to entering into the contract, a contract modification will be issued.
6. Remedial floor coatings.

1.2 REFERENCE STANDARDS

- A. ASTM C109/C109M - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or (50-mm) Cube Specimens); 2013.
- B. ASTM C472 - Standard Test Methods for Physical Testing of Gypsum, Gypsum Plasters and Gypsum Concrete; 1999 (Reapproved 2014).
- C. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2011.
- D. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride; 2011.

- E. ASTM F2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes; 2011.
- F. RFCI (RWP) - Recommended Work Practices for Removal of Resilient Floor Coverings; Resilient Floor Covering Institute; October 2011.

1.3 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate scheduling of cleaning and testing, so that preliminary cleaning has been completed for at least 24 hours prior to testing.

1.4 SUBMITTALS

- A. Visual Observation Report: For existing floor coverings to be removed.
- B. Floor Covering and Adhesive Manufacturers' Product Literature: For each specific combination of substrate, floor covering, and adhesive to be used; showing:
 - 1. Moisture and alkalinity (pH) limits and test methods.
 - 2. Manufacturer's required bond/compatibility test procedure.
- C. Testing Agency's Report:
 - 1. Description of areas tested; include floor plans and photographs if helpful.
 - 2. Summary of conditions encountered.
 - 3. Moisture and alkalinity (pH) test reports.
 - 4. Copies of specified test methods.
 - 5. Recommendations for remediation of unsatisfactory surfaces.
 - 6. Product data for recommended remedial coating.
 - 7. Submit report to Architect.
 - 8. Submit report not more than two business days after conclusion of testing.
- D. Adhesive Bond and Compatibility Test Report.
- E. Copy of RFCI (RWP), Recommended Work Practices for Removal of Resilient Floor Coverings.

1.5 QUALITY ASSURANCE

- A. Moisture and alkalinity (pH) testing shall be performed by an independent testing agency employed and paid by Contractor.
- B. Contractor may perform adhesive and bond test with his own personnel or hire a testing agency.
- C. Testing Agency Qualifications: Independent testing agency experienced in the types of testing specified.
 - 1. Submit evidence of experience consisting of at least three test reports of the type required, with project Owner's project contact information.
- D. Contractor's Responsibility Relating to Independent Agency Testing:
 - 1. Provide access for and cooperate with testing agency.
 - 2. Confirm date of start of testing at least 10 days prior to actual start.
 - 3. Allow at least 4 business days on site for testing agency activities.
 - 4. Achieve and maintain specified ambient conditions.
 - 5. Notify Architect when specified ambient conditions have been achieved and when testing will start.

1.6 FIELD CONDITIONS

- A. Maintain ambient temperature in spaces where concrete testing is being performed, and for at least 48 hours prior to testing, at not less than 65 degrees F or more than 85 degrees F.
- B. Maintain relative humidity in spaces where concrete testing is being performed, and for at least 48 hours prior to testing, at not less than 40 percent and not more than 60 percent.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Patching Compound: Floor covering manufacturer's recommended product, suitable for conditions, and compatible with adhesive and floor covering. In the absence of any recommendation from flooring manufacturer, provide a product with the following characteristics:

1. Cementitious moisture-, mildew-, and alkali-resistant compound, compatible with floor, floor covering, and floor covering adhesive, and capable of being feathered to nothing at edges.
2. Compressive Strength: 3000 psi, minimum, after 28 days, when tested in accordance with ASTM C109/C109M or ASTM C472, whichever is appropriate.
- B. Alternate Flooring Adhesive: Floor covering manufacturer's recommended product, suitable for the moisture and pH conditions present; low-VOC. In the absence of any recommendation from flooring manufacturer, provide a product recommended by adhesive manufacturer as suitable for substrate and floor covering and for conditions present.
- C. Remedial Floor Coating: Single- or multi-layer coating or coating/overlay combination intended by its manufacturer to resist water vapor transmission to degree sufficient to meet flooring manufacturer's emission limits, resistant to the level of alkalinity (pH) found, and suitable for adhesion of flooring without further treatment.
 1. Thickness: As required for application and in accordance with manufacturer's installation instructions.
 2. Use product recommended by testing agency.

PART 3 EXECUTION

3.1 CONCRETE SLAB PREPARATION

- A. Perform following operations in the order indicated:
 1. Existing concrete slabs (on-grade and elevated) with existing floor coverings:
 - a. Visual observation of existing floor covering, for adhesion, water damage, alkaline deposits, and other defects.
 - b. Removal of existing floor covering.
 2. Existing concrete slabs with coatings or penetrating sealers/hardeners/dust-proofers:
 - a. Do not attempt to remove coating or penetrating material.
 - b. Do not abrade surface.
 3. Preliminary cleaning.

4. Moisture vapor emission tests; 3 tests in the first 1000 square feet and one test in each additional 1000 square feet, unless otherwise indicated or required by flooring manufacturer.
 5. Internal relative humidity tests; in same locations as moisture vapor emission tests, unless otherwise indicated.
 6. Alkalinity (pH) tests; in same locations as moisture vapor emission tests, unless otherwise indicated.
 7. Specified remediation, if required.
 8. Patching, smoothing, and leveling, as required.
 9. Other preparation specified.
 10. Adhesive bond and compatibility test.
 11. Protection.
- B. Remediation's:
1. Active Water Leaks or Continuing Moisture Migration to Surface of Slab: Correct this condition before doing any other remediation; re-test after correction.
 2. Excessive Moisture Emission or Relative Humidity: If an adhesive that is resistant to the level of moisture present is available and acceptable to flooring manufacturer, use that adhesive for installation of the flooring; if not, apply remedial floor coating or remedial sheet membrane over entire suspect floor area.
 3. Excessive Alkalinity (pH): If remedial floor coating is necessary to address excessive moisture, no additional remediation is required; if not, if an adhesive that is resistant to the level present is available and acceptable to the flooring manufacturer, use that adhesive for installation of the flooring; otherwise, apply a skim coat of specified patching compound over entire suspect floor area.

3.2 REMOVAL OF EXISTING FLOOR COVERINGS

- A. Comply with local, State, and federal regulations and recommendations of RFCI Recommended Work Practices for Removal of Resilient Floor Coverings, as applicable to floor covering being removed.
- B. Dispose of removed materials in accordance with local, State, and federal regulations and as specified.

3.3 PRELIMINARY CLEANING

- A. Clean floors of dust, solvents, paint, wax, oil, grease, asphalt, residual adhesive, adhesive removers, film-forming curing compounds, sealing compounds, alkaline salts, excessive laitance, mold, mildew, and other materials that might prevent adhesive bond.
- B. Do not use solvents or other chemicals for cleaning.

3.4 MOISTURE VAPOR EMISSION TESTING

- A. Where the floor covering manufacturer's requirements conflict with either the referenced test method or this specification, comply with the manufacturer's requirements.
- B. Where this specification conflicts with the referenced test method, comply with the requirements of this section.
- C. Test in accordance with ASTM F1869 and as follows.
- D. Plastic sheet test and mat bond test may not be substituted for the specified ASTM test method, as those methods do not quantify the moisture content sufficiently.
- E. In the event that test values exceed floor covering manufacturer's limits, perform remediation as indicated. In the absence of manufacturer limits, perform remediation if test values exceed 3 pounds per 1000 square feet per 24 hours.
- F. Report: Report the information required by the test method.

3.5 ALKALINITY TESTING

- A. Where the floor covering manufacturer's requirements conflict with either the referenced test method or this specification, comply with the manufacturer's requirements.
- B. The following procedure is the equivalent of that described in ASTM F710, repeated here for the Contractor's convenience.
- C. Use a wide range alkalinity (pH) test paper, its associated chart, and distilled or deionized water.
- D. Place several drops of water on a clean surface of concrete, forming a puddle approximately 1-inch in diameter. Allow the puddle to set for approximately 60 seconds, then dip the alkalinity (pH) test paper into the water, remove it, and compare immediately to chart to determine alkalinity (pH) reading.

- E. In the event that test values exceed floor covering manufacturer's limits, perform remediation as indicated. In the absence of manufacturer limits, perform remediation if alkalinity (pH) test value is over 10.

3.6 PREPARATION

- A. See individual floor covering section(s) for additional requirements.
- B. Comply with requirements and recommendations of floor covering manufacturer.
- C. Fill and smooth surface cracks, grooves, depressions, control joints and other non-moving joints, and other irregularities with patching compound.
- D. Do not fill expansion joints, isolation joints, or other moving joints.

3.7 ADHESIVE BOND AND COMPATIBILITY TESTING

- A. Comply with requirements and recommendations of floor covering manufacturer.

3.8 APPLICATION OF REMEDIAL FLOOR COATING

- A. Comply with requirements and recommendations of coating manufacturer.

3.9 PROTECTION

- A. Cover prepared floors with building paper or other durable covering.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 09 21 16 - GYPSUM BOARD ASSEMBLIES

- A. This section includes the following:
1. Metal stud wall framing.
 2. Acoustic insulation.
 3. Cementitious backing board.
 4. Joint treatment and accessories.

1.2 RELATED REQUIREMENTS

- A. Section 06 10 00 - Rough Carpentry: Wood blocking product and execution requirements.

1.3 REFERENCE STANDARDS

- A. ANSI A108.11 - American National Standard Specifications for Interior Installation of Cementitious Backer Units; 2010 (Reaffirmed 2016).
- B. ANSI A118.9 - American National Standard Specifications for Test Methods and Specifications for Cementitious Backer Units; 1999 (Reaffirmed 2016).
- C. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2015.
- D. ASTM C645 - Standard Specification for Nonstructural Steel Framing Members; 2014.
- E. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2012.
- F. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products; 2015.
- G. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board; 2013.

- H. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs From 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness; 2015.
- I. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2014.
- J. ASTM C1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base; 2014a.
- K. ASTM C1325 - Specification for Non-Asbestos Fiber-Mat Reinforced Cementitious Backer Units; 2014.
- L. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2012.
- M. GA-216 - Application and Finishing of Gypsum Board; 2013.

1.4 SUBMITTALS

- A. See Section 01 33 00 - Submittal Procedures, for submittal procedures.
- B. Product Data: Provide data on metal framing, gypsum board, accessories, and joint finishing system.

PART 2 PRODUCTS

2.1 METAL FRAMING MATERIALS

- A. Non-Loadbearing Framing System Components: ASTM C645; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/120 at 5 psf.
 - 1. Studs: "C" shaped with flat or formed webs with knurled faces.
 - 2. Runners: U shaped, sized to match studs.

2.2 BOARD MATERIALS

- A. Manufacturers - Gypsum-Based Board:
 - 1. CertainTeed Corporation; www.certainteed.com.

2. Georgia-Pacific Gypsum; www.gpgypsum.com.
 3. National Gypsum Company; www.nationalgypsum.com/#sle.
 4. USG Corporation; www.usg.com.
- B. Backing Board for Moosewood Tub Room:
1. Application: Surfaces behind solid surface wall finish in Tub Room.
 2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
 3. ANSI Cement-Based Board: Non-gypsum-based; aggregated Portland cement panels with glass fiber mesh embedded in front and back surfaces complying with ANSI A118.9 or ASTM C1325.
 - a. Thickness: 1/2-inch.

2.3 ACCESSORIES

- A. Acoustic Insulation: ASTM C665; preformed glass fiber, friction fit type, unfaced. Thickness: Existing to remain; match existing thickness as required to provide insulation at entire perimeter of room.
- B. Acoustic Sealant: Acrylic emulsion latex or water-based elastomeric sealant; do not use solvent-based non-curing butyl sealant.
- C. Beads, Joint Accessories, and Other Trim: ASTM C1047, rigid plastic, galvanized steel, or rolled zinc, unless noted otherwise.
 1. Expansion Joints:
 - a. Type: V-shaped PVC with tear away fins.
- D. Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.
- E. Screws for Fastening of Gypsum Panel Products to Cold-Formed Steel Studs Less than 0.033-inch in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion resistant.
- F. Screws for Fastening of Gypsum Panel Products to Steel Members from 0.033 to 0.112 inch in Thickness: ASTM C954; steel drill screws, corrosion resistant.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that project conditions are appropriate for work of this section to commence.

3.2 FRAMING INSTALLATION

- A. Metal Framing: Install in accordance with ASTM C754 and manufacturer's instructions.
- B. Studs: Space studs at 16 inches on center.
 - 1. Extend partition framing to ceiling in all locations unless otherwise noted.
 - 2. Partitions Terminating at Ceiling: Attach ceiling runner securely to ceiling track in accordance with manufacturer's instructions.
- C. Blocking: Install wood blocking for support of:
 - 1. Wall mounted cabinets.
 - 2. Plumbing fixtures.
 - 3. Toilet/bath accessories.

3.3 ACOUSTIC ACCESSORIES INSTALLATION

- A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.
- B. Acoustic Sealant: Install in accordance with manufacturer's instructions.
 - 1. Seal around all penetrations by conduit, pipe, ducts, and rough-in boxes, except where firestopping is provided.

3.4 BOARD INSTALLATION

- A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
- B. Single-Layer Non-Rated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.

- C. Cementitious Backing Board: Install over steel framing members where indicated, in accordance with ANSI A108.11 and manufacturer's instructions.

3.5 INSTALLATION OF TRIM AND ACCESSORIES

- A. Control Joints: Place control joints consistent with lines of building spaces and as directed.
- B. Corner Beads: Install at external corners, using longest practical lengths.

3.6 JOINT TREATMENT

- A. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
 - 1. Feather coats of joint compound so that camber is maximum 1/32-inch.

3.7 TOLERANCES

- A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8-inch in 10 feet in any direction.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 09 65 00 - RESILIENT FLOORING

A. This section includes the following:

1. Resilient sheet flooring.
2. Installation accessories.

1.2 RELATED REQUIREMENTS

- A. Section 09 05 61 - Common Work Results for Flooring Preparation: Independent agency testing of concrete slabs, removal of existing floor coverings, cleaning, and preparation.

1.3 REFERENCE STANDARDS

- A. ASTM E648 - Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source; 2014c.
- B. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2011.
- C. ASTM F970 - Standard Test Method for Static Load Limit; 2007 (Reapproved 2011).
- D. ASTM F1303 - Standard Specification for Sheet Vinyl Floor Covering with Backing; 2004 (Reapproved 2014).
- E. ASTM F1913 - Standard Specification for Vinyl Sheet Floor Covering Without Backing; 2004 (Reapproved 2014).
- F. NFPA 253 - Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source; 2015.
- G. RFCI (RWP) - Recommended Work Practices for Removal of Resilient Floor Coverings; Resilient Floor Covering Institute; October 2011.

1.4 SUBMITTALS

- A. See Section 01 33 00 - Submittal Procedures, for submittal procedures.

- B. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.
- C. Shop Drawings: Indicate seaming plans and floor patterns.
- D. Selection Samples: Submit manufacturer's complete set of color samples for Architect's initial selection.
- E. Verification Samples: Submit two samples, 2 by 2-inch in size illustrating color and pattern for each resilient flooring product specified.
- F. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning, stripping, and re-waxing.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Upon receipt, immediately remove any shrink-wrap and check materials for damage and the correct style, color, quantity and run numbers.
- B. Store all materials off of the floor in an acclimatized, weather-tight space.
- C. Maintain temperature in storage area between 55 degrees F and 90 degrees F.
- D. Protect roll materials from damage by storing on end.
- E. Do not double stack pallets.

1.6 FIELD CONDITIONS

- A. Store materials for not less than 48 hours prior to installation in area of installation at a temperature of 70 degrees F to achieve temperature stability. Thereafter, maintain conditions above 55 degrees F.

PART 2 PRODUCTS

2.1 SHEET FLOORING

- A. Resilient Sheet Flooring with flash coving: Homogeneous without backing, with color and pattern throughout full thickness.
 - 1. Manufacturers:
 - a. Centaur Floors; Kitchen Sink slip-resistant: www.centaurlfloors.com

2. Minimum Requirements: Comply with ASTM F1913.
 3. Slip Measurement: 0.8 per ASTM D2047.
 4. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E 648 or NFPA 253.
 5. Thickness: 0.080-inch nominal.
 6. Sheet Width: 72 inches minimum.
 7. Static Load Resistance: 750 psi minimum, when tested as specified in ASTM F970.
 8. Seams: Heat welded.
 9. Integral coved base with cap strip, height as indicated in drawings.
 10. Color: As indicated on drawings.
- B. Welding Rod: Solid bead in material compatible with flooring, produced by flooring manufacturer for heat welding seams, and in color matching field color.

2.2 ACCESSORIES

- A. Subfloor Filler: White premix latex; type recommended by adhesive material manufacturer.
- B. Primers, Adhesives, and Seam Sealer: Waterproof; types recommended by flooring manufacturer.
- C. Filler for Coved Base: Plastic.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that surfaces are flat to tolerances acceptable to flooring manufacturer, free of cracks that might telegraph through flooring, clean, dry, and free of curing compounds, surface hardeners, and other chemicals that might interfere with bonding of flooring to substrate.
- B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive resilient base.

- C. Cementitious Sub-floor Surfaces: Verify that substrates are dry enough and ready for resilient flooring installation by testing for moisture and pH.
 - 1. Test in accordance with Section 09 05 61.
 - 2. Obtain instructions if test results are not within limits recommended by resilient flooring manufacturer and adhesive materials manufacturer.
- D. Verify that required floor-mounted utilities are in correct location.

3.2 PREPARATION

- A. Prepare floor substrates for installation of flooring in accordance with Section 09 05 61.

3.3 INSTALLATION - GENERAL

- A. Starting installation constitutes acceptance of sub-floor conditions.
- B. Install in accordance with manufacturer's written instructions.
- C. Spread only enough adhesive to permit installation of materials before initial set.
- D. Fit joints and butt seams tightly.
- E. Set flooring in place, press with heavy roller to attain full adhesion.
- F. Where type of floor finish, pattern, or color are different on opposite sides of door, terminate flooring under centerline of door.
- G. Install edge strips at unprotected or exposed edges, where flooring terminates, and where indicated.
- H. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.

3.4 INSTALLATION - SHEET FLOORING

- A. Lay flooring with joints and seams parallel to longer room dimensions, to produce minimum number of seams. Lay out seams to avoid widths less than 1/3 of roll width; match patterns at seams.
- B. Cut sheet at seams in accordance with manufacturer's instructions.
- C. Seal seams by heat welding where indicated.

- D. Coved Base: Install as detailed on drawings, using coved base filler as backing at floor to wall junction. Extend sheet flooring vertically to height indicated, and cover top edge with metal cap strip.

3.5 CLEANING

- A. Remove excess adhesive from floor, base, and wall surfaces without damage.
- B. Clean in accordance with manufacturer's written instructions.

3.6 PROTECTION

- A. Prohibit traffic on resilient flooring for 48 hours after installation.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 10 26 01 - SOLID SURFACE SHEET WALL FINISH

- A. Solid surface sheet wall finish.

1.2 REFERENCE STANDARDS

- A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2015a.
- B. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- C. UL (DIR) - Online Certifications Directory; current listings at database.ul.com.

1.3 SUBMITTALS

- A. See Section 01 33 00 - Submittal Procedures, for submittal procedures.
- B. Product Data: Provide Manufacturer's printed product data for each type of sheet specified.
- C. Shop Drawings: Indicate dimensioned panel layout with required trim locations.
- D. Samples: Submit two color samples, 2 by 2-inch minimum in size, illustrating color and pattern.
- E. Manufacturer's Instructions: Indicate printed installation instructions for each type of sheet specified.

1.4 DELIVERY STORAGE AND HANDLING

- A. Deliver materials in unopened factory packaging to the jobsite.
- B. Inspect materials at delivery to assure that specified products have been received.
- C. Store in original packaging in an interior climate controlled location away from direct sunlight.

1.5 PROJECT CONDITIONS

- A. Environmental Requirements: Products must be installed in an interior climate controlled environment.

1.6 WARRANTY

- A. Standard Limited 10 year Warranty against materials and manufacturing defects.

PART 2 PRODUCTS

2.1 BASE BID MANUFACTURER

- A. Inpro Corporation; BioPrism: www.inprocorp.com.
- B. Other Acceptable Manufacturers:
 - 1. Corian; Interior Wall Surfaces: www.corian.com.
 - 2. Wilsonart; Solid Surface Designs: www.wilsonart.com.

2.2 MANUFACTURED UNITS

- A. Description:
 - 1. Composition: polyester/acrylic blended resins with natural filler material.
 - 2. Size: Sheets in 48 inches by 96 inches or greater to avoid joints to the greatest extent possible.
 - 3. Edge: Eased with interlocking edges where panels join.

2.3 MATERIALS

- A. Typical Walls: BioPrism, Sheet.
 - 1. Surface Burning Characteristics: Flame spread index of 25 or less, smoke developed index of 450 or less, when tested in accordance with ASTM E84.
 - 2. Thickness: 1/4-inch.
 - 3. Color: As indicated on drawings.

- B. Shower Walls: BioPrism, 12-inch Square Look, Sheet.
 - 1. Surface Burning Characteristics: Flame spread index of 25 or less, smoke developed index of 450 or less, when tested in accordance with ASTM E84.
 - 2. Thickness: 1/4-inch.
 - 3. Color: As indicated on drawings.

2.4 ACCESSORIES

- A. Adhesive: Solid surface bonding adhesive as recommended by manufacturer.
- B. Sealant: Silicone sealant as recommended by manufacturer.
- C. Trim: Provide required trim for inside, outside, and butt joints as recommended by manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verification of Conditions: Examine areas and conditions in which sheet will be installed.

3.2 PREPARATION

- A. General: Prior to installation, clean area to remove dust, debris and loose particles.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. General: Install components plumb and level, scribe adjacent finishes, in accordance with approved shop drawings and recommended installation instructions.

3.4 CLEANING

- A. At completion of the installation, clean surfaces in accordance with maintenance instructions.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 12 36 00 - COUNTERTOPS

- A. This section includes the following:
 - 1. Countertops for architectural cabinet work.
 - 2. Window sills.

1.2 RELATED REQUIREMENTS

- A. Section 06 41 00 - Architectural Wood Casework.

1.3 REFERENCE STANDARDS

- A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2015a.
- B. BISFA 2-01 - Classification and Standards for Solid Surfacing Material; 2013.
- C. ISFA 3-01 - Classification and Standards for Quartz Surfacing Material; 2013.
- D. MIA (DSDM) - Dimensional Stone Design Manual; VII, 2007.
- E. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.
- F. PS 1 - Structural Plywood; 2009.

1.4 SUBMITTALS

- A. See Section 01 33 00 - Submittal Procedures, for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Specimen warranty.

- C. Shop Drawings: Complete details of materials and installation; combine with shop drawings of cabinets and casework specified in other sections.
- D. Selection Samples: For each finish product specified, color chips representing manufacturer's full range of available colors and patterns.
- E. Verification Samples: For each finish product specified, minimum size 2 inches square, representing actual product, color, and patterns.
- F. Test Reports: Chemical resistance testing, showing compliance with specified requirements.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.6 FIELD CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.1 COUNTERTOPS AND WINDOW SILLS

- A. Solid Surfacing Countertops and window sills: Solid surfacing sheet or plastic resin casting over continuous substrate.
 - 1. Flat Sheet Thickness: 1/2-inch, minimum.
 - 2. Solid Surfacing Sheet and Plastic Resin Castings: Complying with ISFA 2-01 and NEMA LD 3; acrylic or polyester resin, mineral filler, and pigments; homogenous, non-porous and capable of being worked and repaired using standard woodworking tools; no surface coating; color and pattern consistent throughout thickness.
 - a. Manufacturers:
 - 1) Avonite Surfaces; www.avonitesurfaces.com.

- 2) Dupont; www.corian.com.
 - 3) Formica Corporation; www.formica.com.
 - 4) Wilsonart; www.wilsonart.com.
 - 5) LG Hausys; www.lghausys.com.
- b. Surface Burning Characteristics: Flame spread index of 25, maximum; smoke developed index of 450, maximum; when tested in accordance with ASTM E84.
 - c. Finish on Exposed Surfaces: Matte, gloss rating of 5 to 20.

2.2 MATERIALS

- A. Wood-Based Components:
 1. Wood fabricated from old growth timber is not permitted.
- B. Plywood for Supporting Substrate: PS 1 Exterior Grade, A-C veneer grade, minimum 5-ply; minimum 3/4-inch thick; join lengths using metal splines.
- C. Adhesives: Chemical resistant waterproof adhesive as recommended by manufacturer of materials being joined.
- D. Joint Sealant: Mildew-resistant silicone sealant, clear.

2.3 FABRICATION

- A. Fabricate tops and splashes in the largest sections practicable, with top surface of joints flush.
 1. Join lengths of tops using best method recommended by manufacturer.
 2. Fabricate to overhang fronts and ends of cabinets 1-inch except where top butts against cabinet or wall.
 3. Prepare all cutouts accurately to size; replace tops having improperly dimensioned or unnecessary cutouts or fixture holes.
- B. Solid Surfacing: Fabricate tops up to 144 inches long in one piece; join pieces with adhesive sealant in accordance with manufacturer's recommendations and instructions.

PART 3 EXECUTION

3.1 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.2 INSTALLATION

- A. Securely attach countertops to casework as indicated on drawings using concealed fasteners. Make flat surfaces level; shim where required.

3.3 TOLERANCES

- A. Variation From Horizontal: 1/8-inch in 10 feet, maximum.
- B. Offset From Wall, Countertops: 1/8-inch maximum; 1/16-inch minimum.
- C. Field Joints: 1/8-inch wide, maximum.

3.4 CLEANING

- A. Clean countertops surfaces thoroughly.

3.5 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 20 01 00 - OPERATION AND MAINTENANCE FOR MECHANICAL

- A. This Section covers form, content, and submittal of mechanical system Operation and Maintenance Manuals.

PART 2 PRODUCTS

2.1 FORM

- A. Arrange operation and maintenance data sequentially by Specification Section.
- B. Provide two indexes at the front of the binder that locates individual items by tab number. The first by Specification Section. The second, an alphabetical index of all items without regard to Specification Section.
- C. Separate each item with consecutively numbered heavy stock divider sheets with plastic index tab. Type item number on both sides of paper inserts.
- D. Precede each item with a completed Item Data Sheet. See required format attached to the end of this Specification Section.
- E. Material included shall indicate the specific item(s) utilized for this Project. Delete or cross out all other items.
- F. Provide complete operation and maintenance manual submittals. Partial or incomplete submittals required under this Section will be returned without review.

2.2 DATA

- A. Provide data for all items, equipment, and equipment components specified or indicated under this Division, so that the Owner's maintenance personnel will have complete service and replacement information required for routine maintenance and repair and to provide maximum usable life. Include data not only for maintainable and repairable items, but also for replaceable but not repairable items. Typical items for which information is required include:
 - 1. Valves and other piping accessories.
 - 2. Plumbing fixtures including fixtures, faucets, flush valves, floor drains, cleanouts, roof drains, and other components.

- B. Include the following data for each item as applicable. Some of these data can be extracted from equipment review submittals and included with the Operation and Maintenance Manuals.
 - 1. Manufacturer's catalog literature and illustrations.
 - 2. Operating characteristics including capacity data, performance curves, flow rates, pressure drops, etc.
 - 3. Dimensions and connection sizes.
 - 4. Installation and adjustment instructions, requirements, and recommendations.
 - 5. Parts lists and assembly Drawings.
 - 6. Maintenance, operational, and troubleshooting instructions.
 - 7. Warranty data.
- C. Data shall be as provided by the equipment manufacturer or supplier.
- D. Data are required for all component items of equipment whether or not the components are products of the equipment manufacturer.
- E. All material must be clearly readable. "Faxed" then photocopied information is not acceptable.
- F. Include a chart, neatly typed and arranged by system, summarizing periodic inspections and maintenance recommended by equipment manufacturers and/or required to properly maintain the facility's new mechanical systems. The periodic maintenance summary chart shall include equipment name, identification symbol, location, type of maintenance or inspection required, and recommended time interval.
- G. Include an equipment schedule, neatly typed and arranged by system, listing new equipment with equipment symbol, nomenclature, function and area served, location, manufacturer, nameplate data including model and serial number and motor data including full load amps, horsepower, volts and phase.
- H. Include a valve schedule, neatly typed and arranged by system, listing new valve tags with information required on valve tag plus location and normal position, open or closed.

2.3 BINDING

- A. Bind the Operation and Maintenance Manuals in three ring, D-ring style binders with page lifters and vinyl covers. Expandable catalog type two-hole binders with soft board covers and metal prong fasteners will not be accepted.

- B. Label the front cover and end panel. Label to include Project title, Project number, date, and facility name.

PART 3 EXECUTION

3.1 REQUIRED COPIES AND TIMING

- A. Review Submittals:
 - 1. Submit one electronic copy (PDF format) of the Operation and Maintenance Manual for review and acceptance by the Contracting Officer. Electronically Index (Bookmark) each section and item, by item data number and name within the electronic submittal.
 - 2. Submit for review not less than thirty days prior to Substantial Completion Inspection.
- B. Final Operation and Maintenance Manuals:
 - 1. Provide five complete, reviewed, corrected and accepted Operation and Maintenance Manuals to the Contracting Officer a minimum of five working days prior to Project Substantial Completion Inspection and 5 working days prior to any scheduled training on equipment covered by the Operations and Maintenance Manual.
 - 2. Provide three complete digital copy's (PDF format) of the accepted Operation and Maintenance Manuals to the Contracting Officer as part of the Final Operation and Maintenance Manual submittal. Provide digital copies on Compact Disc (CD) or USB compatible memory card (Flash).

END OF SECTION

ATTACHMENT: ITEM DATA SHEET

ITEM DATA SHEET

1. Item name/Drawing equipment number:
2. Specification section/Drawing number:
3. Manufacturer/model number:
4. Size/capacity:
5. Use and location: (1)
6. Spare parts source:
7. Providers of warranty service:
8. Other Contractor comments:

(1) This information must be provided for all items. Be specific as possible.

PART 1 GENERAL

1.1 SCOPE: SECTION 20 05 00 - COMMON WORK RESULTS

- A. This Section covers general mechanical requirements for Work covered under Divisions 20 and 22.
- B. All Work and services specifically covered under this Division is supplementary to that covered under other Divisions of these Contract Documents. The requirements of this Division which are more stringent than that covered under other parts of these Contract Documents apply to Work covered under this Division.
- C. All incidental Work required but not specified under this Division shall comply with the Division in which it is specified.
- D. Review the Drawings and Specifications of all other Divisions for additional Work under Division 20.

1.2 GENERAL REQUIREMENTS

- A. Provide the Owner with complete, coordinated, operating, balanced, tested, and adjusted mechanical systems.
- B. Place all equipment in operation and instruct the Owner's maintenance personnel as to the proper operation, periodic maintenance, and lubrication of new mechanical equipment and systems.
- C. The Drawings are somewhat diagrammatic and do not attempt to show all offsets or fittings required for installation of the mechanical system. Furnish and install pipes and ducts with fittings required for complete and proper installation of mechanical systems specified or required under this Division.
- D. Provide piping, equipment, and accessories indicated on the Drawings unless it is specifically indicated that the piping, ductwork, equipment, or accessory is existing.
- E. Install piping and equipment in accordance with manufacturer's recommendations, with accessories recommended by the manufacturer for service intended, and with accessories indicated. Should recommendations conflict with Contract Documents, contact Contracting Officer for clarification before proceeding.
- F. Coordinate the installation of the mechanical systems with the Work of other trades and existing conditions. Route mechanical systems as required to avoid interference with the Work of other trades and existing conditions.

- G. Provide access to concealed piping accessories, duct accessories, and equipment requiring access for periodic maintenance, inspection, replacement, or adjustment. Furnish access panels/doors of the proper type and size for the application.
- H. Do not scale the Mechanical Drawings. Verify dimensions as construction progresses.
- I. Refer to the Architectural and Structural Drawings in regards to partition thicknesses, dimensions and other details of the building construction.
- J. Report any errors, discrepancies, or ambiguities to the Contracting Officer, who will answer all questions and interpret intended meaning of these Contract Documents. Accept Contracting Officer's interpretation as final.
- K. Perform Work in a neat and workmanlike manner with skilled craftsmen specializing in said Work.
- L. Provide new equipment and materials direct from the manufacturer unless specifically indicated otherwise. Remanufactured equipment and materials are specifically not acceptable.
- M. Provide the product of only one manufacturer for each item or type of item provided in quantity.
- N. Where the selection of materials or methods is left to the discretion of the Contractor, faithfully pursue the use of the best available materials or methods suitable for the purpose intended.
- O. Install Owner furnished fixtures, appliances, and equipment indicated to be Contractor installed, and furnish and install all piping and/or ductwork required to connect Owner furnished fixtures, appliances, and equipment to the Mechanical systems, in accordance with the fixture, appliance, or equipment manufacturer's recommendations and as indicated.

1.3 LOCAL CONDITIONS

- A. Bidders shall familiarize themselves with the Contract Documents and existing conditions which affect Work required by the Contract Documents. It will be assumed that bidders have made a personal examination of the jobsite and existing conditions.
- B. Failure to visit the jobsite will in no way relieve the successful bidder from the necessity of furnishing any materials or performing any Work that may be required to complete the Work in accordance with the Contract Documents with no additional cost to the Owner.

1.4 PERMITS, TESTING, AND INSPECTIONS

- A. Obtain, pay for, and comply with the requirements of all permits, fees and inspections by public authorities required for the Work covered under this Division of the Specifications.
- B. Transmit copies of permit applications, permits received, and public authority inspection reports to the Contracting Officer.
- C. Test mechanical systems in accordance with the most restrictive procedures as defined under applicable codes or as specified elsewhere under this Division.
 - 1. Provide a minimum of three working days' notice to Contracting Officer and public authorities prior to performance of test.
 - 2. If less than required notice is given, the Contracting Officer may require the Contractor to repeat the test at no additional cost to the Owner.
 - 3. Test Work prior to insulating or concealing. If less than required notice is given prior to insulating or concealing, the Contracting Officer may require the Contractor to uncover such Work for inspection and recover same at no additional cost to the Owner.
 - 4. Submit certificate of compliance for all tests indicating system tested, results of tests, witnesses and dates prior to calling for Substantial Completion and final inspections.
 - 5. During testing, isolate piping system equipment and accessories that are not rated to withstand test pressures or perform test prior to connection of such equipment and accessories to the piping system.
- D. Substantial Completion and Final Inspections:
 - 1. Provide minimum of 14 calendar days' notice to Contracting Officer and public authorities of intent to have Work ready for inspection. Confirm that Work will be ready for inspection a minimum of 3 working days' notice prior to requested inspection.
 - 2. Prior to inspection:
 - a. Deliver to the Contracting Officer required equipment, Drawings, and records.
 - b. Clean fixtures and equipment. Remove manufacturer's stickers and leave free of dust and dirt.
 - c. Remove boxes, scrap, and other debris.

- d. Touch up holidays or damaged painted surfaces.
 - e. Contractor's Mechanical Administrator, licensed by the State of Alaska, shall review mechanical systems installation for conformance with Contract Documents. With request for inspection, Contractor's Mechanical Administrator shall verify in writing that this review has been performed and note anything not conforming to Contract Documents.
 - f. With request for re-inspection of Work previously inspected, provide the Owner's previous inspection's deficiency list accompanied by an item by item statement of measures taken to correct the previously listed deficiencies.
 - g. Deliver to Owner personnel all special tools and devices furnished by the manufacturer with items, specialties or equipment to allow installation, disassembly, adjustment, repair or maintenance. Identify special tools or devices as to item to which it is applicable.
 - h. Provide mechanical receivables that the Owner is to receive upon completion of the Project. Turn over an inventory list of materials provided for the Owner's use to the Contracting Officer prior to scheduling substantial completion and final inspections.
 - i. Deliver to the Contracting Officer a Certificate of Instruction signed by all Owner personnel receiving instruction, all Contractor personnel providing instruction, and indicating dates of instruction.
3. During inspection:
- a. Provide complete set of current record drawings for use during inspection.
 - b. Provide complete and operating systems suitable for the season.
 - c. Demonstrate that the mechanical system performs in accordance with the Contract Documents. Provide material and personnel required to perform the demonstration.
 - d. Provide assistance to inspection personnel required for a complete and thorough inspection.

1.5 CODES, ORDINANCES, AND STANDARDS

- A. Federal, State and local Codes and Ordinances take precedence over these Specifications and Drawings where conflicts occur unless the Drawings or Specifications call for more stringent requirements. Notify the Contracting Officer in writing of conflicts.

- B. Follow latest adopted editions of Code of Federal Regulations, Alaska Administrative Code, International Building Code, International Mechanical Code, International Fuel Gas Code, Uniform Plumbing Code, International Fire Code, National Electrical Code, ADA Accessibility Guidelines, NFPA, ASME, NEMA, ASHRAE, SMACNA, etc. as applicable.
- C. Comply with all applicable laws, building and construction codes, OSHA Safety and Health Regulations and applicable requirements of any governmental agency under whose jurisdiction this Work is being performed.

1.6 TEMPORARY HEAT & VENTILATION

- A. During construction and until the Work is accepted as substantially complete by the Owner, provide such temporary heating and ventilating equipment, piping, wiring, power, fuel, vents, stacks and related items as necessary to carry on the Work and to protect personnel, Work and materials from such damage or injury as can be caused by dampness, cold, and fumes.
- B. The system or parts of the system shall be complete in all respects prior to consideration of use.
- C. The Contractor retains responsibility for all damage or harm to material, equipment, Work, personnel, etc. that might result from use of temporary heating and ventilating equipment.
- D. Provide temporary equipment of sufficient number and size to maintain the temperature and ventilation requirements for Work, or a minimum temperature of 50 degrees F, whichever is higher.
- E. Provide temporary ventilation of enclosed areas to cure materials, to disperse humidity, and to prevent accumulation of dust, fumes, vapors, and gases.
- F. Non-vented or open flame heating/ventilating equipment is not permitted.
- G. Electric heaters are not permitted.

1.7 TEMPORARY OPERATION OF FACILITY'S NEW AND EXISTING MECHANICAL SYSTEMS

- A. The facility's existing mechanical systems may be utilized for temporary heat and ventilation. The system or parts of the system utilized shall be complete in all respects prior to consideration of use.
- B. Install indicated filters in all air-handling equipment, including cabinet unit heaters, placed in operation during construction. Install new filters during again before acceptance of substantial completion by the Owner.

- C. Install temporary one (1)-inch thick roll filter media over all return and exhaust air intake grills and openings and over all fan intakes in the areas of work. Change filters as required and leave in place until the rooms or areas receive final cleaning for inspection.
- D. When each piece of equipment is initially placed in service, measure the motor current draw. If it exceeds the nameplate amperage (not service factor amperage), adjust fan and/or motor sheaves or pump balancing cocks to bring motor current draw below the full load current rating. If this is not possible, stop operation and notify the Contracting Officer.
- E. Test, clean, and flush liquid systems prior to utilization.
- F. Clean, repair, and lubricate new piping, ductwork, equipment and accessories as required to return the systems to like new condition prior to substantial completion and final inspections.
- G. Clean, repair, and lubricate existing piping, ductwork, equipment and accessories as required to return the systems to condition before start of construction prior to substantial completion and final inspections.
- H. The Contractor retains all responsibility for providing required maintenance until acceptance of substantial completion by the Owner. Fuel and power consumed during temporary use of the facility's new mechanical systems will be paid for by the Owner. Take steps to conserve energy.

1.8 MECHANICAL COMPLIANCE RECORD

- A. Record the performance of all tests, sterilization, cleaning, flushing and refilling of mechanical systems required under this Division.
- B. Include date, time and time interval, test results, brief description of method of tests, and witnesses.
- C. Submit this record to the Contracting Officer prior to scheduling Substantial Completion and final inspections.

1.9 INSTRUCTION OF OWNER'S PERSONNEL

- A. Instruct designated Owner personnel in the proper operation, periodic maintenance and lubrication of the project's mechanical systems, equipment and accessories utilizing an accepted Operations and Maintenance Manual.
- B. As instructors, include journeymen plumbers, electricians, and control men, each fully knowledgeable of the project's mechanical systems and equipment.

- C. Instruct only those Owner personnel specifically designated by the Contracting Officer. Instruction of other Owner personnel will not meet the requirements of this Section.
- D. Include system operations; periodic maintenance including locations and techniques; periodic lubrication including materials, methods and locations; location of concealed valves, instruments, dampers, etc.; location of electrical breakers and disconnects associated with mechanical equipment; and location of control items.
- E. Instruct Owner personnel for a minimum of two hours plus that required by other sections of this Division of the Specifications.
- F. Schedule the instruction period in the same manner as for system tests. The Contractor is obligated to only one instruction period. The instruction period may be divided into more than one period with the concurrence of the Contracting Officer.

1.10 RECORD DOCUMENTS

- A. Maintain one record copy of:
 - 1. Contract Drawings.
 - 2. Specifications.
 - 3. Change Orders and other modifications to the Contract.
 - 4. Reviewed Shop Drawings, product data, and samples.
 - 5. Field test records.
 - 6. Inspection certificates.
 - 7. Manufacturer's certificates.
- B. Store Record Documents and samples in clean, dry, and legible condition in Field Office apart from documents used for construction.
- C. Keep Record Documents and samples available for inspection by Contracting Officer.
- D. Record information concurrently with construction progress. Do not conceal any Work until required information is recorded.
- E. Legibly mark Contract Drawings and Shop Drawings to record actual construction, including:
 - 1. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of construction.

2. Field changes of dimension and detail.
 3. Changes made by Change Orders.
 4. Details not on original Contract Drawings.
 5. References to related Shop Drawings and Change Orders.
 6. Actually installed manufacturer, trade name, and catalog number of each product listed.
 7. Changes made to equipment identification assignments, replacing Contract Document assigned equipment designations, at each location that designation occurs.
 8. Valve numbering for each valve assigned a number at each location shown on the Drawings.
- F. Legibly mark contract Specifications to record actual construction, including:
1. Manufacturer, trade name, and catalog number of each product actually installed, particularly optional items and substitute items.
 2. Changes made by Change orders.
- G. Upon request by the Contracting Officer submit complete collection of Record Documents to the Contracting Officer for review and duplication as desired.
- H. Two weeks prior to request for final inspection submit project Record Documents, including Shop Drawings of Contractor designed systems such as fire protection systems and control systems, to the Contracting Officer for review. Documents shall bear a statement signed and dated by a legal representative of the Contractor indicating that the Record Documents reflect "As-built" conditions.
- I. At Contract closeout, deliver corrected Record Documents to the Contracting Officer. Contract Drawings will be provided to the Contractor by the Contracting Officer in AutoCAD format. CAD files shall be modified as necessary to correctly show all features of the project as it has been constructed by bringing the contract set into agreement with the approved preliminary As-built prints. Upon completion, the As-built drawing set shall be delivered to the Contracting Officer in AutoCAD format, on full-size Mylar sheets, and on full-size paper prints, together with the preliminary As-built marked prints.

1.11 WARRANTY

- A. All manufacturer and supplier standard equipment, item or accessory warranties covered under this Division shall be the Contractor's responsibility under Project warranty period.

- B. Equipment, item, or accessory warranties shall commence upon the date of Final Acceptance by the Owner.
- C. Transfer all manufacturer and supplier standard equipment, item or accessory warranties to the Owner upon expiration of Project warranty period.
- D. Any warranties, more stringent than manufacturer's standard, specified or indicated under this Division remain the responsibility of the Contractor before and after expiration of Project warranty period.
- E. Minimum manufacturer or supplier warranty is that of the manufacturer or supplier used as the basis of design.

1.12 MECHANICAL WORK IN EXISTING FACILITIES

- A. Carefully lay out Work in advance.
- B. Verify existing conditions affecting Work, including existing sizes and materials indicated, prior to beginning Work or ordering materials that are affected by existing conditions. Beginning of Work means acceptance of existing conditions. Match existing products and Work unless otherwise noted. Notify Contracting Officer of conflicts in writing.
- C. Verify locations and elevations of utilities that are crossed or connected to prior to installation of new Work.
- D. When portions of existing mechanical, electrical, structural, etc. conditions are shown, it is not meant to indicate that all of such systems are shown.
- E. Where cutting, channeling, chasing, or drilling of floors, walls, partitions, ceilings or other surfaces is necessary for the proper installation, support or anchorage of the mechanical equipment, piping, or ductwork, carefully perform this Work and patch to match existing conditions.
- F. Repair any damage to building, piping, or equipment with skilled mechanics of the appropriate trade.
- G. Coordinate connection of new services to existing building systems, including required systems shut downs, with the Contracting Officer. Limit required shut down periods to a minimum. Isolate, drain, and refill existing systems as required to accommodate Work. Restore existing systems to full operational condition.
- H. Cut, move, or remove existing items as necessary for installation of new Work and restore and replace at completion.
- I. Remove from site removed materials unless otherwise indicated that the material is to be salvaged for the Owner.

- J. Remove, cut, and patch in a manner to minimize damage and to provide means of restoring items to original conditions.
- K. Replace existing mechanical insulation that is removed to accomplish Work with new insulation matching existing.
- L. Remove piping connected to or serving fixtures or equipment being removed and other piping being removed, back to its main or connection to a still active branch and cap. Remove associated hangers and supports. Patch, to match existing, pipe insulation on mains at removed branch lines. If such piping is connected to mains or still active branches in areas that are not accessible or that are not being made accessible, then remove piping into area of non-accessibility and cap. Patch, to match existing, openings in walls, ceilings, or floors left or created as a result of piping or ductwork removal.
- M. Remove waste and vent piping that is being removed and that extends below slab-on-grade to top of slab, plug with concrete, and grind flush with top of slab or to below top of slab, plug pipe with concrete, and patch slab to match existing.
- N. Remove piping, other than waste and vent piping, that is being removed and that extends below slab-on-grade to below top of slab, cap pipe, and patch slab to match existing.
- O. Remove slab-on-grade floor drains that are being removed to below slab, plug pipe with concrete, and patch slab to match existing.

1.13 ASBESTOS FREE MECHANICAL SYSTEMS

- A. Provide mechanical systems that do not contain asbestos or asbestos-containing materials.

1.14 PROJECT COMPLETION DOCUMENTATION AND MATERIAL TURN OVER

- A. See individual specification sections for required project completion documentation, and required maintenance or spare parts to be turned over to the Contracting Officer, including the following:
 - 1. Record documents and reports:
 - a. Record documents – Section 20 05 00 “Common Work Results.”
 - b. Sterilization testing certificate – Section 22 11 16 “Domestic Water Piping.”
 - c. Conformed O&M manuals – Section 20 01 00 “Operation and Maintenance for Mechanical.”

- d. Test performance records for sterilization, cleaning, flushing and refilling of mechanical systems – Section 20 05 00 “Common Work Results.”
- 2. Training completion record:
 - a. Mechanical instructions training completion record – Section 20 05 00 “Common Work Results.”
 - b. Mechanical access panels and marker familiarization training completion record – Section 20 05 00 “Common Work Results.”

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 20 05 11 - COMMON SUBMITTAL REQUIREMENTS FOR MECHANICAL

- A. This Section covers required mechanical equipment review submittals of material, equipment, items and accessories covered under this Division for review by the Contracting Officer to determine conformance with the Project design concepts and Contract documents prior to commencement of Work under this Division.

PART 2 PRODUCTS

2.1 FORM

- A. Each equipment review submittal or resubmittal shall be indexed, tabbed, and bound copies of data, Drawings, and materials lists. Alphabetize the index by item name and list the Specification Section and item number under which each item is submitted.
- B. Submittal information is required for all material and equipment specified or indicated on the Drawings.
- C. Organize submittals by Specification Section. Separate each Section by a heavy stock divider sheet with plastic index tab. Type Specification Section numbers on both sides of paper inserts.
- D. Identify each item of the submittal with an item number. Number the first item within a Specification Section "#1", the second item within a Specification Section "#2", and so forth. Restart numbering sequence with each Specification Section. Type item numbers on both sides of paper inserts.
- E. Include equipment indicated on the Drawings, but not covered by a Specification Section, with the appropriate volume under a tab marked "Drawings." Rules for item numbering and item data sheets apply.
- F. Precede each item with a completed Item Data Sheet. See required format attached to the end of this Specification Section.
- G. Material submitted shall indicate the specific item(s) proposed for this Project. Delete or cross out all other items.
- H. Long lead mechanical equipment may be submitted for review in a separate volume. Include all long lead items in a single volume that is indexed, tabbed and bound as required for regular mechanical equipment review submittals. Maintain the long lead

item submittal as a separate volume throughout the submittal review process; do not incorporate into the regular mechanical equipment review volumes.

- I. Each submittal or resubmittal of each volume shall be complete and shall contain all previously submitted material except that being replaced by new or revised material which shall be removed. Partial or improperly indexed or tabbed submittals or resubmittals shall be rejected without review or comment.
- J. With each resubmittal include a complete summary of all changes and additions made to the equipment review submittal since the previous submittal. Only those items included in the summary will be reviewed with the resubmitted package.
- K. Do not submit "updates" for previous submittal packages with resubmittals. Previous submittals will not be updated.

2.2 DATA

- A. Include the following data for each item as applicable:
 - 1. Manufacturer and model number.
 - 2. Drawing equipment number.
 - 3. Catalog literature.
 - 4. Operating characteristics including capacity data, performance curves, flow rates, pressure drops, etc.
 - 5. Electrical characteristics and wiring diagrams.
 - 6. Dimensions and connection sizes.
 - 7. Installation and adjustment instructions, requirements and recommendations.
 - 8. Color samples.
 - 9. Warranty data.
- B. A list of minimum submittals required is provided in each Section. These lists are not necessarily complete or all-inclusive and the Contractor is responsible for complete submittal.

PART 3 EXECUTION

3.1 REQUIRED COPIES AND TIMING

- A. Submit one electronic copy (PDF format) of the Mechanical Equipment Review Submittal or resubmittal for review and acceptance by the Contracting Officer. Electronically Index (Bookmark) each section and item within the electronic submittal.
- B. Materials submitted shall be reviewed and accepted by the Contracting Officer before Contractor releases material for fabrication or shipment.

END OF SECTION

ATTACHMENT: ITEM DATA SHEET

ITEM DATA SHEET

1. Item number:
2. Item name/Drawing equipment number:
3. Specification section/Drawing number:
4. Manufacturer/model number:
5. Use and location: (1)
6. Spare parts source:
7. Providers of warranty service:
8. Proposed deviations from the Contract Documents: (2)
9. Other Contractor comments:
10. Contractor Certification: (3)

The undersigned Contractor Representative certifies that he has reviewed the attached information and has determined that the proposed material complies with the requirements of the Contract Documents; he has coordinated installation of the material with the work of other trades and existing conditions; he has determined and verified field measurements, field construction criteria, manufacturer's installation requirements affecting the proposed material; and has notified the Contracting Officer of conflicts.

Contractor Representative's Signature

- (1) Unless otherwise indicated, provide this information only when the product's use and location is not obvious. Provide this information for all items provided under Specification Sections 21 13 00 "Fire Suppression Sprinkler System" and 23 09 23 "Direct Digital Control Systems for HVAC."
- (2) If this section is left blank it will be assumed that proposed equipment is exactly as specified and indicated on the Drawings.
- (3) The Contractor referenced here is the General Contractor for the project. The signature of a subcontractor representative is not acceptable.

PART 1 GENERAL

1.1 SCOPE: SECTION 20 05 29 - HANGERS AND SUPPORTS FOR MECHANICAL

- A. This Section covers selection, installation, and adjustment of equipment and material used to hang and/or support mechanical systems and equipment.

1.2 SUBMITTALS

- A. Manufacturer's Data:
 - 1. Catalog Cuts and Selections for equipment and accessory items.
 - 2. Submit concrete anchors used in each application with installation instructions and ICC evaluation report or other third party test report showing seismic rating (where applicable).
- B. Application Schedule: Hanger and supports schedule indicating the type of product and materials proposed for each size or application.
- C. Test Reports:
 - 1. Third party reports or certifications where indicated.
 - 2. Copy of the standard form used for Special Inspection of concrete anchors.
- D. Shop Drawings for fabricated pipe or equipment hangers or supports including:
 - 1. Dimensions.
 - 2. Construction details.
 - 3. Materials.
 - 4. Deflection for spring hangers.
 - 5. Rated or design load, actual load and safety factors.
 - 6. Applications.

PART 2 PRODUCTS

2.1 GENERAL

- A. Provide factory standard hangers and supports complete with necessary inserts, bolts, nuts, rods, washers, and other accessories. B-Line, Anvil, or equal.

2.2 PIPE HANGERS

- A. Pipe hangers placed in direct contact with pipe:
 - 1. Pipe hangers for 8 inches and smaller cast iron and steel pipe: Swivel loop style, galvanized carbon steel. B-Line Figure 2 or equal.
 - 2. Pipe hangers for 6 inches and smaller copper pipe: Swivel loop style, carbon steel, epoxy coated or felt lined, copper colored. B-Line Figure 200F or equal.
- B. Pipe hanger placed around insulation:
 - 1. Clevis ring style, electro-galvanized carbon steel. B-Line B3100 or equal.
 - 2. J-Hanger, electro-plated steel, used with B-Line B3151 shield. B-Line B3690.
 - 3. Adjustable band hanger, pre-galvanized steel, used with B-Line B3151 shield. B-Line 3170.

2.3 RISER CLAMPS

- A. Riser clamps for cast iron and steel pipe: Electro-galvanized carbon steel. B-Line B3373 or equal.
- B. Riser clamps for copper pipe: Copper-electro plated carbon steel. B-Line B33373CT or equal.
- C. Riser clamps for DWV pipe: Carbon steel. B-Line B3373 or equal.

2.4 HANGER RODS

- A. Electro-galvanized carbon steel. B-Line ATR or equal.
- B. Select equipment hanger rods as required to properly support the equipment in-service load. Select tank, coil, etc. supports assuming that they are full of water when in service.

- C. Size equipment hanger rods as follows:
- | <u>Load/rod</u> | <u>Hanger Rod</u> |
|------------------|-------------------|
| 0 - 300 pounds | 3/8-inch |
| 301 - 600 pounds | 1/2-inch |
- D. Size pipe hanger rods as follows:
- | <u>Pipe Size</u> | <u>Hanger Rod</u> |
|-------------------|-------------------|
| 1/2 to 2 inches | 3/8-inch |
| 2-1/2 to 4 inches | 1/2-inch |

2.5 CHANNEL STRUTS

- A. Fabricated from 0.105 inch thick rolled mild steel. Unistrut, Erico Caddy, Power Strut, or equal. Select as follows for spans up to seven feet. For longer spans or greater loads submit Shop Drawing for review.
- | <u>Total Load</u> | <u>Unistrut</u> | <u>Power Strut</u> |
|-------------------|-----------------|--------------------|
| 0 - 245 pounds | P1000 | PS 200 |
| 246 - 680 pounds | P1001 | PS 200 2T3 |
| 681 - 1360 pounds | P1001C41 | ----- |
- B. Finish: Zinc plated electrostatically for interior applications and hot dipped galvanized after fabrication for exterior applications.

2.6 ARTICULATING HANGER SYSTEMS

- A. Malleable iron eye socket fitting. B-Line B3222 or equal.
- B. Carbon steel linked welded eye rod. B-Line B3211X or equal.

2.7 STEEL STRUCTURE ATTACHMENTS

- A. Beam clamps: Malleable/ductile iron with set screw and lock nut and with retainer strap. B-Line Figure 65 and B-Line Figure 66 or equal. Provide retainer strap listed with clamp or provide a steel strap of not less than 16-gauge thickness and not less than 1.0-inch wide for pipe diameters up to 8-inch.
- B. Welded beam attachments: Carbon steel. B-Line 50, B3083 or B3083WO or equal.
- C. Channel strut beam or truss clamps: Carbon steel with retainer rod and hook. B-Line Figure 40 or equal.
- D. Steel truss attachments: Carbon steel fittings compatible with truss.

PART 3 EXECUTION

3.1 GENERAL

- A. Examine the Architectural and Structural Drawings and existing conditions and provide additional structural members or framing required to support the mechanical systems.

- B. Hanger spacing:

<u>Metallic Pipe Size (Inches)</u>	<u>Maximum Spacing Between Supports (Feet)</u>
1/2	5
3/4	6
1	7
1-1/4	8
1-1/2	9
2	10
2-1/2	11
3	12
4	14

- C. Provide articulating hangers so that systems can swing freely.
- D. Provide additional support at valves, elbows, bends, and other locations where concentrated loads occur.
- E. Where groups of three or more pipes occur, they may be supported with trapeze hangers constructed from channel strut and hanger rods. Space trapeze hangers for smallest pipe supported.
- F. Do not support piping four inches size and larger from a single joist or structural member.
- G. Support hub and no-hub cast iron piping at each joint, in accordance with above hanger spacing table, or in accordance with coupling manufacturer's recommendations, whichever is more stringent.
- H. Support piping with sleeved couplings and grooved end piping at each length of pipe and at each fitting, in accordance with above hanger spacing table, or in accordance with coupling manufacturer's recommendations, whichever is more stringent.

- I. Provide floor mounted channel strut racks to support piping, ductwork, and equipment that cannot be otherwise supported from structure overhead or from walls.
- J. When copper piping is placed in direct contact with channel strut supports, wrap piping at point of contact with two wraps of dielectric pipe wrap.
- K. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges. Remove sharp or rough areas on exposed surfaces.

3.2 HANGERS ON INSULATED PIPING

- A. Place hanger or support in direct contact with the pipe unless specifically indicated that piping is to have continuous insulation. When placed in direct contact install fiberglass insulation around the hangers.
- B. For suspended piping required to have continuous insulation, provide calcium silicate insulation segments between supported piping and hangers / supports. In addition, provide galvanized iron shields between the insulation segments and hangers / supports. Fabricate shields for four inches and larger pipes of 16-gauge iron, 18 inches long. Shields for three inches and smaller pipes of 18-gauge material, 12 inches long. Match the radius of curvature of the shields with the outside radius of the insulation.

3.3 WALL MOUNTED PIPING

- A. Unless otherwise indicated, support piping that is installed exposed on walls with channel strut and compatible pipe clamps. Space supports in accordance with "Hanger Spacing" table.
- B. Support vertical piping drops within one foot of top of drop and within one-foot of bottom of drop and in accordance with "Hanger Spacing" table.
- C. Where groups of two or more pipes occur support piping from common channel strut.
- D. Secure channel strut to poured concrete walls with expansion anchors, to CMU walls with expansion anchors in grouted cells, and to stud walls with screws into studs or blocking.
- E. Cut multiple channel strut supports for a piping run or drop to consistent lengths.

3.4 STEEL STRUCTURES

- A. Secure to steel structures through use of beam clamps with retainer strap, channel strut with retainer rod and hook or with welded beam attachments.
- B. Bolts and nuts shall conform to ASTM A307 and flat washers are required under all nuts.

- C. Weld in accordance with American Welding Society Code AWS D1.1, latest edition, using E70xx electrodes.
- D. Verify with steel truss and deck manufacturer's maximum allowable loads on single point support; provide additional steel supports as required to comply with maximum recommended values.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 20 05 53 - IDENTIFICATION FOR MECHANICAL

- A. This Section covers the identification of mechanical systems and components.

1.2 SUBMITTALS

- A. Manufacturer's Data:
- Catalog Cuts and selections for identification products and accessory items.
- B. Application Schedule: Prior to ordering, submit valve tag schedule indicating the type of service and size proposed for each application.

PART 2 PRODUCTS

2.1 PIPE MARKERS

- A. Pressure-sensitive identification markers banded in place with color-coded tape incorporating direction of flow arrows. "Opti-Code" markers and "Arrows On a Roll", Seton Name Plate Corp., Brady, Brimar, or equal. Painted stencil markers are not acceptable.
- B. Provide markers of length and with letter size indicated below. Diameter listed is outer diameter of insulation if piping is insulated.
- | Nominal
<u>Diameter</u> | Marker
<u>Length</u> | Letter
<u>Height</u> |
|----------------------------|-------------------------|-------------------------|
| 3/4 to 1-1/4 inch | 8 inches | 1/2-inch |
| 1-1/2 to 2 inches | 8 inches | 3/4-inch |
| 2-1/2 to 7 inches | 12 inches | 1-1/4 inch |
- C. Provide marker with appropriately color-coded background and with a clearly printed legend to identify the contents of the pipe in conformance with the "Scheme for the Identification of Piping Systems" (ANSI A13.1).

2.2 VALVE TAGS AND COLD PIPING ACCESSORY TAGS

- A. Laminated plastic with subsurface printing, heavy duty, brass bead chain, and appropriately colored border. Craftmark, Seton, Brimar, or equal.
- B. Minimum of 2-inch diameter round tag or 2-inch square tag with maximum three text lines, 0.2-inch high characters, 8 characters per line.
- C. On each tag, print valve number and message describing system, function, and equipment and/or area/room served. Message shall be as complete as possible within space available.
- D. Number valves sequentially.

2.3 EQUIPMENT LABELS

- A. Minimum 1-inch high by 1/16-inch thick, black, laminated plastic with white core. "Setonply" by Seton Nameplate Corp., Craftmark, Brimar, or equal.
- B. Engraved with 3/8-inch high characters identifying the item or equipment by symbol and description indicated on the Drawings.

2.4 ACCESS PANEL AND CEILING IDENTIFICATION MARKERS

- A. Color coded dots. Avery or equal.
- B. Color coded tacks. Craftmark or equal.
- C. Color code markers as follows:
 - 1. Plumbing valves and devices: Green.

PART 3 EXECUTION

3.1 GENERAL INSTALLATION

- A. Identify new piping, valves, balancing cocks, and equipment in the facility whether concealed within accessible spaces or exposed.
- B. Do not label piping exposed to view in offices or in public access areas.
- C. Identify insulated and uninsulated piping.

- D. Locate identification so that it is readable by a person standing on the floor for exposed items or at point of access for concealed items.

3.2 PIPING AND DUCTS

- A. Provide identification at both sides of partitions and floors, at all branch takeoffs, at connections to equipment and at intermediate intervals not in excess of 50 feet.
- B. Secure pipe pressure-sensitive vinyl markers in place with pressure-sensitive tape incorporating direction of flow arrows on both ends of label. At each end make two complete wraps around the pipe with tape so that tape is wrapped back on itself to assure attachment.

3.3 VALVES

- A. Identify normally open valves and balancing cocks with valve identification tags. Unless otherwise noted, equipment isolation valves and balancing cocks that are located adjacent to equipment isolated are exempted from this requirement.
- B. Identify normally closed valves with valve identification tags and with a second valve tag reading "NORMALLY CLOSED" in 1/2-inch high letters.

3.4 ACCESS PANEL AND CEILING IDENTIFICATION MARKERS

- A. Provide identification markers for accessible tile ceiling areas and on access panels to indicate the location of balancing cocks, valves, volume dampers, fire dampers and other concealed mechanical items that may require service or adjustment.
- B. Apply markers to the exposed face of panel or the ceiling tee bar nearest the concealed item.
- C. Familiarize the Owner's maintenance personnel with the location and function of the markers during the instruction period.

3.5 COLD PIPING ACCESSORIES

- A. Identify all chilled water and cold water accessories located underneath insulation with identification tags connected to accessory with number 6 bead chain or equivalent strength connection. Unless otherwise noted, all chilled water piping accessory tags are to be visible without removal of insulation.

3.6 IDENTIFICATION COLOR CODING

- A. Provide identification markers that match the existing piping and equipment color scheme.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 20 07 00 - INSULATION FOR MECHANICAL

- A. This Section covers selection and installation of insulation used in the mechanical systems.

1.2 SUBMITTALS

- A. Manufacturer's Data:
 - 1. Catalog cuts and selections of insulation products and accessory items.
- B. Application Schedule: Insulation and thickness schedule indicating the type of product, materials, and thickness proposed for each size or application.

PART 2 PRODUCTS

2.1 GENERAL

- A. Provide interior insulation having UL listed composite fire and smoke hazard rating not exceeding:
 - 1. Flame Spread: 25.
 - 2. Smoke Developed: 50.
- B. Provide accessories such as adhesives, mastics, cement, tapes, and jackets having the same component rating as listed above.
- C. Lagging fabric: 100 percent textured silica yarn or 100 percent cotton fabric, 8-ounce per square yard, with or without pre-applied rewettable adhesive finish. Fattal's Thermocanvas, Zetex 300, or equal.
- D. Thermal Insulation Coatings: Washable, abrasion resistant coating for thermal insulation. Minimum continuous service rating of 180 degrees F. Maximum dry basis VOC level of 80 grams per liter. Used to adhere lagging fabric without pre-applied rewettable adhesive finish to pipe and duct insulation. Foster #30-36 Sealfas, MEI, or equal.
- E. Insulating cements: Mineral fiber base with maximum 0.90 (BTU-inch)/(square foot-hour-Fahrenheit) conductivity at 200 degrees F mean temperature.

- F. Vapor barrier coatings: Water based, fire resistive, flexible, maximum 0.08 perm water vapor permeability. Foster #30-80, MEI, or equal.
- G. Preformed plastic insulation covers and inserts: PVC with fiberglass inserts provided by cover manufacturer. Johns-Manville Zest2.2on, Fuller Speedline, Proto, or equal.
- H. Metal Jackets: 0.024-inch thick embossed aluminum jacket meeting ASTM B209 with 1/2-inch wide, 0.015 inch-thick, annealed stainless steel bands.

2.2 INTERIOR, ABOVE GRADE, PIPING SYSTEM INSULATION

- A. Fiberglass preformed by the manufacturer specifically for the size pipe or tubing on which it is to be installed unless otherwise indicated. Owens/Corning Fiberglass 25 ASJ, Johns-Manville Micro-Lok 650 with AP-T self-sealing jacket, Knauf ASJ, or equal.
- B. Continuous service rating: 500 degrees F minimum.
- C. Provide with vapor barrier jacket with maximum water vapor permeability of 0.02 perm and minimum beach puncture resistance rating of 50 units and a white kraft paper facing.
- D. Conductivity: 0.28 (BTU-inch)/(square foot-hour-Fahrenheit) maximum at 100 degrees F mean temperature.

PART 3 EXECUTION

3.1 GENERAL

- A. Provide insulation for new piping for the systems indicated below unless otherwise indicated.
- B. Replace existing insulation that is removed to accomplish Work with new insulation as specified in Part 2 of this Section or to match existing if not specified. Match existing thickness unless otherwise indicated.
- C. Surface Preparation: Prior to insulation installation, clean and dry exterior surfaces of pipe and ductwork.
- D. Patch insulation on existing pipe mains at removed branches. Match existing insulation and finish.
- E. Do not cover or obscure manufacturer or field applied identification tags, nameplates, information labels, etc.
- F. Seal exposed ends and face of cuts in fiberglass insulation with thermal insulation coating.

3.2 INTERIOR, ABOVE GRADE PIPING SYSTEMS INSULATION, GENERAL

- A. Unless otherwise indicated insulate the following piping systems with insulation thickness, additional insulation covering and insulation with a continuous vapor barrier in accordance with ASHRAE 90.1. Details used by this standard are included in the following schedule:

1. Interior domestic cold water, plumbing vent and rain water leader cold piping:

<u>Pipe Size</u>	<u>Insulation Thickness</u>	<u>Lagging Fabric Required</u>	<u>Continuous Vapor Barrier Required</u>
<1-1/2 inches	1/2-inch	{1}	No
1-1/2 inches and larger	1-inch	{1}	Yes

2. Interior domestic hot water, recirculated domestic hot water, and hot water heating systems with design operating temperatures from 105 degrees F to 140 degrees F hot piping:

<u>Pipe Size</u>	<u>Insulation Thickness</u>	<u>Lagging Fabric Required</u>	<u>Continuous Vapor Barrier Required</u>
<1-1/2 inches	1/2-inch	{1}	No
1-1/2 inches and larger	1-inch	{1}	No

{1} Lagging required at exposed installations, including mechanical spaces
{2} Provide continuous insulation.

- B. Where pipes are insulated with two layers, stagger the insulation joints.
- C. Where insulation terminates, continue insulation jacketing to cover exposed insulating material and seal to adjoining pipe with vapor barrier coating for cold piping and thermal insulation coating for hot piping.
- D. Insulate equipment and accessories with the same thickness as is called for on adjoining piping unless otherwise indicated.
- E. Insulate pipe fittings to the same thickness as adjoining pipe insulation. Insulate fittings with preformed plastic insulation covers packed full with fitting manufacturer provided fiberglass insulation or with segmented sections of pipe insulation and 1/4-inch coat of insulating cement.
- F. Insulate solder and threaded end gate, globe, and ball valve bodies with pipe insulation. Do not insulate valve bonnets or bonnet rings. Fill voids between cutouts and valve body with insulating cement.

- G. Insulate flanged end gate and globe valve bodies with insulating cement. Do not insulate valve bonnets.
- H. Place hanger or support in direct contact with the pipe and install fiberglass insulation around the hangers when continuous insulation is not required.
- I. To provide a continuous insulation on piping systems, provide calcium silicate insulation segments between the pipes supported and the support. In addition, provide galvanized iron shields between the insulation segments and the supports.

3.3 INTERIOR, ABOVE GRADE PIPING SYSTEMS INSULATION, HOT PIPING

- A. Insulate domestic hot water piping in which hot water is being recirculated. Insulation is not required on branch piping to fixtures through which hot water is not being recirculated.
- B. Terminate insulation at wall and floor penetrations. Maintain minimum one-inch clearance to combustible construction. At exposed locations, size penetration so that butting insulation to wall trims out penetration.
- C. Seal and secure seams and joints to provide a neat and evenly rounded finished surface. It is not necessary to seal penetrations if holes are neatly cut in the insulation and there is a tight fit between the insulation and the penetrating equipment. A complete vapor barrier envelope is not required.
- D. Secure self-sealing lap on concealed piping insulation with outward clinching staples at a maximum spacing of one foot on center.
- E. Insulation is not required on flexible connectors, check valves, pipe guides, anchors, strainers, traps, meters, and pump bodies and any section of pipe between them less than 6 inches in length.
- F. When pipe insulation is installed around ring, clamp, and clevis type hangers place the seam at the hanger rod and slit the sealing lap to pass around the rod.
- G. Notch pipe insulation at trapeze hangers and at angle iron floor and wall supports. Seal insulation exposed to atmosphere with a thermal insulation coating.

3.4 INTERIOR, ABOVE GRADE PIPING SYSTEMS INSULATION, COLD PIPING

- A. Domestic cold water: Only that piping serving more than one plumbing fixture. Insulation is not required on cold water branch line piping serving a single fixture, except that piping serving hose bibbs and drinking fountains. Insulate cold water piping serving hose bibbs and drinking fountains full length. Insulation is not required on piping serving only trap primers or on piping from trap primers to floor drains.

- B. Continuous through walls, floors, and ceilings unless otherwise indicated.
- C. Seal and secure seams, joints, and penetrations in order to provide a neat and evenly rounded finished surface and complete vapor barrier envelope. Fill gaps between insulation and penetrating equipment with insulating cement and coat with vapor barrier coating.
- D. Cover piping insulation and ends with lagging fabric, which has been dipped in a thermal insulation coating. Lap lagging fabric over ends of preformed plastic insulation covers. In areas exposed to public view, install lagging fabric neatly, with cut rather than torn edges, to give a clean architectural appearance.
- E. When pipe insulation is installed around ring, clamp, and clevis type hangers place the seam at the hanger rod and slit the sealing lap to pass around the rod. After installation, seal these slits with a vapor barrier coating. If notching of the insulation is required to accommodate the hanger, fill the notches with insulating cement and vapor barrier coating.
- F. When trapeze hangers and angle iron wall or floor supports are used on piping systems place the pipes supported in direct contact with the hanger. Notch fiberglass insulation at these hangers and supports. Fill the notches with insulating cement and vapor barrier coating.
- G. Insulate check valves with insulating cement or with an oversized section of pipe insulation. If pipe insulation is used, the inside diameter shall equal the outside diameter of the adjoining pipe insulation. If insulating cement is used, do not insulate the cap, flanges, and the side plug provided for access to the hinge pin.
- H. Insulate balancing cock and flow control valve bodies with pipe insulation. Insulation shall not interfere with use of the pressure sensing taps or the volume regulating mechanism. Fill voids between cutouts and valve body with insulating cement and vapor barrier coating.
- I. Insulate isolation valves with an oversized section of insulation. The inside diameter shall equal the outside diameter of the adjoining pipe insulation. Fill any voids between insulation sections with insulating cement and vapor barrier coating to provide a continuous vapor barrier.
- J. Where inline piping equipment are covered by insulation and cannot be identified by an exposed item such as a valve handle or pressure taps, install a chain as indicated in Section 20 05 53 "Identification for Mechanical" for a connection of a tag outside the insulation. Seal chain where it penetrates the vapor barrier.

3.5 INTERIOR, BURIED, PIPING SYSTEM INSULATION

- A. Insulate with closed cell insulation either slipped over the piping or split longitudinally and applied on the piping. Match insulation thickness indicated for similar above ground systems.
- B. Seal and secure seams, joints, and penetrations in order to provide a complete vapor barrier envelope. Fill gaps between insulation and penetrating equipment with insulating cement.
- C. Fabricate insulation fittings from properly miter cut pieces.
- D. Bond seams and joints together with adhesive in accordance with manufacturer's recommendations.
- E. Continuous through floors.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 22 05 00 - COMMON WORK RESULTS FOR PLUMBING

- A. This Section covers selection and installation of basic pipe materials and specialties.

1.2 SUBMITTALS

- A. Manufacturer's Data:
 - 1. Catalog Cuts and selections for equipment and accessory items.
- B. Application Schedule: Provide a schedule indicating the balancing cock size and GPM for each application.
- C. Substantial deviations:
 - 1. Submit to the Contracting Officer Shop Drawings of any proposed substantial deviations in the piping systems for this facility from these documents for review and acceptance. Include four, plus the number required by the Contractor, copies of each Shop Drawing submitted.
 - 2. Any substantial deviations from these documents installed prior to Contracting Officer review and acceptance of submittal may be required by the Contracting Officer to be removed and the indicated system be installed at no additional cost to the Owner.
 - 3. The Contracting Officer is the sole judge of what constitutes a substantial deviation and what is an acceptable alternate technique or method.

PART 2 PRODUCTS

2.1 GENERAL

- A. Provide all pipes, fittings, and accessories required for complete functioning installation of all piping systems specified and required under this Division.
- B. Miscellaneous items specified and required under this Division are not necessarily indicated on the Drawings.

2.2 DRAIN VALVES

- A. Unless otherwise indicated, provide 3/4-inch ball valve or 1/2-inch ball valve if line size is less than 3/4-inch. Provide with brass hose end fitting and cap.

2.3 BALANCING COCKS

- A. Combination balancing cock and positive shutoff valve with check valved pressure sensing taps, drain tap, and memory stop. B & G Circuit Setter Plus, Armstrong CBV, Taco Accu-Flow, TA Hydronics or equal.
- B. Teflon seats, EPT checks, EPDM stem "O" ring.
- C. 200 psig, 250 degrees F rated.
- D. At time of instruction, provide differential pressure meter by the same manufacturer as balancing cock and with sensing connections to suit balancing cocks. Complete with calibrated curves and carrying case, capable of plus or minus 3 percent accuracy, and with reading range of 0 to 25 feet B & G Model R0-5, Taco or equal.

2.4 FLEXIBLE CONNECTORS

- A. Corrugated hose and single braid fabricated from carbon steel for iron or steel systems. Flexonics Series 100, Metraflex, Twin City Hose, or equal.
- B. Corrugated hose and single braid fabricated from bronze for copper systems. Flexonics Series 300, Metraflex, Twin City, or equal.
- C. Rated for 200 psig at 200 degrees F.
- D. End fittings to suit installation.
- E. Minimum live length is manufacturer's recommended length to allow 3/4-inch offset distance from centerline.

2.5 DIELECTRIC PIPE PROTECTION

- A. Polyvinyl, 20-mil, self-adhesive. Westape, Calpico, 3M, or equal.
- B. Dielectric nipples and flanges only. Dielectric unions are specifically not allowed.

2.6 ESCUTCHEONS

- A. Chrome plated brass or stainless steel, spring clip. Dearborne Brass Series 5300, Brasscraft, or equal.

PART 3 EXECUTION

3.1 GENERAL INSTALLATION AND APPEARANCE

- A. Conceal piping above ceilings or in walls unless otherwise noted. Expose piping in spaces without ceiling or furred-in enclosures.
- B. Install piping in truss space in areas with exposed trusses unless otherwise noted.
- C. Route piping within the facility vapor retarder and insulation boundary.
- D. Ream pipes thoroughly and clean before installation.
- E. Flush lines clear of debris, scale and discoloration prior to startup. Clean out all strainers and drip pockets after flushing.
- F. Run pipes with proper grade to provide for easy drainage and venting.
- G. Support piping to provide an installation that is without sag or droops.
- H. Provide pipe supports and offsets, loops or accessories at equipment connections to minimize connection stress caused by normal system warm-up, cool-down and equipment operation.
- I. Install parallel runs of non-insulated piping as required to provide a minimum of 6-inch clearance between piping.
- J. Install parallel runs of insulated piping as required to provide a minimum of 4-inch clearance between insulation surfaces.
- K. Install piping and equipment as required to provide minimum 6 feet 8 inches of headroom in mechanical rooms, piping within 12 inches of the ceiling in other spaces with exposed piping, and as required to not interfere with other items or access to equipment.
- L. At piping penetrating wood or metal framing, cut hole with hole saw and center piping in hole so that piping does not contact wood framing. Provide plastic isolation bushings as required to adequately support piping.
- M. Provide escutcheons around pipes at finished floor, ceiling or wall penetrations. Slip steel escutcheons onto piping prior to joining pipe. Set steel escutcheons with bead of paintable silicon sealant at perimeter, press tight to wall or floor, and remove excess sealant.

3.2 FITTINGS, VALVES, AND ACCESSORIES

- A. Make changes of direction, branches, and reductions in pipe size with fittings. Bushings are allowed only in non-pressurized tanks and similar equipment.
- B. Provide isolation valves at pressure gauges.
- C. At pressure reducing valves, control valves, and other devices whose size is less than adjoining pipe size, provide reducers immediately adjacent to the device.
- D. Provide isolation valves in piping adjacent to equipment, including terminal units, and where indicated. Locate valves on system side of unions or flanges.
- E. Provide unions or flanges at connections to equipment and control valves to allow maintenance. Locate unions or flanges to allow maintenance without removal of any additional piping other than that between the union or flange and the equipment. Use of dielectric unions is prohibited.
- F. Provide drains valves at all low points in piping systems for drainage unless otherwise indicated.
 - 1. Drains are not required at plumbing fixtures if stop valve forms the low point of the branch.
 - 2. Provide threaded plug where space is not available to install a drain valve.
- G. Install balancing cocks with test ports at or above the horizontal position. Permanently mark, etched or stamped, balancing cock setpoint scale readings and balanced flow in GPM on 1-1/2 inches diameter brass valve tags attached to balancing cock with No. 6 bead chain. This tag is in addition to valve identification tag called for elsewhere.
- H. Install flow control valves with test ports at or above the horizontal position.
- I. Provide flexible connectors where indicated and on all connections to vibration isolated equipment.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 22 05 23 - GENERAL DUTY VALVES FOR PLUMBING

- A. This Section covers the selection and installation of manual valves.

1.2 SUBMITTALS

- A. Manufacturer's Data:
 - 1. Catalog Cuts and selections for valves and accessory items.
 - 2. Data showing parts in contact with domestic water are ANSI/NSF 61 certified to current lead free requirements.
- B. Application Schedule: Submit valve schedule indicating the type of service and size proposed for each application.

PART 2 PRODUCTS

2.1 GENERAL

- A. Standardize on one make as much as possible but not to the extent of sacrificing quality listed. Apollo, Grinnell, Milwaukee, Nibco, Stockham, Vogt, or equal.
- B. Provide ball valves where indicated, in lieu of gate valves for domestic water systems in piping two inch and less in size. All valves, two inches and smaller, shall be of same type. Provide ball valves installed in insulated piping systems with extended stems to bring the handle clear of the insulation.
- C. ASME Class 125 unless otherwise indicated.
- D. Gate and globe valves: Repackable under pressure with valve fully open.

2.2 DOMESTIC WATER SYSTEM VALVES

- A. Valves two inches and smaller:
 - 1. Isolation valves: ANSI/NSF-61 certified, full port ball valve, two-piece, bronze body with brass internals, chrome plated or stainless steel ball, reinforced Teflon seats and seals, non-blowout stem. Nibco S-585-66-LF/T585-66-LF or equal.

2. Check valves installed in horizontal lines and vertical lines with upward flow: Bronze body and cap, renewable seat and disc, teflon disc. ANSI/NSF -61 certified, swing check, Y-Pattern, with threaded cap that allows for removal of entire disc assembly through top of valve body. Nibco S-413-Y-LF/T-413-Y-LF or equal.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Provide isolation valves in piping adjacent to equipment and where indicated. Locate valves on system side of unions or flanges.
- B. Do not install valve stems below horizontal.
- C. Install globe valves in domestic water systems such that valve closes in direction of normal flow.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 22 11 16 - DOMESTIC WATER PIPING

- A. This Section covers selection, installation, testing, and sterilization of domestic water systems and storage tanks.

1.2 SUBMITTALS

- A. Manufacturer's Data, catalog cuts and selections of pipe and fittings are not required unless otherwise indicated.
- B. Application Schedule: Piping schedule indicating the type of product and materials proposed for each size or application.
- C. Submit certification documentation showing that pipe and fittings in contact with domestic water are ANSI/NSF 61 rated to current lead free requirements.

PART 2 PRODUCTS

2.1 PIPE, FITTINGS, AND JOINTS

- A. At minor modifications to existing piping: Match existing.
- B. Interior, above ground, three inches and smaller:
 - 1. ANSI/NSF-61 certified type L hard copper tubing with wrought copper solder fittings with lead free solder.
 - 2. 1/2-inch, 3/4-inch, and 1-inch branch piping may be connected to copper run piping using mechanically formed tee connections when run piping is minimum 1-inch, 1-1/2 inches, and 2 inches respectively. 1/2-inch branch piping may only be used to connect a single lavatory or drinking fountain.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Prior to performing Work on the existing domestic water system, isolate that portion of system requiring renovation from the rest of the facility's domestic water system. Do not reconnect the isolated portion of the domestic water system to the existing system until sterilization and testing are complete.

3.2 TESTING

- A. Hydrostatically test new and existing system at 100 psig for one hour with no noticeable pressure drop or water leaks.
- B. Report any leaks in the existing system to the Contract Officer. At the option of the Contract Officer, he will issue a Contract Amendment to repair leaks or he will have other maintenance personnel repair the leaks.
- C. Test minor modifications to existing system by returning system to normal operating conditions and visually inspect new joints for leaks.
- D. Firmly tap soldered fittings with a leather or rubber mallet during the pressure test to demonstrate soundness of soldered joints.

3.3 STERILIZATION

- A. Flush piping clear of debris or discoloration prior to sterilization.
- B. Prior to connection of the isolated portion of the domestic water system to the existing system thoroughly sterilize new and isolated existing portions of the domestic water system with sodium hypochlorite mixed in solution with water as required to achieve not less than 50 parts per million of available chlorine for a minimum of 24 hours. Take all precautions required to avoid introduction of foreign material into the non-isolated portion of the existing domestic water system. If foreign materials are introduced, sterilize the entire existing domestic water system.
- C. Introduce the sterilizing solution into the system in a manner that will cause all parts of the system to come into contact with the solution. Operate all valves at least twice during the contact period.
- D. After sterilization, flush the solution from the system with clean water until the residual chlorine content is less than 0.2 PPM throughout the system. During the flushing period, open and close all valves several times.
- E. 24 hours after flushing the system, sample the water at each domestic water storage tank, at one lavatory in each bathroom, at each drinking fountain, at each breakroom or coffee sink, and at the kitchen pot sink and submit samples to an independent testing laboratory for bacteriological testing. Submit certificate of conformance with bacteriological quantity standards, by State of Alaska, Department of Environmental Conservation Drinking Water Regulations (18AAC80), to the Contracting Officer.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 22 11 19 - DOMESTIC WATER SPECIALTIES

- A. This Section covers selection and installation of domestic water specialties.

1.2 SUBMITTALS

- A. Manufacturer's Data:
 - 1. Catalog Cuts and selections for equipment and accessory items.
- B. Submit data showing that specialties and accessories in contact with domestic water are ANSI/NSF 61 certified to current lead free requirements.

PART 2 PRODUCTS

2.1 TEMPERING VALVES

- A. TV-1 : ANSI/NSF-61 certified bronze body construction with minimum adjustment range 80F to 120F with +/-3F temperature control range at min flow rate of 0.5gpm. Provide with integral inlet filter washers and hot and cold water check valves, ASSE rated for application, Watts LFUSG-B, or equal.

2.2 DIELECTRIC NIPPLES

- A. Nipples specifically designed to dielectrically isolate dissimilar metal piping systems. Epco, Capitol, or equal.

2.3 HOSE BIBBS

- A. HB-1, HB-2: J.R. Smith, Figure 5670 or equal. Vacuum breaker hose valve, polished chrome finish. Wall flange, removable wheel handle.

PART 3 EXECUTION

3.1 SPECIALTIES

- A. Provide fixture supply tubes, fixture stops, and fixture traps, tailpieces, and trap arms at all fixtures requiring same including items specified under this Division.
- B. Install traps with no more than one slip or compression fitting between trap and rough-in.
- C. Provide escutcheons over all fixture supply and trap tailpiece wall penetrations. Inside cabinet escutcheons may be primed and painted steel instead of chrome plated.
- D. Provide dielectric nipples or flanges with dielectric gaskets at flange faces, bolt heads, and nut faces at connections of dissimilar piping materials in the domestic water system including connections.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 22 13 16 - SANITARY WASTE AND VENT PIPING

- A. This Section covers the selection, installation, and testing of waste piping systems.

1.2 SUBMITTALS

- A. Manufacturer's Data, catalog cuts and selections of pipe and fittings are not required.
- B. Application Schedule: Pipe and fittings schedule indicating the type of product and materials, proposed for each size or application.

PART 2 PRODUCTS

2.1 WASTE AND VENT PIPING

- A. At minor modifications to existing piping: Match existing.
- B. Above ground:
 - 1. Service weight cast iron soil pipe and fittings. "No hub" pipe and fittings with compression type couplings.
 - 2. Where seismic restraint of piping is required join piping with heavy-duty compression type fittings, Mission C - HW or equal.
 - 3. Copper DWV pipe and fittings with lead free solder.
- C. Underground within the building: Service weight cast iron soil pipe and fittings. Bell and spigot pipe and fittings with double seal compression joints or "no-hub" pipe and fittings with heavy duty compression type couplings. Provide continuous machine applied corrosion protective coating. Galvanizing is not acceptable.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Pitch drainage piping down 1/4-inch per foot in direction of flow unless otherwise indicated.

- B. Provide cleanouts where indicated, at the base of every stack, every 75 feet along buried interior runs, at every 200 feet along exterior runs, for each aggregate change of direction greater than 135 degrees, and where otherwise required by code. Provide access panels or grade cover boxes where required and as indicated.
- C. Piping passing through concrete or cinder walls and floors shall be protected against external corrosion by a protective sheathing or wrapping or other means that will withstand any reaction from the lime and acid of concrete. Minimum wall thickness of material shall be 0.025-inch and shall allow for movement including expansion and contraction of piping.

3.2 TESTING

- A. Test new and existing waste and vent system by plugging all openings and filling system with water. Test with a minimum of ten feet of water head on all joints with no level drop in one half hour period.
- B. Report any leaks in the existing system to the Contracting Officer. At the option of the Contracting Officer, he will issue a Contract Amendment to repair leaks or he will have Government maintenance personnel repair the leaks.
- C. Testing minor modifications to existing system by returning system to normal operating conditions and visually inspect new joints for leaks.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 22 13 19 - SANITARY WASTE PIPING SPECIALTIES

- A. This Section covers the selection and installation of sanitary waste piping equipment, drains, cleanouts and their connection to the domestic waste and vent piping system.

1.2 SUBMITTALS

- A. Manufacturer's Data:
 - 1. Catalog cuts and selections for equipment and accessory items. Provide a separate complete submittal for each equipment package even though some accessory items may be repeated in several packages.
 - a. Rough-in data.
- B. Shop Drawings:
 - 1. Contractor fabricated items.

PART 2 PRODUCTS

2.1 FLOOR DRAINS

- A. Vinyl tile floors: Cast iron body and flashing with round nickel bronze adjustable strainer head w/secured square hole grate and tile flange. Trap primer connection. J. R. Smith 2005/2010-A-P-F or equal.

2.2 FLOOR SINKS

- A. Floor Sinks: 14-gauge, Type 304 stainless steel, 10 inches deep, flanged receptor body with flashing clamp and seepage control holes. Perforated stainless steel dome strainer and sediment bucket. Body interior, dome bottom strainer, and sediment bucket polished to #4 finish. 12 inches square, 14-gauge, Type 304 stainless steel ribbed non-tilt loose set 1/2 grate with 1/2-inch square holes where indicated. J.R. Smith 3009-C (-12) or equal.

2.3 CLEANOUTS

- A. Vinyl tile floors: Cast iron body and frame with round adjustable scoriated secured cast iron top. Spigot outlet with taper thread, bronze closure plug. J. R. Smith 4223 or equal.
- B. Walls: Extra heavy cast iron cleanout tee. Stainless steel shallow cover. Countersunk, taper thread, bronze plug. Vandal proof screws. J. R. Smith 4532-U or equal.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Connect waste to all items requiring same including items specified under this Division.
- B. Coordinate kitchen equipment rough-in locations, heights, and sizes with kitchen equipment supplier.
- C. Refer to the Architectural Drawings for fixture locations and mounting heights.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 22 42 13 - COMMERCIAL WATER CLOSETS AND URINALS

- A. This Section covers the selection and installation of water closet fixtures, urinal fixtures, bidet fixture, accessories, and their connection to the domestic water and waste piping system.

1.2 SUBMITTALS

- A. Manufacturer's Data:
 - 1. Catalog cuts and selections for fixtures and accessory items.
 - a. Provide a separate complete submittal for each fixture type even though some trim items may be repeated in several fixtures.
 - b. Rough-in data for each fixture.

PART 2 PRODUCTS

2.1 GENERAL

- A. Provide IAPMO and ADA complying products and installations.
- B. Fixtures: Vitreous china and enameled cast iron fixtures shall be white and stainless steel fixtures natural polished satin finish without discoloration unless otherwise indicated.

2.2 FLUSH VALVES

- A. Manual flush valves: Diaphragm type, chrome plated brass construction, quiet operating, exposed installation unless otherwise indicated, oscillating non-hold-open handle, check angle stop with protective cap, vacuum breaker flush connection. Provide ADA complying flush valve handles and handle locations at handicapped water closets and urinals. Sloan Royal, Zurn Aquaflush, or equal.

2.3 FLOOR MOUNTED WATER CLOSETS

- A. WC-1: ADA-complying, low flow.
 - 1. Configure and install as required to conform to ADA.

2. Elongated bowl, siphon jet action, vitreous china, water saver (1.6 gallons per flush cycle) with 1-1/2 inch top spud. American Standard Madera, Kohler Highcliff, or Mansfield equal.

2.4 ACCESSORIES

- A. Seat: White plastic, injection molded, open, less cover, stainless steel self-sustaining check hinge, for elongated bowl. Church 9400C, Bemis, or equal to suit.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Connect water and waste to all items requiring same.
- B. Refer to the Architectural Drawings for fixture locations and mounting heights.
- C. Install fixtures tight to adjacent walls and/or floors. Wall hung fixtures shall not exhibit noticeable deflection when supporting 175 pounds weight on furthestmost projection.
- D. Provide tight fitting sleeves over all exposed water rough-in nipples.
- E. Caulk joints between fixtures and walls with non-hardening silicon caulking. Provide caulking with color matching fixture or wall finish.
- F. Securely anchor fixture supports to adjacent floors and/or walls, and install in accordance with manufacturer's instructions. Secure floor mounted fixture supports to floor with 1/2-inch diameter bolts.
- G. Provide wall hung water closet fixture supports with anchor foot when supporting a single fixture. Secure fixture-supporting studs with double nuts at the fixture support.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 22 42 16 - COMMERCIAL LAVATORIES AND SINKS

- A. This Section covers the selection and installation of lavatory and sink fixtures, accessories, and their connection to the domestic water and waste piping system.

1.2 SUBMITTALS

- A. Manufacturer's Data:
 - 1. Catalog cuts and selections for fixtures and accessory items.
 - a. Provide a separate complete submittal for each fixture type even though some trim items may be repeated in several fixtures.
 - b. Rough-in data for each fixture.

PART 2 PRODUCTS

2.1 GENERAL

- A. Provide IAPMO and ADA complying products and installations.
- B. Fixtures: Vitreous china and enameled cast iron fixtures shall be white and stainless steel fixtures natural polished satin finish without discoloration unless otherwise indicated.
- C. Rough-in sleeves: Polished chromium plated drawn brass tubing.
- D. Wall mounted lavatory fixture supports: Floor mounted, concealed arms with positive mechanical locking device, four-by-four inch base supports with welded high strength steel uprights, adjustable sleeve. Arms fully adjustable after installation of wall finish. J.R. Smith, Josam, or equal.

2.2 WALL MOUNTED LAVATORIES

- A. L-1: Concealed arm lavatory with concealed floor mounted support (ADA complying).
 - 1. Vitreous china, 20 by 18-inch lavatory with front overflow and integral back. American Standard Lucerne, Kohler Greenwich, or Mansfield equal.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Connect water and waste to all items requiring same.
- B. Coordinate kitchen equipment rough-in locations, heights, and sizes with kitchen equipment supplier.
- C. Refer to the Architectural Drawings for fixture locations and mounting heights.
- D. Install fixtures tight to adjacent walls and/or floors. Wall hung fixtures shall not exhibit noticeable deflection when supporting 175 pounds weight on furthestmost projection.
- E. Provide tight fitting sleeves over all exposed water rough-in nipples.
- F. Caulk joints between fixtures and walls with non-hardening silicon caulking. Provide caulking with color matching fixture or wall finish.
- G. Securely anchor fixture supports to adjacent floors and/or walls, and install in accordance with manufacturer's instructions. Secure floor mounted fixture supports to floor with 1/2-inch diameter bolts.
- H. In addition to floor connections, brace wall mounted lavatory fixture supports with channel strut or other framing member so that support is rigidly connected to adjacent wall framing studs.
- I. Reinforce plywood flooring with additional 1-1/8 inches plywood glued to underside of floor at all floor mounted fixture supports.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 22 42 23 - COMMERCIAL SHOWERS

- A. This Section covers the selection and installation of commercial shower fixtures, drains, accessories, and their connection to the domestic water and waste piping system.

1.2 SUBMITTALS

- A. Manufacturer's Data:
 - 1. Catalog cuts and selections for fixtures and accessory items.
 - a. Provide a separate complete submittal for each fixture type even though some trim items may be repeated in several fixtures.
 - b. Rough-in data for each fixture.

PART 2 PRODUCTS

2.1 GENERAL

- A. Provide IAPMO and ADA complying products and installations.

2.2 WALL SHOWER

- A. SH-1: Handicap wall shower:
 - 1. Fixture: 14-gauge, type 304 stainless steel construction. Plumbing access panel. Diverter valve with lever handle. Wall mounted showerhead. Hand held shower spray with 59-inch stainless steel flexible hose and post style mounting bracket. In line backflow preventer with quick disconnect for flexible hose. Stops in supplies. All exposed parts either No. 4 finish stainless steel or chrome plated brass. Symmons Visu-Temp, without seat and grab bars, or equal.

2.3 SHOWER VALVE

- A. Diaphragm operated, pressure balanced mixing valve with user visible thermometer and adjustable temperature limit stop. All exposed parts stainless steel or chrome plated. Integral stops. Symmons Visu-Temp 4-5000VT, or equal.

2.4 SHOWER HEAD

- A. Heads: Chrome plated brass, single spray pattern, universal ball joint, 1.5 GPM flow regulator, secure to stainless steel wall flange, Symmons 4-241 or equal.
- B. ADA Head: Hand held shower spray with 59-inch flexible stainless steel hose, vacuum breaker, and post style mounting bracket. Symmons H401-V or equal.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Connect water and waste to all items requiring same.
- B. Refer to the Architectural Drawings for fixture locations and mounting heights.
- C. Install fixtures tight to adjacent walls and/or floors. Wall hung fixtures shall not exhibit noticeable deflection when supporting 175 pounds weight on furthestmost projection.
- D. Provide tight fitting sleeves over all exposed water rough-in nipples.
- E. Caulk joints between fixtures and walls with non-hardening silicon caulking. Provide caulking with color matching fixture or wall finish.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 22 42 39 - COMMERCIAL FAUCETS, SUPPLIES, AND TRIM

- A. This Section covers the selection and installation of commercial faucets, supplies, trim, accessories, and their connection to the domestic water piping system.

1.2 SUBMITTALS

- A. Manufacturer's Data:
 - 1. Catalog cuts and selections for fixtures and accessory items.
 - a. Provide a separate complete submittal for each fixture type even though some trim items may be repeated in several fixtures.
 - b. Rough-in data for each fixture.
 - c. Data showing parts in contact with domestic water are ANSI/NSF 61 rated to current lead free requirements.
- B. Application Schedule: Faucet, Supplies and Trim schedule indicating the type of product and materials, proposed for each size or application.

PART 2 PRODUCTS

2.1 SUPPLIES AND TRIM

- A. Fixture supply tubes – concealed applications: Braided stainless steel outer sheath, inner PVC tubing, ANSI/NSF-61 certified, rated to 125 psi from 40 to 140 degrees F. Brasscraft, Speedway, Eastman, or equal.
- B. Fixture stops: Polished chromium plated, brass, compression disc, quarter turn, ANSI/NSF-61 certified, angle stop valves with inlet end connections to suit piping system. Fixed handle operated unless indicated otherwise. Brasscraft, Speedway, Eastman, or equal.
- C. Fixture traps, tailpieces, and trap arms: Unless otherwise indicated provide polished, chromium plated, drawn brass tubing not less than 17-gauge. Dearborne Brass 701/704, Brasscraft, Eastman, or equal.

- D. Tailpiece, trap, trap arm, stop valves, and supplies covers: ADA complying, molded closed cell vinyl, white, paintable, hidden fasteners. Truebro or equal.

2.2 ACCESSORIES

- A. Strainer: Stainless steel strainer basket, neoprene stopper, chrome plated brass, 1-1/2 inch outlet with elbow for offset tailpiece. Elkay LK-35L or equal.

2.3 LAVATORY FAUCETS

- A. F-1: Lavatory faucets:
 - 1. ADA, 4-inch single lever faucet handle, aerator, chrome plated brass construction, ANSI/NSF-61 certified, renewable seats. Chicago No. 420 and No. E12 Softflo aerator, Moen Chateau series, or equal.
 - 2. Drain: Stainless steel grid drain with 1-1/2 inch tailpiece. Elkay LK-18-B or equal.

PART 3 EXECUTION

3.1 SPECIALTIES

- A. Provide fixture supply tubes, fixture stops, and fixture traps, tailpieces, and trap arms at all fixtures requiring same.
- B. For fixtures with exposed supply tubes, provide polished brass. For concealed applications, braided stainless steel supply tubes may be used at Contractor's option.
- C. Install traps with no more than one slip or compression fitting between trap and rough-in.
- D. Provide escutcheons over all fixture supply and trap tailpiece wall penetrations. Inside cabinet escutcheons may be primed and painted steel instead of chrome plated.

END OF SECTION

Printed on: 6/5/2019		Project: Fairbanks Pioneer Home Tub Room and Kitchen Upgrades Project No: AJF 20-02C				Owner: Department of Health and Social Services Contractor: Consultant: Design Alaska, Inc.				
SD-01 Preconstruction; SD-02 Shop Drawings; SD-03 Product Data; SD-04 Samples; SD-05 Design Data; SD-06 Test Report; SD-07 Certificates; SD-08 Manufacturer's Instructions; SD-09 Manufacturer's Report; SD-10 O&M Data; SD-11 Closeout; SD-12 LEED										
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Item No.	Transmittal No.	Spec. Section or Drawing No.	Submittal Description	Spec. Paragraph or Drawing Detail No.	Item Description	Contractor's Scheduled Submittal Date	Actual		Status	Review Comments
							Submittal Date	Return Date		
<p>Corrections or comments do not relieve Contractor from compliance with Contract Documents. Submittals are reviewed only for general conformance with the design concept of the project and general compliance with the Contract Documents. The Contractor is responsible for confirming compliance with the Contract Documents, confirming & correlating all quantities & dimensions, selecting fabrication processes, techniques of construction, coordinating his work with that of other trades, and existing conditions; and performing his work in a safe and satisfactory manner.</p>										
03 30 00										
					Cast-In-Place Concrete					
1		1.3.A.1	SD-03	2.2	Steel Reinforcing					
2		1.3.A.2	SD-03	2.7	Admixtures					
3		1.3.B	SD-09		Design Mixtures					
4		1.4.E	SD-06		Field Quality-Control Reports					
05 12 00										
					Structural Steel Framing					
1		1.2.A.1	SD-03	2.3	Primer					
2		1.2.B	SD-02		Shop Drawings					
3		1.3.A	SD-07		Qualification Data for Installer					
4		1.3.A	SD-07		Qualification Data for Fabricator					
5		1.3.A	SD-07		Qualification Data for Testing Agency					
6		1.3.B	SD-07		Welding Certificates					
06 10 00										
					Rough Carpentry					
1		1.3.A	SD-03	2.2	Dimension Lumber for Concealed Applications					
06 41 00										
					Architectural Wood Casework					
1		1.4.B	SD-02		Shop Drawings					
2		1.4.C	SD-03	2.5.A	Hardware					
3		1.4.C	SD-03	2.5.B	Adjustable Shelf Supports - Side-Mounted System					
4		1.4.C	SD-03	2.5.C	Drawer and Door Pulls					
5		1.4.C	SD-03	2.5.D	Hinges					
6		1.4.D	SD-04		Samples - Pulls, Hinges, Shelf Standards and Locksets					
09 05 61										
					Common Work Results for Flooring Preparation					
1		1.4.A	SD-01		Visual Observation Report					
2		1.4.B	SD-03		Floor Covering and Adhesive Manufacturer's Product Literature					
3		1.4.C	SD-06		Testing Agency's Report					
4		1.4.D	SD-06		Adhesive Bond and Compatibility Test Report					
5		1.4.E	SD-01		RFCI Recommended Work Practices for Removal of Resilient Floor Coverings					
6		1.5.C.1	SD-07		Evidence of Experience of Testing Agency					
09 21 16										
					Gypsum Board Assemblies					
1		1.4.B	SD-03	2.1.B	Non-Loadbearing Framing System Components					
2		1.4.B	SD-03	2.2	Gypsum Wallboard					
3		1.4.B	SD-03	2.3.A	Acoustic Insulation					

Reviewed By _____

Date _____

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4		1.4.B	SD-03	2.3.B	Acoustic Sealant					
5		1.4.B	SD-03	2.3.C	Finishing Accessories					
6		1.4.B	SD-03	2.3.D	Joint Materials					
7		1.4.B	SD-03	2.3.G	Screws for Attachment to Steel Members Less Than 0.033 inch in Thickness					
8		1.4.B	SD-03	2.3.H	Screws for Attachment to Steel Members From 0.033 to 0.112 inch in Thickness					
09 65 00					Resilient Flooring					
1		1.4.B	SD-03	2.1	Sheet Flooring					
2		1.4.C	SD-02		Shop Drawings					
3		1.4.D	SD-04		Selection Samples					
4		1.4.E	SD-04		Verification Samples					
5		1.4.F	SD-10		Maintenance Data					
10 26 01					Solid Surface Sheet Wall Finish					
1		1.3.B	SD-03	2.3.A	Typical Walls					
2		1.3.B	SD-03	2.3.B	Shower Walls					
3		1.3.B	SD-03	2.4.A	Adhesive					
4		1.3.B	SD-03	2.4.B	Sealant					
5		1.3.B	SD-03	2.4.C	Trim					
6		1.3.C	SD-02		Shop Drawings					
7		1.3.D	SD-04		Samples					
8		1.3.E	SD-08		Manufacturers Instructions					
12 36 00					Countertops					
1		1.4.B	SD-03	2.1.B	Solid Surfacing Countertops and Window Sills					
2		1.4.B	SD-03	2.2.B	Plywood for Supporting Substrate					
3		1.4.B	SD-03	2.2.C	Adhesives					
4		1.4.B	SD-03	2.2.D	Joint Sealant					
5		1.4.C	SD-02		Shop Drawings					
6		1.4.D	SD-04		Selection Samples					
7		1.4.E	SD-04		Verification Samples					
8		1.4.F	SD-06		Test Reports					
20 05 29					Hangers and Supports for Mechanical					
1		1.2.A	SD-03	2.2.A	Non Insulated Pipe Hangers					
2		1.2.A	SD-03	2.2.B	Insulated Pipe Hangers					
3		1.2.A	SD-03	2.3	Riser Clamps					
4		1.2.A	SD-03	2.4	Hanger Rods					
5		1.2.A	SD-03	2.5	Channel Struts					

Reviewed By _____

Date _____

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6		1.2.A	SD-03	2.6	Articulating Hanger Systems					
7		1.2.A	SD-03	2.7	Steel Structure Attachments					
8		1.2.B	SD-01		Application Schedule: Hanger and Support Systems					
9		1.2.C.1	SD-06		Test Reports: Third Party					
10		1.2.C.2	SD-06		Concrete Anchors Special Inspection Form					
11		1.2.D	SD-02		Shop Drawings: Fabricated Items					
20 05 53					Identification for Mechanical					
1		1.2.A	SD-03	2.1	Pipe Markers: Pressure Sensitive					
2		1.2.A	SD-03	2.2	Valve Tags and Cold Piping Accessory Tags					
3		1.2.A	SD-03	2.3	Equipment Labels					
4		1.2.A	SD-03	2.4	Access Panel and Ceiling Identification Markers					
5		1.2.B	SD-01		Application Schedule: Valve Tags					
20 07 00					Insulation for Mechanical					
1		1.2.A	SD-03	2.1.C	Lagging Fabric					
2		1.2.A	SD-03	2.1.D	Thermal Insulation Coatings					
3		1.2.A	SD-03	2.1.E	Insulating Cement					
4		1.2.A	SD-03	2.1.G	Plastic Insulation Covers					
5		1.2.A	SD-03	2.2	Interior, Above Grade, Piping System Insulation					
6		1.2.B	SD-01		Application Schedule: Insulation and Thickness					
22 05 00					Common Work Results for Plumbing					
1		1.2.A	SD-03	2.2	Drain Valves					
2		1.2.A	SD-03	2.3	Balancing Cocks					
3		1.2.A	SD-03	2.5	Flexible Connectors					
4		1.2.A	SD-03	2.6	Dielectric Pipe Protection					
5		1.2.A	SD-03	2.7	Escutcheons					
6		1.2.B	SD-05		Balancing Cock Schedule					
7		1.2.C	SD-02		Substantial Deviations					
22 05 23					General Duty Valves for Plumbing					
1		1.2.A	SD-03	2.2.A.1	Valves 2 Inches and Smaller: Isolation Ball Valves					
2		1.2.A	SD-03	2.2.A.2	Valves 2 inches and Smaller: Check Valves					
3		1.2.B	SD-01		Application Schedule: Valves					
22 11 16					Domestic Water Piping					
1		1.2.B	SD-01		Application Schedule: Product and Materials for Piping and Fittings					
2		1.2.C	SD-03		NSF 61 Data					
22 11 19					Domestic Water Specialties					

Reviewed By _____

Date _____

Printed on: 6/5/2019					Project: Fairbanks Pioneer Home Tub Room and Kitchen Upgrades		Owner: Department of Health and Social Services			
					Project No: AJF 20-02C		Contractor: Design Alaska, Inc.			
SD-01 Preconstruction; SD-02 Shop Drawings; SD-03 Product Data; SD-04 Samples; SD-05 Design Data; SD-06 Test Report; SD-07 Certificates; SD-08 Manufacturer's Instructions; SD-09 Manufacturer's Report; SD-10 O&M Data; SD-11 Closeout; SD-12 LEED										
1=No Exception Taken; 2 = Accepted as Noted; 3 = Revise & Resubmit; 4 = Submit Specified Item; 5 = Rejected										
Item No.	Transmittal No.	Spec. Section or Drawing No.	Submittal Description	Spec. Paragraph or Drawing Detail No.	Item Description	Contractor's Scheduled Submittal Date	Actual		Status	Review Comments
							Submittal Date	Return Date		
1		1.2.A	SD-03	2.2	Tempering Valves					
2		1.2.A	SD-03	2.3	Dielectric Nipples					
3		1.2.A	SD-03	2.4	Hose Bibbs					
4		1.2.B	SD-03		NSF 61 Data					
22 13 16					Sanitary Waste and Vent Piping					
1		1.2.B	SD-01		Application Schedule: Product and Materials for Piping and Fittings					
22 13 19					Sanitary Waste Piping Specialties					
1		1.2.A	SD-03	2.1.C	Floor Drain					
2		1.2.A	SD-03	2.2.A	Kitchen Floor Sink					
3		1.2.A	SD-03	2.3.A	Vinyl Tile Cleanout					
4		1.2.A	SD-03	2.3.B	Wall Cleanout					
5		1.2.B	SD-02		Shop Drawings: Trench Drains					
22 42 13					Commercial Water Closets and Urinals					
1		1.2.A	SD-03	2.2.A	Manual Flush Valve					
2		1.2.A	SD-03	2.3.A	Water Closets					
3		1.2.A	SD-03	2.4.A	Seats					
22 42 16					Commercial Lavatories and Sinks					
1		1.2.A	SD-03	2.2.A	Lavatories					
22 42 23					Commercial Showers					
1		1.2.A	SD-03	2.2.A	Showers					
2		1.2.A	SD-03	2.3	Shower Valves					
3		1.2.A	SD-03	2.4	Shower Head					
22 42 39					Commercial Faucets, Supplies, and Trim					
1		1.2.A	SD-03	2.1	Supplies and Trim					
2		1.2.A	SD-03	2.2	Accessories					
3		1.2.A	SD-03	2.3.A	Lavatory Faucets					
4		1.2.B	SD-01		Application Schedule: Faucet, Supplies and Trim Schedule					

Corrections or comments do not relieve Contractor from compliance with Contract Documents. Submittals are reviewed only for general conformance with the design concept of the project and general compliance with the Contract Documents. The Contractor is responsible for confirming compliance with the Contract Documents, confirming & correlating all quantities & dimensions, selecting fabrication processes, techniques of construction, coordinating his work with that of other trades, and existing conditions; and performing his work in a safe and satisfactory manner.

Reviewed By _____

Date _____

Printed on: 6/5/2019					Project: Fairbanks Pioneer Home Tub Room and Kitchen Upgrades					Owner: Department of Health and Social Services	
					Project No: AJF 20-02C					Contractor:	
										Consultant: Design Alaska, Inc.	
SD-01 Preconstruction; SD-02 Shop Drawings; SD-03 Product Data; SD-04 Samples; SD-05 Design Data; SD-06 Test Report; SD-07 Certificates; SD-08 Manufacturer's Instructions; SD-09 Manufacturer's Report; SD-10 O&M Data; SD-11 Closeout; SD-12 LEED											
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Item No.	Transmittal No.	Spec. Section or Drawing No.	Submittal Description	Spec. Paragraph or Drawing Detail No.	Item Description	Contractor's Scheduled Submittal Date	Actual		Status	Review Comments	
							Submittal Date	Return Date			
					Drawings						
1		A701, A900	SD-02 SD-03 SD-08		Specialty Equipment						
2		A900	SD-02 SD-03 SD-08		Partition Track and Curtain(PRTN-1)						
3		A900	SD-02 SD-03 SD-08		Window Film - Translucent (WF-1)						
4		M001	SD-03		Commercial Dishwasher (DW-1)						

Corrections or comments do not relieve Contractor from compliance with Contract Documents. Submittals are reviewed only for general conformance with the design concept of the project and general compliance with the Contract Documents. The Contractor is responsible for confirming compliance with the Contract Documents, confirming & correlating all quantities & dimensions, selecting fabrication processes, techniques of construction, coordinating his work with that of other trades, and existing conditions; and performing his work in a safe and satisfactory manner.

Reviewed By _____

Date _____

Catalog Cut Sheets

LUCERNE™ WALL-HUNG LAVATORY

- Vitreous china
- Front overflow
- D-shaped bowl
- Self-draining deck area with contoured back and side splash shields
- Faucet ledge

Faucet holes on 203mm (8") centers (Illus.):

- ☐ **0356.028** For exposed bracket support
Shown with 4801.862 Amaris Heritage faucet with Triune Cross handles (not included)
- ☐ **0356.015** For wall hanger (included) or concealed arms support
- ☐ **0356.037** For wall hanger (included) or concealed arms support
 - Extra right-hand hole
- ☐ **0356.073** For wall hanger (included) or concealed arms support
 - Extra left-hand hole

Faucet holes on 102mm (4") centers:

- ☐ **0355.027** For exposed bracket support
- ☐ **0355.012** For wall hanger (included) or concealed arms support
- ☐ **0355.034** For wall hanger (included) or concealed arms support
 - Extra right-hand hole
- ☐ **0355.056** For wall hanger (included) or concealed arms support
 - Extra left-hand hole

Single center faucet hole (Illus.):

- ☐ **0356.041** for exposed bracket support
Shown with 1340.000 metering faucet (not included)
- ☐ **0356.421** for wall hanger (included) or concealed arms support
- ☐ **0356.137** For wall hanger (included) or concealed arms support
 - Extra right-hand hole
- ☐ **0356.115** For wall hanger (included) or concealed arms support
 - Extra left-hand hole

Nominal Dimensions:
521 x 464mm (20-1/2" x 18-1/4")

Bowl sizes:
381mm (15") wide, 254mm (10") front to back,
165mm (6-1/2") deep

Compliance Certifications -
Meets or Exceeds the Following Specifications:
• ASME A112.19.2 for Vitreous China Fixtures

 Top of front rim mounted 864mm (34") from finished floor.
**MEETS THE AMERICAN DISABILITIES ACT GUIDE-
LINES AND ANSI A117.1 ACCESSIBLE AND USEABLE
BUILDINGS AND FACILITIES - CHECK LOCAL CODES.**



0356.028



0356.041

To Be Specified

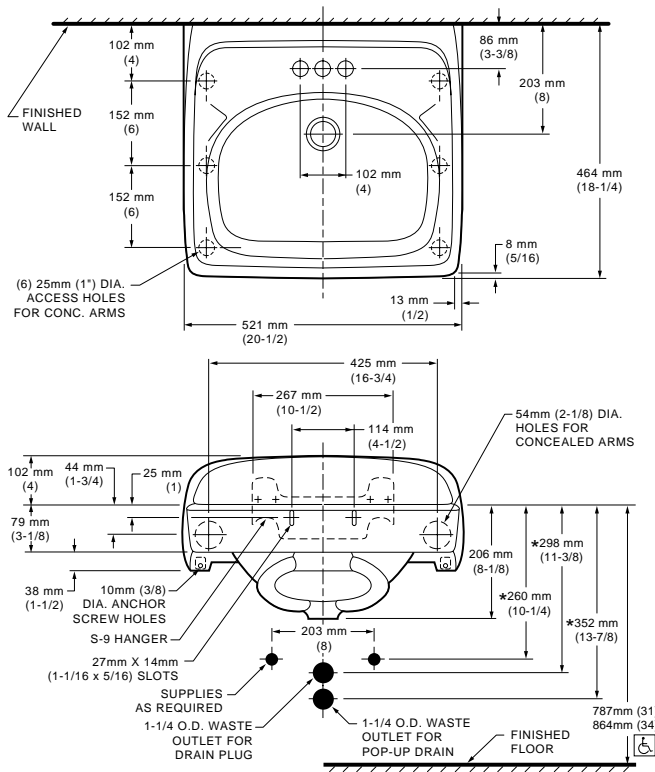
- ☐ Color: ☐ White ☐ Bone ☐ Silver ☐ Black
- ☐ Shell
- ☐ Faucet*: ☐ Faucet Finish:
- ☐ Supplies: ☐ 1-1/4" Trap:
- ☐ Nipple:
- ☐ Bracket Support (by others):
- ☐ Concealed Arms Support (by others):

* See faucet section for additional models available

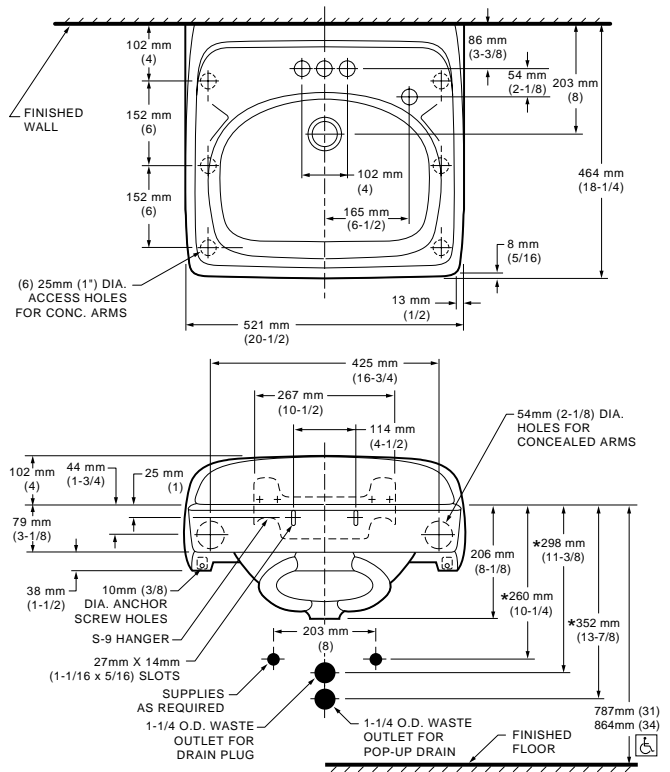
NOTE: Roughing-in information shown on reverse side of page



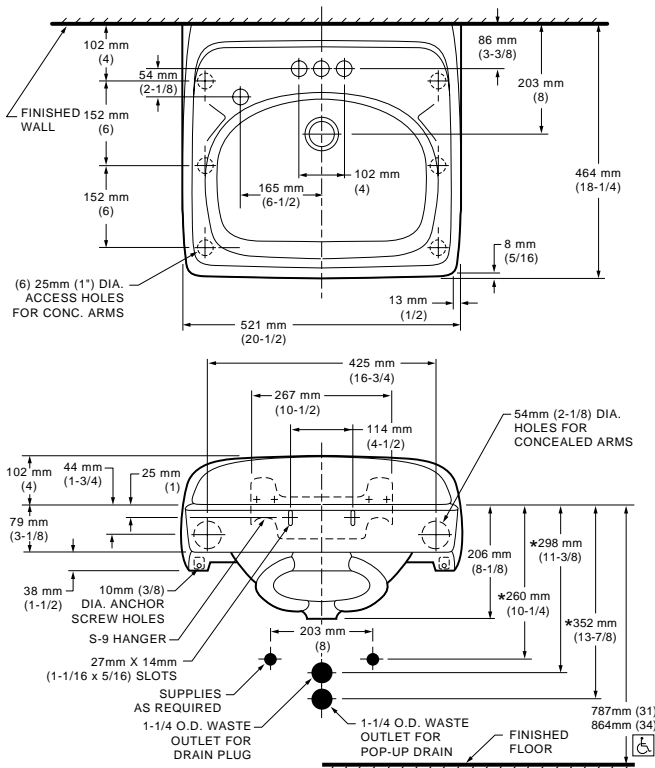
0355.012 4" CTRS FOR WALL HANGER OR CONCEALED ARMS



0355.034 4" CTRS FOR WALL HANGER OR CONCEALED ARMS
EXTRA RIGHT HAND HOLE



0355.056 4" CTRS FOR WALL HANGER OR CONCEALED ARMS
EXTRA LEFT HAND HOLE



NOTES:

* DIMENSIONS SHOWN FOR LOCATION OF SUPPLIES AND "P" TRAP ARE SUGGESTED.



LAVATORY DESIGNED TO MEET ADA HANDICAPPED GUIDELINES WITH MOUNTING HEIGHT SET AT 864MM (34") ABOVE FINISHED FLOOR.

PROVIDE SUITABLE REINFORCEMENT FOR ALL WALL SUPPORTS.

FITTINGS NOT INCLUDED AND MUST BE ORDERED SEPARATELY.

CONCEALED ARM SUPPORT AS REQUIRED TO BE FURNISHED BY OTHERS.

IMPORTANT: Dimensions of fixtures are nominal and may vary within the range of tolerances established by ANSI Standard A112.19.2.

These measurements are subject to change or cancellation. No responsibility is assumed for use of superseded or voided pages.

Manual and Metering Faucets

Product Type

Deck Mounted 4" Fixed Centers Single Lever Hot and Cold Water Mixing Sink Faucet

Features & Specifications

- 4" Fixed Centers
- 1.5 GPM (5.7 L/min) Non-Aerating Outlet
- Volume Control and Hot Water Limit Stop Cartridge
- 1/2" NPSM Supply Inlets for 3/8" or 1/2" Flexible Riser
- 4 5/8" Center to Center Rigid Cast Brass Spout
- ECAST® design provides durable brass construction with total lead content equal to or less than 0.25% by weighted average
- CFNow! Item Ships in 5 Days

Performance Specification

- Rated Operating Pressure: 20-125 PSI
- Rated Operating Temperature: 40-140°F

Warranty

- 5-Year Limited Faucet Warranty
- 5-Year Limited Cartridge Warranty
- 1-Year Limited Finish Warranty

Codes & Standards

- ASME A112.18.1/CSA B125.1
- Certified to NSF/ANSI 61, Section 9 by CSA
- California Health and Safety Code 116875 (AB1953-2006)
- Vermont Bill S.152
- NSF/ANSI 372 Low Lead Content
- ADA ANSI/ICC A117.1

Job Name _____

Item Number _____

Section/Tag _____

Model Specified _____

Architect _____

Engineer _____

Contractor _____

☐ Submitted as Shown ☐ Submitted with Variations

Date _____



ECAST®

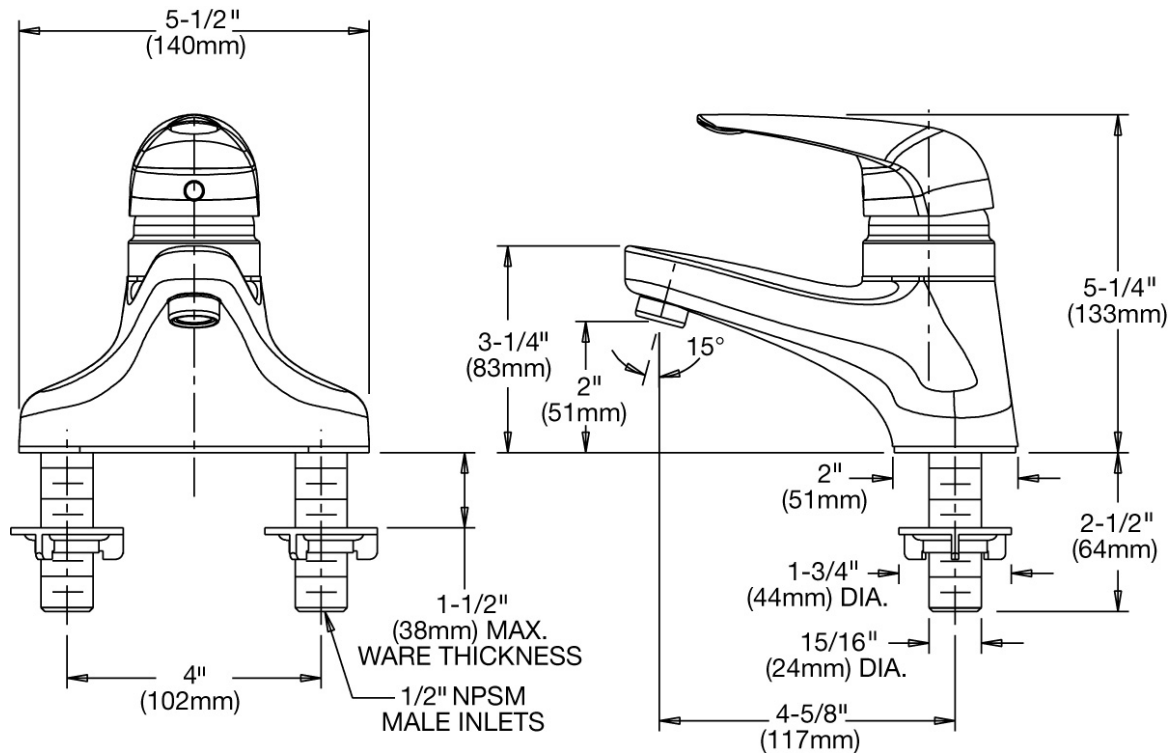
ECAST products are intended for installation where state laws and local codes mandate lead content levels or in any location where lead content is a concern.



2100 South Clearwater Drive
Des Plaines, IL
P: 847/803-5000
F: 847/803-5454
Technical: 800/TEC-TRUE
www.chicagofaucets.com

Architect/Engineer Specification

Chicago Faucets No. 420-ABCP, Deck Mounted 4" Fixed Centers Single Lever Hot and Cold Water Mixing Sink Faucet, Chrome Plated solid brass construction. 4 5/8" Center to Center Rigid Cast Brass Spout. 1.5 GPM (5.7 L/min) Pressure Compensating Laminar Flow Non-Aerating Outlet. 1/2" NPSM Supply Inlets for 3/8" or 1/2" Flexible Riser. ECAST® construction with less than 0.25% lead content by weighted average. Secondary Control Valve: 4 5/8" Center to Center Rigid Cast Brass Spout. This product meets ADA ANSI/ICC A117.1 requirements and is tested and certified to industry standards: ASME A112.18.1/CSA B125.1, Certified to NSF/ANSI 61, Section 9 by CSA, California Health and Safety Code 116875 (AB1953-2006), Vermont Bill S.152, and NSF/ANSI 372 Low Lead Content.



Operation and Maintenance

Installation should be in accordance with local plumbing codes. Flush all pipes thoroughly before installation. After installation, remove spout outlet or flow control and flush faucet thoroughly to clear any debris. Care should be taken when cleaning the product. Do not use abrasive cleaners, chemicals or solvents as they can result in surface damage. Use mild soap and warm water for cleaning and protecting the life of Chicago Faucet products. For specific operation and maintenance refer to the installation instructions and repair parts documents that are located at www.chicagofaucets.com.

Chicago Faucets, member of the Geberit Group, is the leading brand of commercial faucets and fittings in the United States, offering a complete range of products for schools, laboratories, hospitals, office buildings, food service, airports and sport facilities. Call 1.800.TECTRUE or 1.847.803.5000 Option 1 for installation or other technical assistance.



2100 South Clearwater Drive
Des Plaines, IL
P: 847/803-5000
F: 847/803-5454
Technical: 800/TEC-TRUE
www.chicagofaucets.com


Location:

SYMMONS® Visu-Temp®

Shower System & Hand Shower 1-1170VT-H401-V

Specification Submittal

Feature Highlights

- Symmons Visu-Temp® pressure-balancing mixing valve with Clear-vue™ thermometer and adjustable stop screw to limit handle turn, #4-5000VT.
- Euro-flo single mode wall/hand shower with flexible metal hose, in-line vacuum breaker, wall connection, flange and cradle for mounting hand shower, #H401-V that includes wand #EF-118
- Lever diverter, 2DIV-BODY with volume control for showerhead and hand shower
- Euro-flo single mode self-cleaning showerhead #4-241
- Showerhead mounting arm and flange, # 300
- Standard flow rate is 2.5 gpm (9.5 L/min)
Optional aerator available in lower flow rates 
- Polished chrome finish (standard)

Model Numbers

- ☐ 1-1170VT-H401-V Shower System with Symmons Visu-Temp® pressure balancing mixing valve, #4-5000VT

Finish Options / Modifications

Append appropriate -suffix to model number.

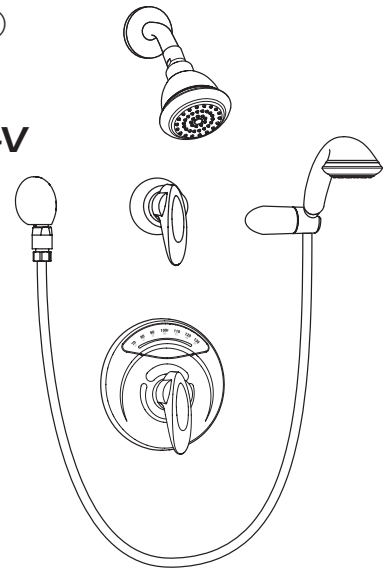
- ☐ -STN Satin nickel
- ☐ - Polished chrome (standard finish)

Warranty

- Limited Lifetime - to the original end purchaser in consumer installations.
- 5 years - for commercial installations



Standards / Certifications

ASME A112.18.1/CSA B125.1

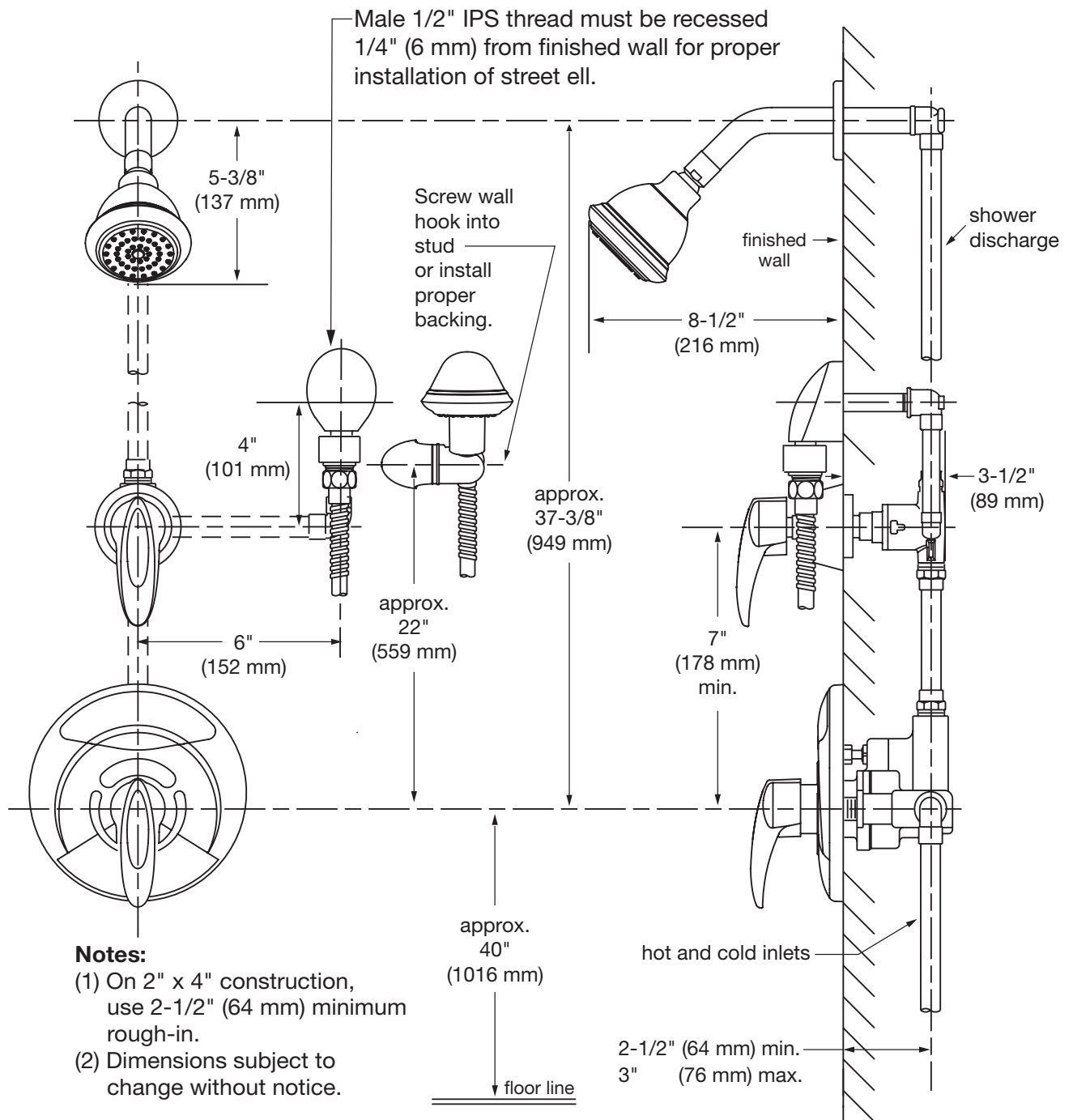


Options / Modifications

Append appropriate -suffix to model number.

- ☐ -X Symmons Temptrol® pressure balancing mixing valve includes integral service stops to allow water shut-off for service
- ☐ -X-CHKS Integral check stops: Used where a positive shut-off device is used down stream of mixing valve
- ☐ -X-3/4 3/4 inch valve to increase water flow approximately 20%
- ☐ -L/HD Shower head not included
Includes showerhead arm and flange only
- ☐ -L/HS Hand Shower wand not included
Includes hose, in-line vacuum breaker, wall connections, cradle and flange only
- ☐ -72 6 foot hand shower hose in place of standard 5 foot hose
- ☐ -R Vinyl hose in place of flexible metal hose
- ☐ -QD Quick disconnect on hand shower unit
- ☐ -VB Elevated vacuum breaker with wall flange on hand shower unit in place of in-line vacuum breake
- ☐  -2.0 2.0 gpm (7.6 L/min) flow rate restrictor
- ☐  -1.5 1.5 gpm (5.7 L/min) flow rate restrictor

Dimensions *Visu-Temp Shower System with Hand Shower, 1-1170VT-H401-V*



DW-1

Quantity

C.S.I. Section 11400



701 S Ridge Avenue, Troy, OH 45374
1-888-4HOBART • www.hobartcorp.com

CL44eN-BAS DISHWASHER



STANDARD FEATURES

- 202 racks per hour
- Opti-RinSe™ system
- Rapid return conveyor drive mechanism
- Insulated hinged double doors with door interlock switches
- 19.5 inch chamber height opening
- Top mounted micro-processor control module
- Energy saver mode
- Dirty water indicator
- Manager activated low temperature alert
- NSF rated configurable Pot and Pan dwell mode
- Configurable “intelligent” smart delime alert, determined by water hardness test at installation
- Service diagnostics
- NAFEM Data Protocol compliant
- Computational fluid dynamic designed self-aligning wash manifolds
- Stainless steel debossed anti-clogging wash arms
- Removable integrated pump intake screen
- Stainless steel self-draining pump and impeller
- Single, sloping scrap screen and deep basket
- Stainless panels enclose perimeter and bottom
- Door actuated drain closure
- Single point electrical connection (three phase only), does not include the booster heater
- Convertible hot water or low temp final rinse
- Vent fan and booster heater control

DIRECTION OF OPERATION

- ☐ Right to Left
- ☐ Left to Right

VOLTAGE

- | | | |
|-----------------------------------|-----------------------------------|-----------------------------------|
| <input type="checkbox"/> 208/60/1 | <input type="checkbox"/> 240/60/1 | <input type="checkbox"/> 380/60/3 |
| <input type="checkbox"/> 208/60/3 | <input type="checkbox"/> 240/60/3 | <input type="checkbox"/> 480/60/3 |
| | | <input type="checkbox"/> 600/60/3 |

MODEL

- ☐ CL44eN-BAS – Dishwasher

OPTIONS AT EXTRA COST

- ☐ Stainless steel pressure-less 15/30 KW booster heater
- ☐ Higher than standard chamber

ACCESSORIES

- ☐ Stainless steel vent hoods
- ☐ Direct drive unloader
- ☐ Side loader
- ☐ Blower-dryer
- ☐ Drain water tempering kit (Drain water tempering kit comes standard on the DWER or *advansys* models)
- ☐ Flanged feet kit (requires two kits)

Specifications, Details and Dimensions on Inside and Back.



CL44eN-BAS DISHWASHER

CL44eN-BAS DISHWASHER

HOBART

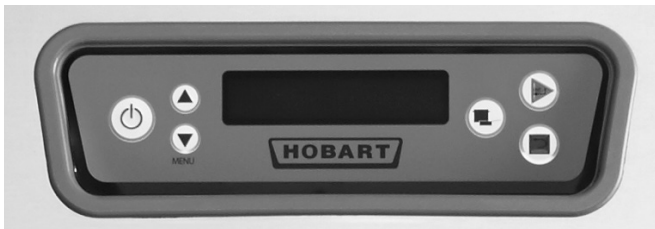
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THE CL_eN WAREWASHER IS NOW STANDARD WITH MORE EFFICIENT FEATURES THAN EVER . . .

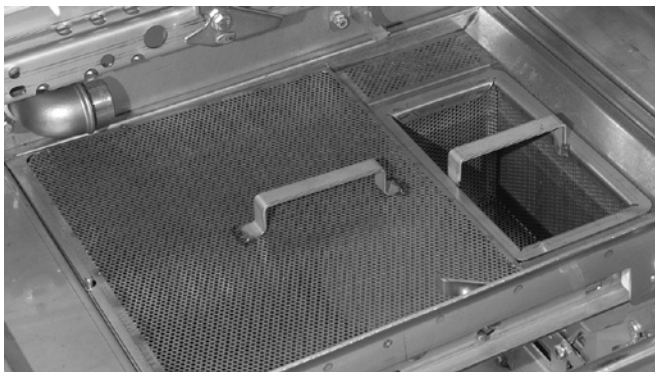
Inside and out the CL_eN warewashers by Hobart are packed with standard components and patented design innovations that make them the biggest value in the dishwasher industry.



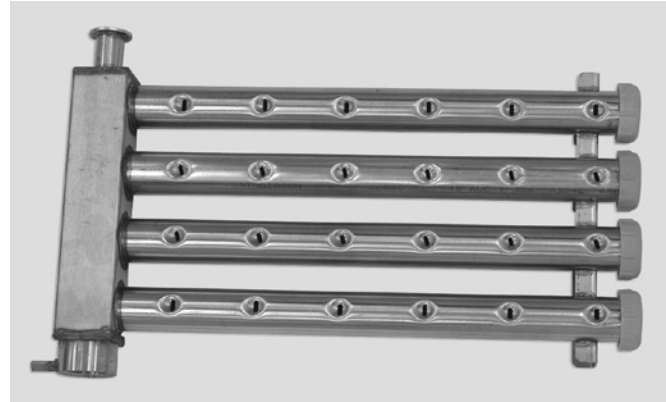
The insulated hinged inspection doors provide easy access in the chamber. Exterior wash pipes and reduced interior baffles reduce clean-up time. The Rapid Return drive allows for a wide separation between the wash and the rinse zone.



New, Improved Control Module. The Hobart exclusive microprocessor control module offers a choice of many features, such as an exclusive Energy Saver Mode, NSF rated configurable Pot and Pan dwell mode, Low Temperature Alerts and Dirty Water Indicator. It also displays pertinent machine status and has a configurable “intelligent” delime notification. The controls have built-in Service Diagnostics and are NAFEM Data Protocol Compliant.



Soil Management System. Screen design sheds soil more easily than flat screens, reduces frequency of cleaning — easy to empty large soil particles . . . Just lift out the scrap basket.



Wash Manifolds. Computational Fluid Dynamic designed wash manifolds are self-aligning and come with Hobart’s signature debossed anti-clogging nozzles for superior result.



Opti-RinSe™. Hobart’s exclusive Opti-RinSe™ significantly reduces operating cost by reducing rinse water and the energy required to heat the water. The unique spray pattern uses large droplets to more efficiently sanitize the ware.

OTHER STANDARD FEATURES . . .

- **Thermal Layer Curtains** help keep the heat inside the machine.
- **Ball Detent Clutch Conveyor Drive** for maximum protection against conveyor jams
- **Integrated Removable Pump Intake Screen** to offer the ultimate guard of keeping debris from entering the pump.
- **Hinged Door Seals** and stainless steel labyrinth seal for drip-free operation
- **Low-Temp Convertibility In Field.** All machines shipped hot. Change software in field at set up to low temperature if desired — then, if requirements change, convert from one mode to the other in the field. An exclusive feature — standard from Hobart.
- **Door Actuated Drain Closure.** Closing the door automatically actuates drain closure, eliminates extra manual steps, ensures that closure is in the correct position.



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CL44eN-BAS DISHWASHER

AVAILABLE OPTIONS AND ACCESSORIES . . .

Flexibility is synonymous with Hobart CL_e dishwashers. If your operation demands a dishwasher with a vent hood, an extended hood . . . a power scrapper, just specify the combination of options that suit your needs.



Built-in Pressureless Stainless Steel Booster Heater. Interwired and interplumbed. Saves on installation and saves floor space. Simplifies operation with just one switch to power dishmachine and booster.



Side Loader. Save up to 20 square feet in the dishroom layout with an optional C-Line Side Loader. Racks are indexed 90° into the dishwasher automatically – a feature that cuts space and reduces labor dramatically. Your dishroom team will appreciate this feature.

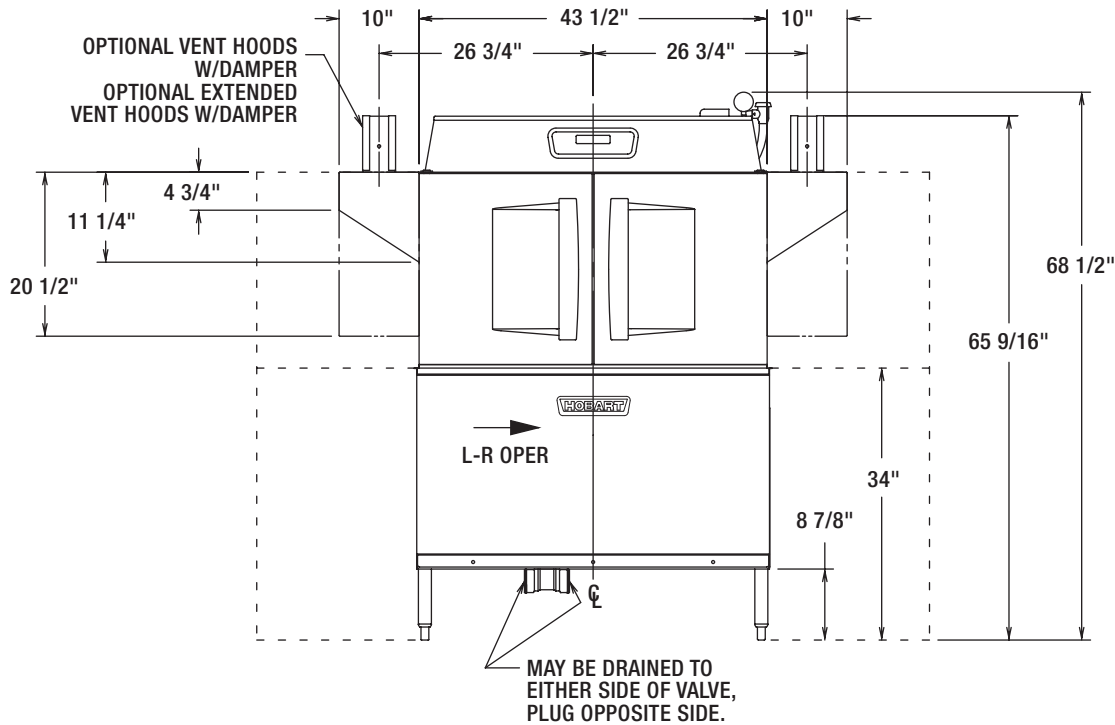
OTHER AVAILABLE ACCESSORIES . . .

Blower-dryer, steam booster heater, and a single-point electrical connection to include electric booster heater.

	CL44eN
Machine Ratings (Mechanical)	
Racks per hour (19¾" x 19¾")	202
Conveyor Speed - feet per minute	5.6 max.
Dishes per Hour (Average 25 per rack)	5,025
Glasses per Hour (Average 45 per rack)	9,045
Floor Space – Table to Table (Inches)	44
Overall Dimensions – H x W x D (Inches)	68½ x 44¾ x 31¼
Motor H.P.	2
Conveyor Drive H.P.	⅓
Number of Tanks	1
Tank Capacity – Gallons	23
Pump Capacity – Gallons per Minute - Weir Test	165
Heating Equipment – (For keeping power wash hot) Gas Burners (with Natural Gas)	78,000 BTU per hr.
Electric Heating Unit – Size Used	15 KW
Optional Booster Heater / Final Rinse	15 KW / 30 KW
Rinse – Minutes operated during hour of maximum operation	60
Final Rinse Flow – Gals. per min. At 15 PSI Flow Pressure	1.8
At 20 PSI Flow Pressure	2.1
Final Rinse Flow – Gals. per hr. – MAXIMUM At 15 PSI Flow Pressure	108
At 20 PSI Flow Pressure	126
Rinse 20 PSI Flow Pressure Gal./Rack	Hot Water Sanitizing - Chemical Sanitizing .62 - 180°F – .62 - 120°F
Steam Consumption – Pounds per hr. - MAXIMUM Approx. 30 lbs. per hr. = 1 boiler H.P. (BHP) Dishwasher , based on 20 PSI steam and on customer supplying final rinse water at 180°F maximum	65
Steam Booster , if used on 20 PSI steam - 20 PSI water flowing - 130°F entering water raised to 180°F min.	60
Exhaust Requirements – Cubic Feet per minute	
Entrance End	200
Discharge End	400
Peak Rate of Drain Flow – Gallons per minute. (Initial rate with full tank)	38
Shipping Weight Crated – Approximate lbs.	613

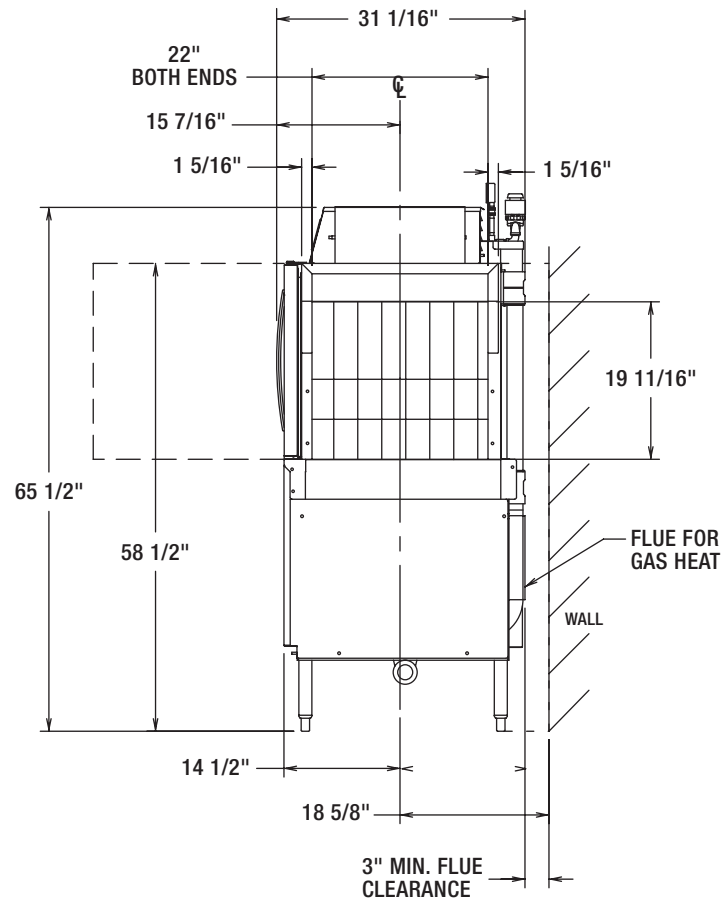
CL44eN-BAS DISHWASHER

HOBART

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BOOSTER HEAT 15 KW			
ELEC. SPECS.	RATED AMPS	MINIMUM SUPPLY CIRCUIT CONDUCTOR AMPACITY	MAXIMUM PROTECTIVE DEVICE
200-240/50/3	40.1	50	50
380-415/50/3	26.6	30	30
200/50/3	43.3	60	60
208-240/60/3	40.1	50	50
208/60/3	45.0	60	60
240/60/3	40.1	50	50
380/60/3	21.3	30	30
380-415/60/3	23.2	30	30
480/60/3	20.0	25	25
600/60/3	13.5	20	20

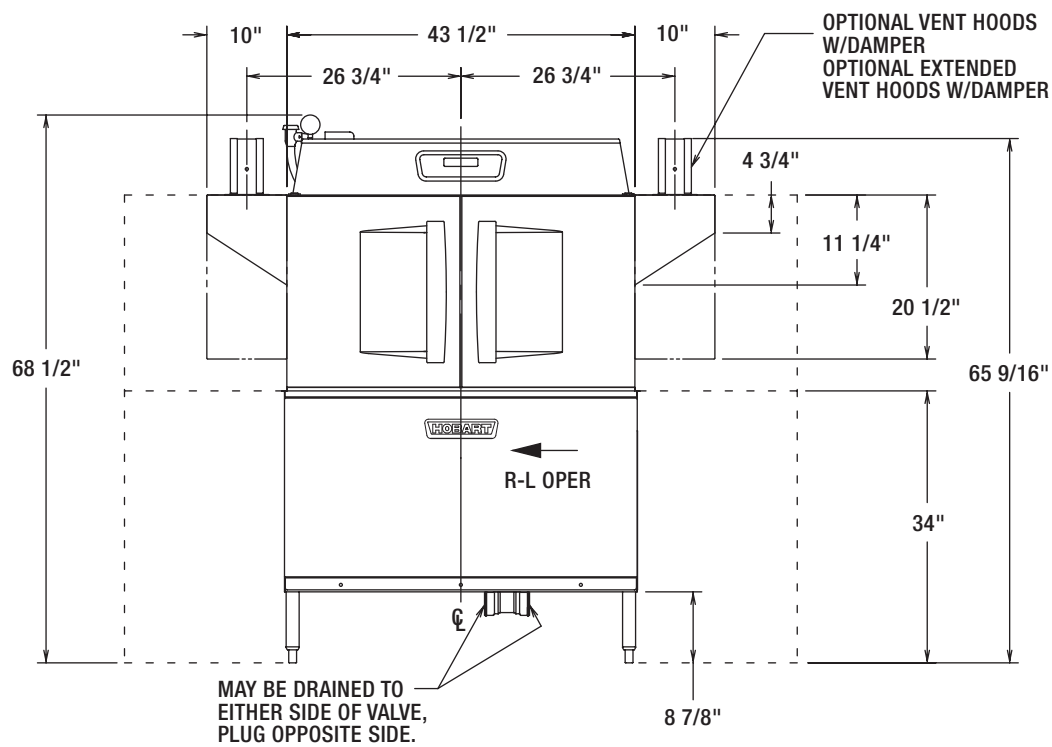
BOOSTER HEAT 30 KW			
ELEC. SPECS.	RATED AMPS	MINIMUM SUPPLY CIRCUIT CONDUCTOR AMPACITY	MAXIMUM PROTECTIVE DEVICE
200-240/50/3	80.2	90	90
380-415/50/3	53.2	60	60
200/50/3	80.8	90	90
208-240/60/3	80.2	90	90
208/60/3	83.9	90	90
240/60/3	80.2	90	90
380/60/3	42.5	60	60
380-415/60/3	46.4	60	60
480/60/3	40.1	50	50
600/60/3	33.7	40	40



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CL44eN-BAS DISHWASHER

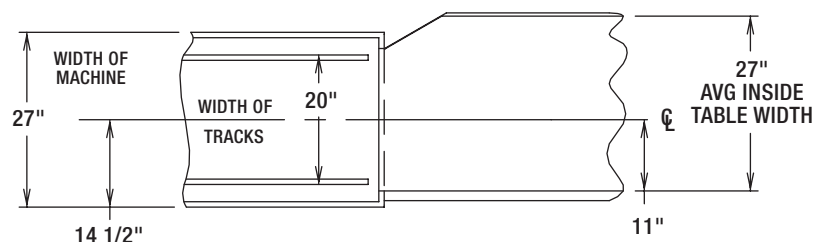


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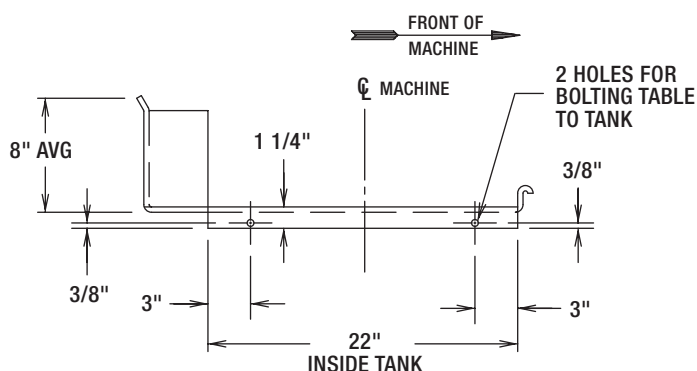
ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH THE APPLICABLE PORTIONS OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER LOCAL ELECTRICAL CODES.

CAUTION: CERTAIN MATERIALS INCLUDING SILVER, ALUMINUM, AND PEWTER ARE ATTACKED BY SODIUM HYPOCHLORITE (LIQUID BLEACH).

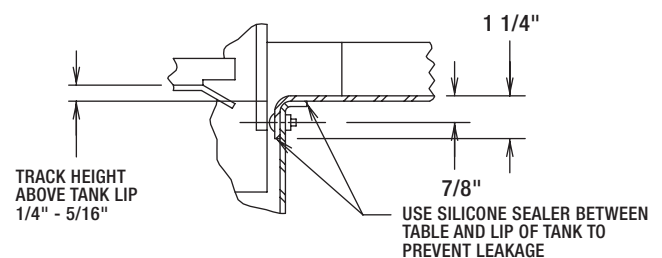
ATTN: PLUMBING CONNECTIONS MUST COMPLY WITH APPLICABLE SANITARY, SAFETY, AND PLUMBING CODES.



SUGGESTED TRACK AND TABLE LAYOUT



VIEW SHOWING HOLE LOCATIONS IN TURNED DOWN PORTION OF TABLE

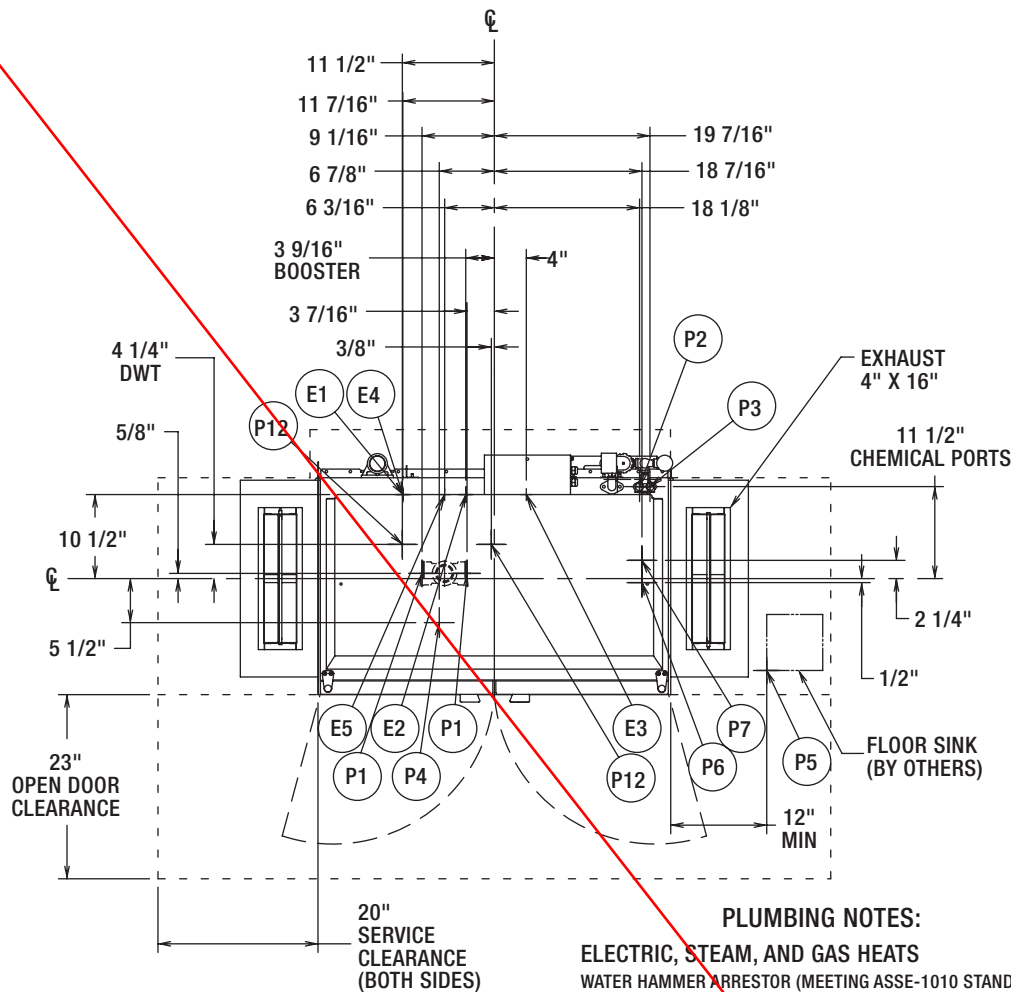


SECTIONAL VIEW SHOWING TABLE CONNECTIONS

CL44eN-BAS ELECTRIC L-R

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 MODEL:
 CL44eN BASE
 L-R OPERATION
 D-974801
 REV B


MISCELLANEOUS NOTES:

OPTIONAL VENT HOODS OR EXTENDED HOODS EXHAUST REQUIREMENTS: 200 CFM ENTRANCE END
400 CFM EXIT END.

ALL DIMENSIONS TAKEN FROM FLOOR LINE MAY BE INCREASED APPROXIMATELY 3/4" OR DECREASED 1/2".

44" INSIDE TANK (AT TABLE CONNECTION)

43-25/32" TABLE TO TABLE.

NET WEIGHT OF MACHINE: 501 LBS (STD HEIGHT),
DOMESTIC SHIPPING WEIGHT: 576 LBS (STD HEIGHT).

CL44EN LATENT AND SENSIBLE HEAT DISSIPATION
INFORMATION ON F40459.

PLUMBING NOTES:

ELECTRIC, STEAM, AND GAS HEATS

WATER HAMMER ARRESTOR (MEETING ASSE-1010 STANDARD OR EQUIVALENT) TO BE SUPPLIED (BY OTHERS) IN COMMON WATER SUPPLY LINE AT SERVICE CONNECTION.

RECOMMENDED WATER HARDNESS TO BE 3 GRAINS OR LESS FOR BEST RESULTS.

FOR NON-BOOSTER MACHINE (P6 CONN): RECOMMENDED BUILDING FLOWING WATER PRESSURE TO THE DISHWASHER IS 20 PSI, (15 PSI MIN - 25 PSI MAX). IF PRESSURES HIGHER THAN 25 PSI ARE PRESENT, A PRESSURE REGULATING VALVE WITH INTERNAL THERMAL EXPANSION BY-PASS MUST BE SUPPLIED (BY OTHERS) IN THE WATER LINE TO THE DISHWASHER.

FOR CONVENIENCE WHEN CLEANING, WATER TAP SHOULD BE INSTALLED NEAR MACHINE WITH HEAVY DUTY HOSE AND SQUEEZE VALVE.

WHEN USED, CHEMICAL SANITIZING FEEDER MUST BE CERTIFIED TO NSF STANDARD 29.

SINGLE POINT ELECTRICAL CONNECTION (3 PH ONLY) MOTORS AND ELECTRIC TANK HEAT

VOLTAGE	RATED AMPS	MINIMUM SUPPLY CIRCUIT CONDUCTOR AMPACITY	MAXIMUM PROTECTIVE DEVICE
208/60/3	55	70	70
240/60/3	52.6	70	70
480/60/3	27.9	40	40
200/50/3	53.9	70	70
380/60/3	30.1	40	40
380-415/50/3	31.8	40	40
600/60/3	20.3	25	25

SEPARATE SERVICE CONNECTION FOR ELEC. HEAT

VOLTAGE	RATED AMPS	MINIMUM SUPPLY CIRCUIT CONDUCTOR AMPACITY	MAXIMUM PROTECTIVE DEVICE
208/60/3	45	60	60
240/60/3	43	60	60
480/60/3	22	30	30
200/50/3	43	60	60
380/60/3	23	30	30
380-415/50/3	29	40	40
600/60/3	14.4	20	20
208/60/1	78	100	100
240/60/1	74.4	100	100

SEPARATE SERVICE CONNECTION FOR MOTORS ON ELEC. HEAT

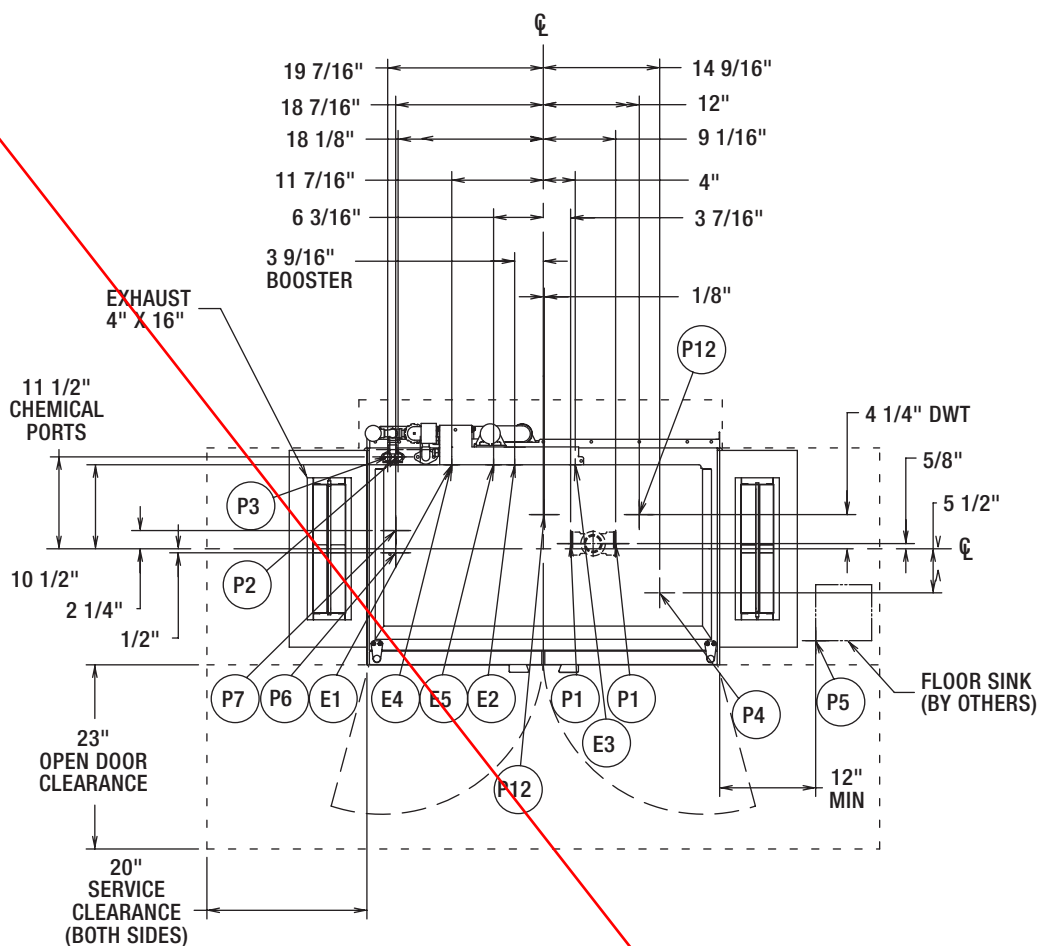
VOLTAGE	RATED AMPS	MINIMUM SUPPLY CIRCUIT CONDUCTOR AMPACITY	MAXIMUM PROTECTIVE DEVICE
208/60/3	10	15	15
240/60/3	9.7	15	15
480/60/3	6.4	15	15
200/50/3	10.6	15	15
380/60/3	7.3	15	15
380-415/50/3	7	15	15
600/60/3	5.9	15	15
208/60/1	15.9	20	20
240/60/1	15.7	20	20



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CL44eN-BAS ELECTRIC R-L

MODEL:
CL44eN BASE
R-L OPERATION
D-974800
REV B



ELECTRICAL CONNECTIONS CONNECTION INFORMATION (AFF = ABOVE FINISHED FLOOR)

LEGEND

ELECTRIC, STEAM, AND GAS HEATS

- E1 ELECTRIC CONNECTION: SINGLE POINT, ELEC, GAS, & STEAM, 1-1/4" CONDUIT HOLE OR 2" CONDUIT, 63-3/4" AFF
- E2 ELECTRIC CONNECTION: BOOSTER. 15KW/30KW, 1-1/4" CONDUIT HOLE OR 2" CONDUIT HOLE, 63-3/4" AFF
- E3 ELECTRIC CONNECTION: DETERGENT, SANITIZER (LOW TEMP ONLY) AND RINSE FEEDERS. 1/2" CONDUIT. 64-1/4" AFF

ELECTRIC HEAT ONLY

SINGLE PHASE OR FIELD CONFIGURED 3 PHASE SEPARATE ELECTRIC CONNECTION

- E4 ELECTRIC CONNECTION: MOTORS AND CONTROLS 1-1/4" CONDUIT. 63-3/4" AFF.
- E5 ELECTRIC HEAT: 15,000 WATTS, WASH TANK. 1" CONDUIT HOLE, 63-3/4" AFF.

PLUMBING CONNECTIONS CONNECTION INFORMATION (AFF = ABOVE FINISHED FLOOR)

LEGEND

ELECTRIC, STEAM, AND GAS HEATS

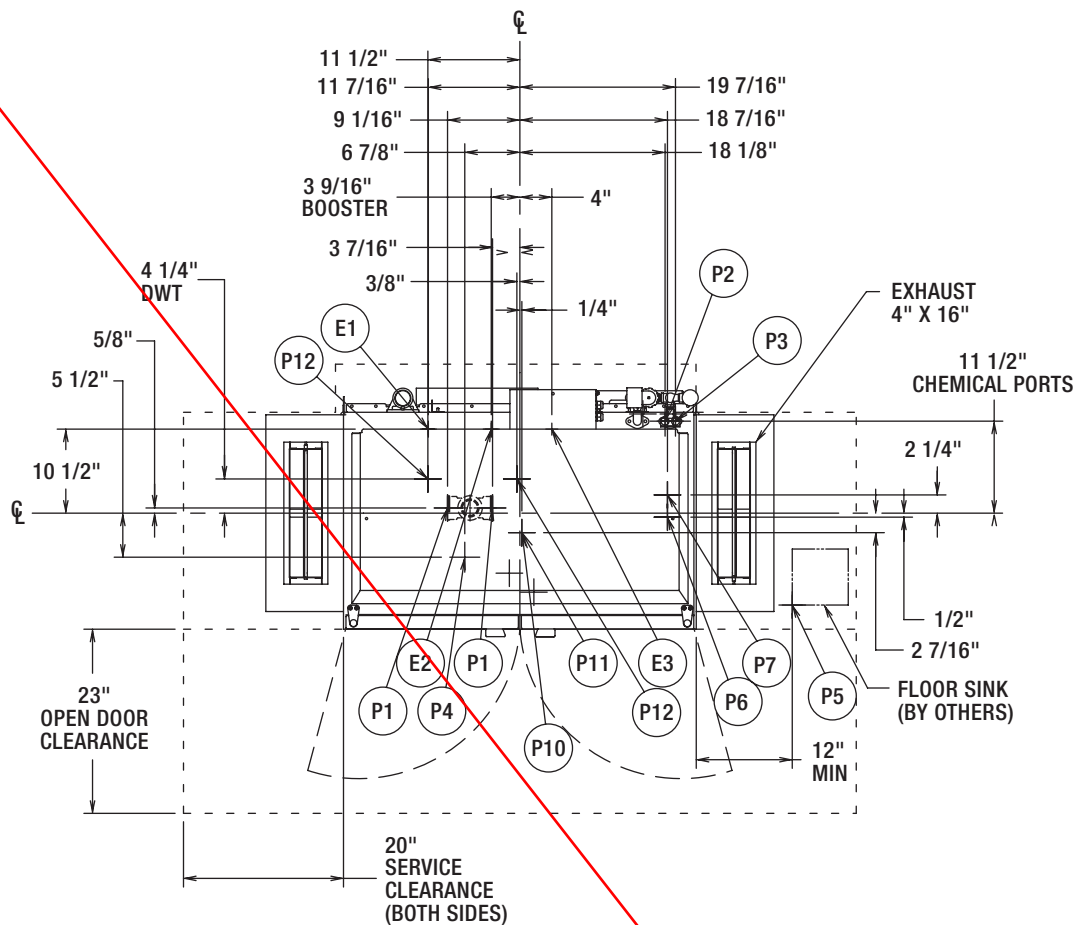
- P1 DRAIN: 2" FPT, 7-3/8" AFF TWO POSSIBLE CONNECTIONS; MAY BE DRAINED TO EITHER SIDE OF VALVE, PLUG OPPOSITE SIDE.
- P2 SANITIZER FEEDER: REMOVE 1/8" NPT PIPE PLUG TO ACCESS TAPPED HOLE. 1/8" NPT 59-1/2" AFF (LOW TEMP ONLY)
- P3 RINSE FEEDER: REMOVE 1/8" NPT PIPE PLUG TO ACCESS TAPPED HOLE. 1/8" NPT 59-9/16" AFF.
- P4 DETERGENT PROBE SENSOR: REMOVE CAP AND STUD ASSEMBLY TO ACCESS 7/8" DIA HOLE (WASH TANK ONLY). 14-5/8" AFF.
- P5 INDIRECT DRAIN-FLOOR SINK: BY OTHERS, 0" AFF. WHEN REQUIRED, INSTALL FLOOR SINK OUTSIDE THE PERIMETER OF THE DISHWASHER.
- P6 COMMON WATER CONNECTION: 1/2" FPT, 11-3/16" AFF.
HIGH TEMP. W/O BOOSTER 180°F MIN. 194°F MAX.
LOW TEMP. 120°F MIN.
- P7 COMMON WATER CONNECTION: 1/2" FPT, 11-3/16" AFF
HIGH TEMP. W/15K BOOSTER 140°F MIN.
HIGH TEMP. W/30K BOOSTER 110°F MIN.

OPTIONAL DRAIN WATER TEMPERING

- P12 COLD WATER CONNECTION: 1/2" FPT, COLD TEMP 80°F MAX 7-3/8" AFF.

CL44eN-BAS GAS L-R

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MISCELLANEOUS NOTES:

OPTIONAL VENT HOODS OR EXTENDED HOODS EXHAUST REQUIREMENTS: 200 CFM ENTRANCE END
400 CFM EXIT END.

ALL DIMENSIONS TAKEN FROM FLOOR LINE MAY BE INCREASED APPROXIMATELY 3/4" OR DECREASED 1/2".

44" INSIDE TANK (AT TABLE CONNECTION)
43-25/32" TABLE TO TABLE.

NET WEIGHT OF MACHINE: 501 LBS (STD HEIGHT),
DOMESTIC SHIPPING WEIGHT: 576 LBS (STD HEIGHT).

CL4eN LATENT AND SENSIBLE HEAT DISSIPATION
INFORMATION ON F40459.

SERVICE CONNECTION FOR MOTORS AND CONTROLS

MOTORS: 1/6 HP CONVEYOR 2 HP WASH			
VOLTAGE	RATED AMPS	MINIMUM SUPPLY CIRCUIT CONDUCTOR AMPACITY	MAXIMUM PROTECTIVE DEVICE
208-240/60/3	10.7	15	15
380/60/3	7.7	15	15
480/60/3	6.7	15	15
600/60/3	6.1	15	15
208-240/60/1	16.9	20	20

PLUMBING NOTES:

ELECTRIC, STEAM, AND GAS HEATS

WATER HAMMER ARRESTOR (MEETING ASSE-1010 STANDARD OR EQUIVALENT) TO BE SUPPLIED (BY OTHERS) IN COMMON WATER SUPPLY LINE AT SERVICE CONNECTION.

RECOMMENDED WATER HARDNESS TO BE 3 GRAINS OR LESS FOR BEST RESULTS.

FOR NON-BOOSTER MACHINE (P6 CONN):
RECOMMENDED BUILDING FLOWING WATER PRESSURE TO THE DISHWASHER IS 20 PSI, (15 PSI MIN - 25 PSI MAX).
IF PRESSURES HIGHER THAN 25 PSI ARE PRESENT, A PRESSURE REGULATING VALVE WITH INTERNAL THERMAL EXPANSION BY-PASS MUST BE SUPPLIED (BY OTHERS) IN THE WATER LINE TO THE DISHWASHER.

FOR CONVENIENCE WHEN CLEANING, WATER TAP SHOULD BE INSTALLED NEAR MACHINE WITH HEAVY DUTY HOSE AND SQUEEZE VALVE.

WHEN USED, CHEMICAL SANITIZING FEEDER MUST BE CERTIFIED TO NSF STANDARD 29.

GAS HEAT ONLY

FOR NATURAL GAS, PRESSURE TO THE BURNER (CUSTOMER CONNECTION) SHOULD BE 3.5" MIN, 7" MAX W.C.

FOR LP GAS, PRESSURE TO THE BURNER (CUSTOMER CONNECTION) SHOULD BE 8" MIN, 11" MAX. W.C.

IF GAS PRESSURE IS HIGHER THAN 7"(NAT) OR 11"(LP) W.C., A PRESSURE REGULATING VALVE MUST BE INSTALLED (BY OTHERS) IN THE GAS LINE TO THE DISHWASHER.

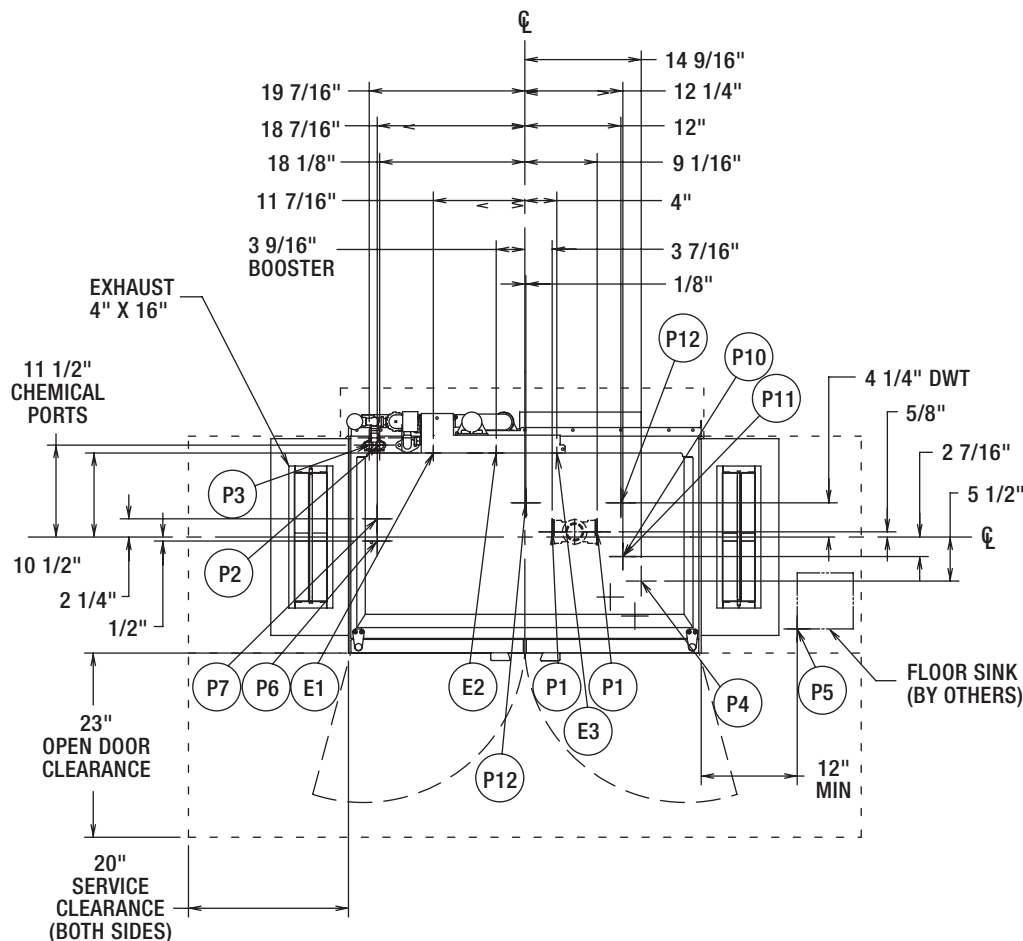
GAS HEAT (NATURAL OR LP) BTU/HR INPUT - 78,000.

GAS EXHAUST VENTING MUST BE INSTALLED ACCORDING TO LOCAL CODE. DO NOT CONNECT FLUE TO POWER VENT. SEE INSTALLATION MANUAL FOR GAS VENTING.



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CL44eN-BAS GAS R-L



PLUMBING CONNECTIONS CONNECTION INFORMATION (AFF = ABOVE FINISHED FLOOR)

LEGEND

ELECTRICAL CONNECTIONS

CONNECTION INFORMATION (AFF = ABOVE FINISHED FLOOR)

LEGEND

ELECTRIC, STEAM, AND GAS HEATS

- E1 ELECTRIC CONNECTION: SINGLE POINT, ELEC, GAS, & STEAM, 1-1/4" CONDUIT HOLE OR 2" CONDUIT, 63-3/4" AFF
- E2 ELECTRIC CONNECTION: BOOSTER. 15KW/30KW, 1-1/4" CONDUIT HOLE OR 2" CONDUIT HOLE, 63-3/4" AFF
- E3 ELECTRIC CONNECTION: DETERGENT, SANITIZER (LOW TEMP ONLY) AND RINSE FEEDERS. 1/2" CONDUIT. 64-1/4" AFF

OPTIONAL DRAIN WATER TEMPERING

- P12 COLD WATER CONNECTION: 1/2" FPT, COLD TEMP 80°F MAX 7-3/8" AFF.

ELECTRIC, STEAM, AND GAS HEATS

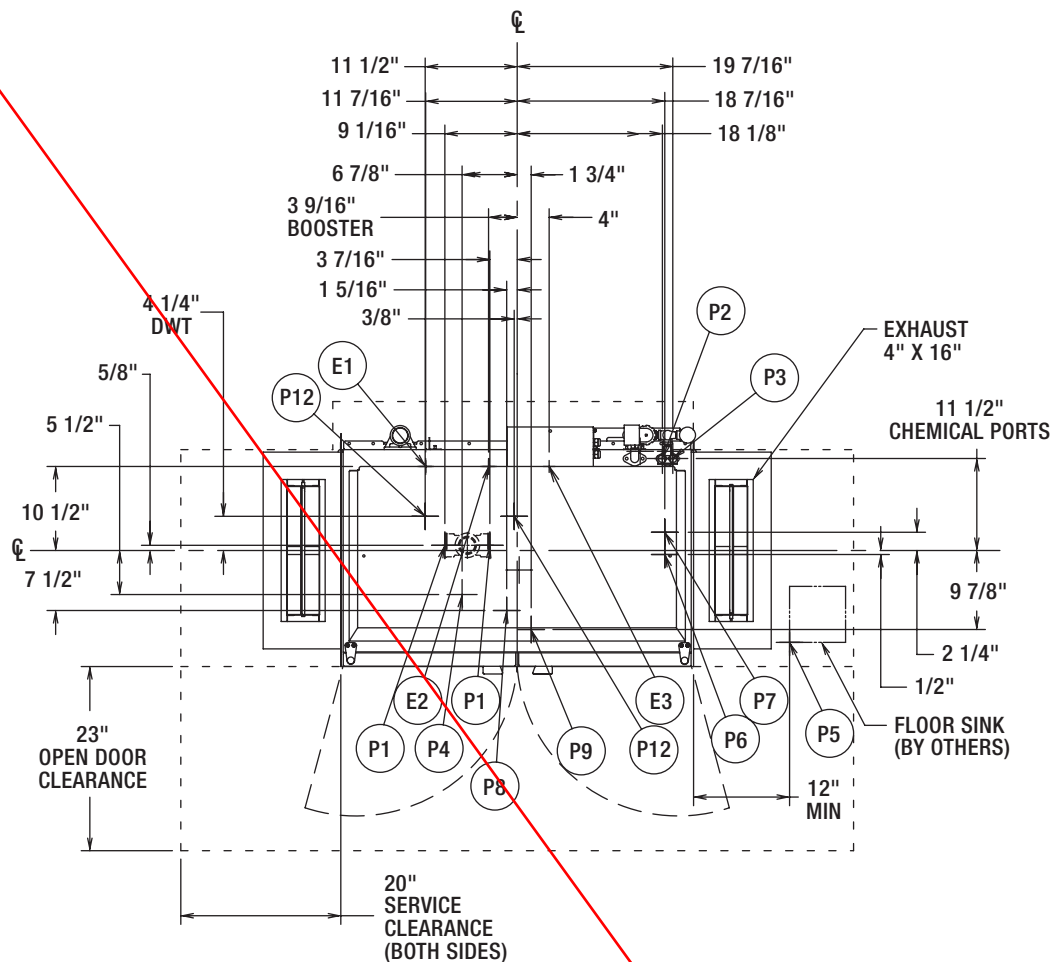
- P1 DRAIN: 2" FPT, 7-3/8" AFF TWO POSSIBLE CONNECTIONS; MAY BE DRAINED TO EITHER SIDE OF VALVE, PLUG OPPOSITE SIDE.
- P2 SANITIZER FEEDER: REMOVE 1/8" NPT PIPE PLUG TO ACCESS TAPPED HOLE. 1/8" NPT 59-1/2" AFF (LOW TEMP ONLY)
- P3 RINSE FEEDER: REMOVE 1/8" NPT PIPE PLUG TO ACCESS TAPPED HOLE. 1/8" NPT 59-9/16" AFF.
- P4 DETERGENT PROBE SENSOR: REMOVE CAP AND STUD ASSEMBLY TO ACCESS 7/8" DIA HOLE (WASH TANK ONLY). 14-5/8" AFF.
- P5 INDIRECT DRAIN-FLOOR SINK: BY OTHERS, 0" AFF. WHEN REQUIRED, INSTALL FLOOR SINK OUTSIDE THE PERIMETER OF THE DISHWASHER.
- P6 COMMON WATER CONNECTION: 1/2" FPT, 11-3/16" AFF.
HIGH TEMP. W/O BOOSTER 180°F MIN.
194°F MAX.
LOW TEMP. 120°F MIN.
- P7 COMMON WATER CONNECTION: 1/2" FPT, 11-3/16" AFF
HIGH TEMP. W/15K BOOSTER 140°F MIN.
HIGH TEMP. W/30K BOOSTER 110°F MIN.

GAS HEAT ONLY

- P10 GAS CONNECTION - NAT., 1/2" FPT, 10-3/4" AFF; 3.5" MIN, 7" MAX W.C. INCOMING.
- P11 GAS CONNECTION - L.P., 1/2" FPT, 10-3/4" AFF; 8" MIN, 11" MAX W.C. INCOMING.

CL44eN-BAS STEAM L-R

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MISCELLANEOUS NOTES:

OPTIONAL VENT HOODS OR EXTENDED HOODS EXHAUST REQUIREMENTS: 200 CFM ENTRANCE END
400 CFM EXIT END.

ALL DIMENSIONS TAKEN FROM FLOOR LINE MAY BE INCREASED APPROXIMATELY 3/4" OR DECREASED 1/2".

44" INSIDE TANK (AT TABLE CONNECTION)

43-25/32" TABLE TO TABLE.

NET WEIGHT OF MACHINE: 501 LBS (STD HEIGHT),
DOMESTIC SHIPPING WEIGHT: 576 LBS (STD HEIGHT).

CLeN LATENT AND SENSIBLE HEAT DISSIPATION
INFORMATION ON F40459.

SERVICE CONNECTION FOR MOTORS AND CONTROLS

VOLTAGE	RATED AMPS	MINIMUM SUPPLY CIRCUIT CONDUCTOR AMPACITY	MAXIMUM PROTECTIVE DEVICE
200-240/50/3	10.6	15	15
208-240/60/3	10.7	15	15
380-415/50/3	7.0	15	15
380/60/3	7.7	15	15
480/60/3	6.7	15	15
600/60/3	6.1	15	15
208-240/60/1	16.9	20	20

PLUMBING NOTES:

ELECTRIC, STEAM, AND GAS HEATS

WATER HAMMER ARRESTOR (MEETING ASSE-1010 STANDARD OR EQUIVALENT) TO BE SUPPLIED (BY OTHERS) IN COMMON WATER SUPPLY LINE AT SERVICE CONNECTION.

RECOMMENDED WATER HARDNESS TO BE 3 GRAINS OR LESS FOR BEST RESULTS.

FOR NON-BOOSTER MACHINE (P6 CONN):

RECOMMENDED BUILDING FLOWING WATER PRESSURE TO THE DISHWASHER IS 20 PSI, (15 PSI MIN - 25 PSI MAX).

IF PRESSURES HIGHER THAN 25 PSI ARE PRESENT, A PRESSURE REGULATING VALVE WITH INTERNAL THERMAL EXPANSION BY-PASS MUST BE SUPPLIED (BY OTHERS), IN THE WATER LINE TO THE DISHWASHER.

FOR CONVENIENCE WHEN CLEANING, WATER TAP SHOULD BE INSTALLED NEAR MACHINE WITH HEAVY DUTY HOSE AND SQUEEZE VALVE.

WHEN USED, CHEMICAL SANITIZING FEEDER MUST BE CERTIFIED TO NSF STANDARD 29.

STEAM HEAT ONLY

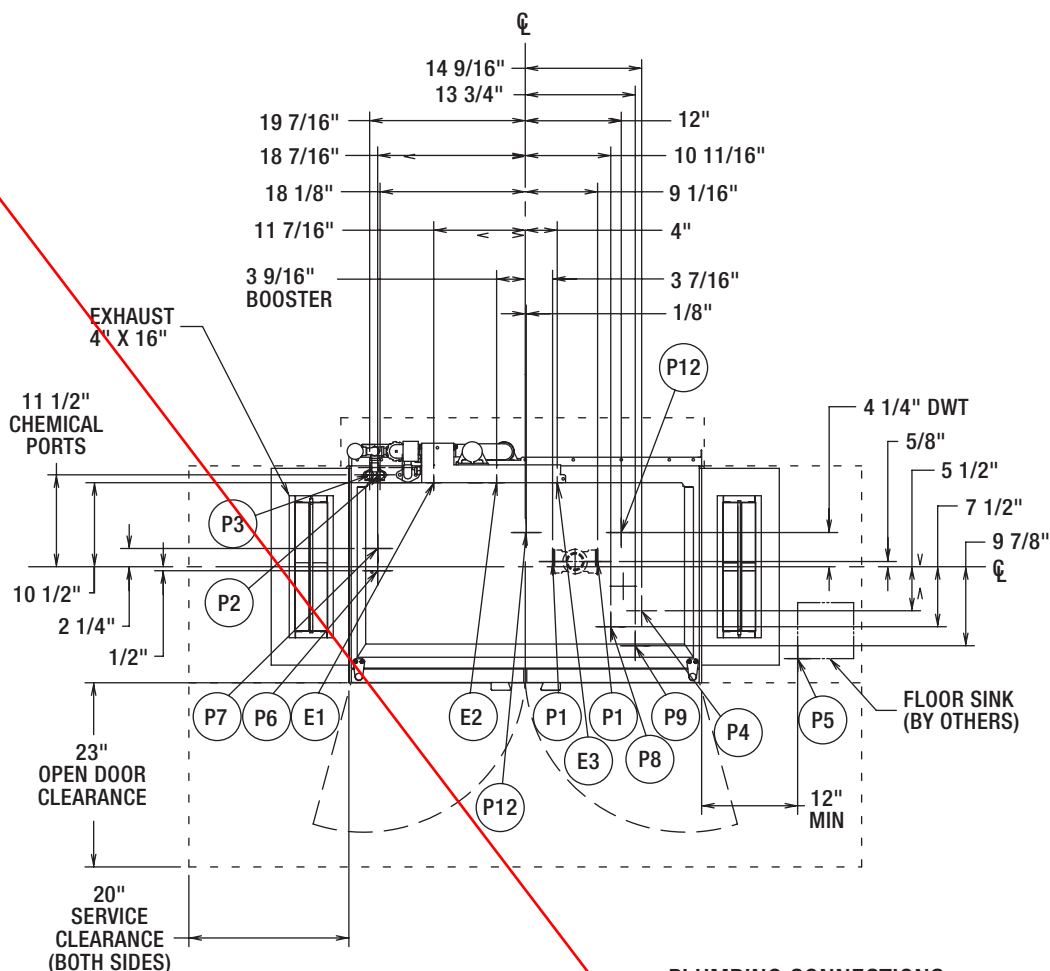
FLOWING STEAM PRESSURES ABOVE 50 PSI MUST HAVE A PRESSURE REGULATOR (BY OTHERS) INSTALLED IN THE STEAM LINE.

SHUT OFF VALVE MUST BE SUPPLIED (BY OTHERS) IN THE STEAM LINE TO THE DISHWASHER.



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CL44eN-BAS STEAM R-L



PLUMBING CONNECTIONS CONNECTION INFORMATION (AFF = ABOVE FINISHED FLOOR)

LEGEND

ELECTRIC, STEAM, AND GAS HEATS

- P1 DRAIN: 2" FPT, 7-3/8" AFF TWO POSSIBLE CONNECTIONS; MAY BE DRAINED TO EITHER SIDE OF VALVE, PLUG OPPOSITE SIDE.
- P2 SANITIZER FEEDER: REMOVE 1/8" NPT PIPE PLUG TO ACCESS TAPPED HOLE. 1/8" NPT 59-1/2" AFF (LOW TEMP ONLY)
- P3 RINSE FEEDER: REMOVE 1/8" NPT PIPE PLUG TO ACCESS TAPPED HOLE. 1/8" NPT 59-9/16" AFF.
- P4 DETERGENT PROBE SENSOR: REMOVE CAP AND STUD ASSEMBLY TO ACCESS 7/8" DIA HOLE (WASH TANK ONLY). 14-5/8" AFF.
- P5 INDIRECT DRAIN-FLOOR SINK: BY OTHERS, 0" AFF. WHEN REQUIRED, INSTALL FLOOR SINK OUTSIDE THE PERIMETER OF THE DISHWASHER.
- P6 COMMON WATER CONNECTION: 1/2" FPT, 11-3/16" AFF.
HIGH TEMP. W/O BOOSTER 180°F MIN.
194°F MAX.
LOW TEMP. 120°F MIN.
- P7 COMMON WATER CONNECTION: 1/2" FPT, 11-3/16" AFF
HIGH TEMP. W/15K BOOSTER 140°F MIN.
HIGH TEMP. W/30K BOOSTER 110°F MIN.

STEAM HEAT ONLY

- P8 STEAM COILS: 10 TO 50 PSI FLOWING, 3/4" FPT, 11-1/8" AFF.
- P9 CONDENSATE RETURN: A 10 PSI MINIMUM DIFFERENTIAL PRESSURE ACROSS THE STEAM TRAP MUST BE MAINTAINED. 3/4" FPT. 11-1/8" AFF ONE CONNECTION. (ONE BUCKET TYPE TRAP FURNISHED).

ELECTRICAL CONNECTIONS

CONNECTION INFORMATION (AFF = ABOVE FINISHED FLOOR)

LEGEND

ELECTRIC, STEAM, AND GAS HEATS

- E1 ELECTRIC CONNECTION: SINGLE POINT, ELEC, GAS, & STEAM, 1-1/4" CONDUIT HOLE OR 2" CONDUIT, 63-3/4" AFF
- E2 ELECTRIC CONNECTION: BOOSTER. 15KW/30KW, 1-1/4" CONDUIT HOLE OR 2" CONDUIT HOLE, 63-3/4" AFF
- E3 ELECTRIC CONNECTION: DETERGENT, SANITIZER (LOW TEMP ONLY) AND RINSE FEEDERS. 1/2" CONDUIT. 64-1/4" AFF

OPTIONAL DRAIN WATER TEMPERING

- P12 COLD WATER CONNECTION: 1/2" FPT, COLD TEMP 80°F MAX 7-3/8" AFF.

CL44eN-BAS DISHWASHER



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SPECIFICATIONS: Meets requirements of ASSE Standard No. 1004.

DESIGN: Semi automatic, high or low temperature single-tank, rack-type dishwasher with flexible thermal layer curtains at the ends of chamber and between wash and final rinse zones. Insulated hinged inspection doors located in front of machine provide easy access to wash arms, rinse arms, strainer, strainer basket, and pump intake screen. Length of machine inside tank (at table connection) 44". Machine designed to clean and sanitize with hot water 160°F wash and 180°F (minimum) final rinse, or low temperature 130°F wash and 120°F final rinse and a chemical sanitizer. Water hardness recommended to be 3 gr. or less for best results. Automatic interlocks shut off pump and conveyor if door is opened when machine is in operation.

CONSTRUCTION: Tank, chamber, frame, legs, control box, doors, and all panels are constructed of stainless steel.

PUMP: The 165 gpm recirculating stainless steel pump and impeller with a ceramic seat seal. Easily accessible pump assembly permits quick inspection. The pump is self-draining. All piping distributing water to the upper and lower wash arms is stainless steel tubing.

PUMP MOTOR: Built for Hobart 2 hp grease-packed ball bearings, splash proof, ventilated with manual, resettable inherent overload protection. Available in electrical specifications of 208-240/60/1, 208-240/60/3, 480/60/3 and 600/60/3. Also available, but not submitted for UL listing are 200-240/50/3 and 380-415/50/3.

CONTROLS: A stainless steel control module with power and "start/stop" buttons is mounted on top of the machine. Machine control circuitry will be operated from a 120-volt control circuit transformer. Electrical components are completely wired with 105°C, 600V thermoplastic insulated wire with stranded conductors routed through UL listed electrical conduit or covered wire way.

CONVEYOR: Rapid Return drive, designed for more even throughput of racks and allows for a 16-inch separation between the wash and the rinse zone. Racks conveyed automatically through wash and rinse zones and onto clean dish table. Ball Detent Clutch drive prevents damage to machine or racks, should movement of racks be obstructed. Rack tracks, conveyor structure, and drive units of stainless steel for 19¾" x 19¾" racks as standard. Conveyor speed: 5.6 FPM.

DRIVE MOTOR: Built for Hobart, ½ horsepower gear motor, ventilated with manual, resettable inherent overload protection. Available in electrical specifications of 208-240/60/1, 208-240/60/3, 480/60/3 and 600/60/3. Also available, but not submitted for UL Listing are 200-240/50/3 and 380-415/50/3.

POWER WASH: Wash tank is equipped with upper and lower stainless steel CFD Wash Arms which effectively direct water jets to all ware surfaces. Both upper and lower wash arms are self-aligning and have easily removable end caps for cleaning without use of tools. A removable perforated stainless steel strainer pan supports a deep perforated stainless steel basket.

FINAL RINSE: Final rinse flow rate: 2.1 gpm, .62 gpr, 126-gph. Stainless steel upper and lower Auto Position Rinse Arms™ have single rows of nozzles. Racks entering the rinse zone automatically trigger rinse. Final rinse water line is equipped with a vacuum breaker downstream of an electrically operated

solenoid valve in common piping system. Rinse agent and Low Temp Final Rinse – Sanitizer agent (5.25% sodium hypochlorite – bleach) dispenser injection ports provided in final rinse piping above chamber. **Caution:** Certain materials, including silver, aluminum, and pewter are attacked by sodium hypochlorite (bleach) in the chemical sanitizing dishwasher mode of operation.

FILL: Fill water line is equipped with vacuum breaker on downstream side of electrically operated solenoid valve in common piping system, for automatic maintenance of tank level.

DRAIN AND OVERFLOW: Large bell-type automatic overflow and drain valve controlled from inside of machine. Drain automatically seats by closing inspection doors. Drain seal is large diameter, high temperature o-ring. Drain housing can be plumbed from load or unload end of machine.

STANDARD EQUIPMENT: Digital display of wash and final rinse temperature. Positive low water protection for tank heat. Thermal Layered Curtains throughout machine are keyed to ensure proper placement. Drain is automatically closed when inspection doors are closed. Stainless steel adjustable feet. Bolted stainless steel enclosure panels around perimeter and underneath machine. Automatic tank fill. Door interlock. Auto-timer. Vent fan and booster heater controls. Single point electrical connection. Low temperature alerts. Service diagnostics. Dirty water indicator. Configurable delime notification. NSF rated configurable Pot and Pan dwell mode. Energy Saver Mode. NAFEM Data Protocol compliant.

WASH TANK HEATING SELECTIONS (must choose one):

ELECTRIC: One electric Incoloy® sheathed immersion heater (15 KW) removable from inside tank. Tank water temperature is controlled by microprocessor controlled thermostat with positive low-water protection and magnetic contactor. (Disconnect switches not furnished.) A high limit device mounted on the surface of the tank additionally protects heating element.

STEAM: One-inch stainless steel steam coil. Tank water temperature controlled by microprocessor controlled thermostat with positive low-water protection. Steam supplied to machine through high temperature steam solenoid valve and line strainer.

GAS: Regulated infrared immersion tube gas burner system. Microprocessor controlled thermostat and a blower with a pressure switch control tank water temperature. Positive low water protection is provided. A high limit device mounted on the surface of the tube additionally protects immersion tube. A solid-state igniter board controls the gas valve and provides flame ignition. A transformer steps the control circuit voltage down from 120 volts to 24 volts to power the igniter board and gas valve. For natural gas, gas pressure to burner (customer connection) not to exceed 7" W.C. For LP gas, gas pressure to burner (customer connection) not to exceed 11" W.C. If gas pressure is higher than 7" W.C. natural or 11" W.C. LP pressure regulating valve must be supplied (by others) in the gas line to the dishwasher.

OPTIONAL EQUIPMENT AT EXTRA COST:

Stainless steel pressureless booster heater. Stainless steel vent hoods with vent stack and locking-type damper. Higher than standard chamber. Side loaders and unloaders. Floor mounted steam booster. 19¾" x 19¾" peg, combination and miscellaneous racks. Table limit switch. Drain water tempering kit.

As continued product improvement is a policy of Hobart, specifications are subject to change without notice.



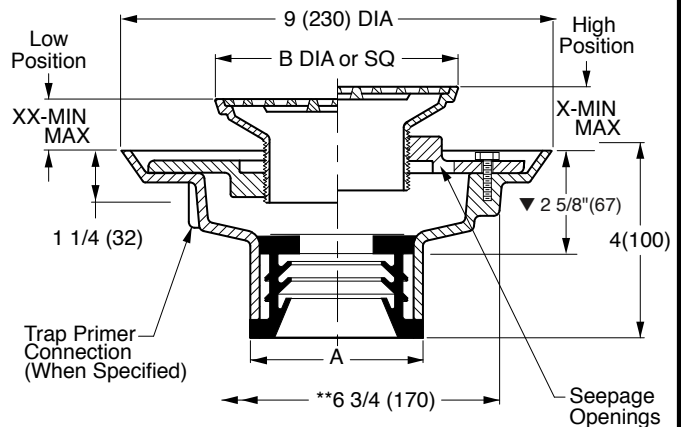
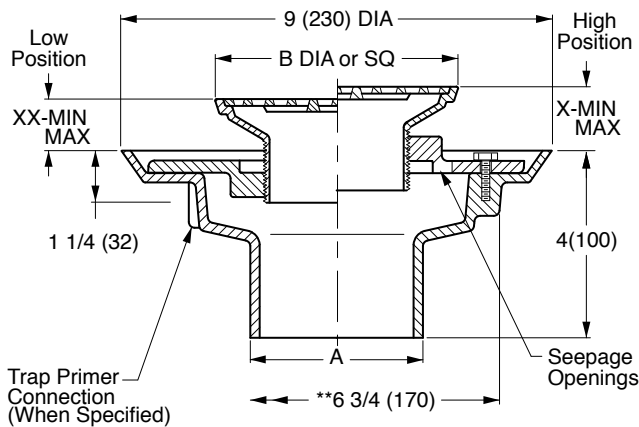
JAY R. SMITH MFG. CO.
MEMBER OF MORRIS GROUP INTERNATIONAL
POST OFFICE BOX 3237
MONTGOMERY, ALABAMA 36109-0237 (USA)
TEL: 334-277-8520 FAX: 334-272-7396 www.jrsmith.com



LOCATION

FLOOR OR SHOWER DRAINS WITH ADJUSTABLE STRAINER HEADS

FUNCTION: General service floor drain for use in showers, toilets, kitchens and other finished areas where foot traffic is expected. The round top strainer head is used for all types of poured finished floors. The square top is particularly adaptable to floors that are finished in material of square or straight line pattern. Reversible flashing collar permits adjustment of the strainer to meet finished floor level.



A (Pipe Size) = 02(50), 03(75), 04(100), 05(125) or 06(150)

NO-HUB OUTLET

- ☐ Fig. 2005Y.....(A) ROUND TOP
☐ Fig. 2005Y.....(B) SQUARE TOP

Outlet Size	Nickel Bronze Strainer Head
02(50)	05(125) DIA or SQ
03(75)	06(150) DIA or SQ
04(100)	08(205) DIA or SQ

FD-2

FD-1

SPEEDI-SET OUTLET

- ☐ Fig. 2005L.....(A) ROUND TOP
☐ Fig. 2005L.....(B) SQUARE TOP

Strainer Size B	*Collar In High Position X		*Collar In Low Position XX		Free Area SQ IN (SQ CM)	
	MIN	MAX	MIN	MAX	ROUND	SQUARE
05 (125)	1 1/4(32)	2 1/4(57)	3/4(19)	1 5/8(41)	7(45)	6.5(42)
06 (150)	1 1/4(32)	2 1/4(57)	3/4(19)	1 5/8(41)	9(58)	12.5(81)
07 (180)	1 1/4(32)	2 1/4(57)	7/8(22)	1 7/8(48)	14(90)	11(71)
08 (205)	1 1/2(38)	2 1/2(64)	1(25)	1 7/8(48)	17(110)	14(90)
*09 (230)	1 1/2(38)	2 3/8(60)	1(25)	1 7/8(48)	18(116)	16(103)
*10 (255)	1 1/2(38)	2 3/8(60)	1(25)	1 7/8(48)	23(48)	16(103)

- ▼ This dimension to internal stop of speedi-set gasket.
• Add 3/8"(10) to all min/max dimensions for round strainers.
* Collar is reversible to obtain extreme high and low strainer positions.
** Not available for 5"(125) size strainer.
** MIN 6 3/4"(170) hole required for core drilled application.

REGULARLY FURNISHED:

Duco Cast Iron Body with Flashing Collar and Adjustable Strainer Head as Indicated by Suffix Letter Selected.

VARIATIONS:

- ☐ Flapper Type Backwater Valve -V
☐ Hinged Grate -H
☐ L Speedi-Set Service Weight 2(50), 3(75) & 4"(100) only
☐ LXH Speedi-Set Extra Heavy 2(50), 3(75) & 4"(100) only
☐ Sediment Bucket -B
☐ Trap Primer Connection -P050 1/2" (13) & -P075 3/4" (19)
☐ Vandal Proof Screws -U
☐ Wide Flanged Strainer (Specify Fig. DX2005)
☐ T Threaded Outlet
☐ Heelproof Grate -HP -AHP (Round) or -BHP (Square)
☐ Quad Close Trap Seal (Specify Fig. 2692)

OPTIONAL MATERIALS:

- ☐ Bronze Body -BB
☐ Chrome Plated Strainer -CP
☐ Galvanized Cast Iron Body -G
☐ Nickel Bronze Strainer -NB
☐ Polished Bronze Strainer -PB
☐ All Stainless Steel (Specify Fig. 9700)
☐ Stainless Steel Strainers -SS [Available in 05(125) & 06(150) sizes only]




NOTE: Dimensions shown in parentheses are in millimeters.

- ▲ Meets ASME Standard A112.6.3-2001 02(50), 03(75) or 04"(100) sizes only.

SEE PM0457 FOR
OPTIONAL STRAINER HEADS.

S	11-3-16	Revised Optional Materials	TBW	CL
R	6-10-15	Revised Variations	TBW	CL
Q	11-18-11	Rev. Dwg., Var.	TBW	CR
P	11-20-09	Revised Variations	RN	BW
REV.	DATE	DESCRIPTION	BY	CKD. BY

WEIGHT POUNDS	VOLUME CUBIC FEET	FIGURE NUMBER
		2005

U	<div>SMITH® JAY R. SMITH MFG. CO.® MEMBER OF MORRIS GROUP INTERNATIONAL POST OFFICE BOX 3237 MONTGOMERY, ALABAMA 36109-0237 (USA) TEL: 334-277-8520 FAX: 334-272-7396 www.jrsmith.com</div> <div></div> <div>MEMBER OF:</div>				LOCATION																																																												
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SUFFIX	DESCRIPTION	SUFFIX	DESCRIPTION																																																																			
<input type="checkbox"/> -10	Less SS Grate	<input type="checkbox"/> -61	With SS Heel-Proof Ribbed Non-Tilt Loose Set Grate with 1/4" (6) SQ Holes.																																																																			
<input type="checkbox"/> -12	With SS 1/2 Grate	<input type="checkbox"/> -63	With SS Medium Duty Heel-Proof Ribbed Non-Tilt Loose Set Grate with 1/4" (6) SQ Holes.																																																																			
<input type="checkbox"/> -13	With SS 3/4 Grate	<input type="checkbox"/> -64	With SS Heavy Duty Ribbed Non-Tilt Loose Set Grate with 1/2" (13) SQ Holes.																																																																			
<input type="checkbox"/> -14	With SS 2 1/2" (64) SQ Center Hole Grate	<input type="checkbox"/> -66	With SS Extra Heavy Duty Ribbed Non-Tilt Loose Set Grate with 1/2" (13) SQ Holes.																																																																			
<input type="checkbox"/> -15	With SS Recessed Grate with Handle	<input type="checkbox"/> -68	With SS Extra Heavy Duty Ribbed Non-Tilt Loose Set 3/4 Grate with 1/2" (13) SQ Holes.																																																																			
<input type="checkbox"/> -18	With NB Rim and Angle Grate	<input type="checkbox"/> -69	With 1" (25) Thick Underbolted NB Rim and Extra Heavy Duty Cast Stainless Steel Secured Grate.																																																																			
<input type="checkbox"/> -21	With SS Grate with 4" (100) DIA NB Funnel																																																																					
<input type="checkbox"/> -22	With SS Grate with 6" (150) DIA NB Funnel																																																																					
<input type="checkbox"/> -25	With SS Grate with 8 1/4(210) x 3 1/4(83) x 4 1/2"(115) High Oval NB Funnel																																																																					
<input type="checkbox"/> -26	With SS Grate with 6(150) x 2 1/2(64) x 1"(25) High Oval NB Funnel																																																																					
<input type="checkbox"/> -41	With SS Solid Cover																																																																					
<input type="checkbox"/> -42	With SS 1/2 Solid Cover																																																																					
<input type="checkbox"/> -43	With SS 3/4 Solid Cover																																																																					
<input type="checkbox"/> -44	With SS 2 1/2" (64) SQ Center Hole Solid Cover																																																																					

C	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 30%;"> SMITH® JAY R. SMITH MFG. CO.® <small>MEMBER OF MORRIS GROUP INTERNATIONAL™ POST OFFICE BOX 3237 MONTGOMERY, ALABAMA 36109-0237 (USA) TEL: 334-277-8520 FAX: 334-272-7396 www.jrsmith.com</small> </div> <div style="width: 20%; text-align: center;"> <small>MEMBER OF:</small> </div> <div style="width: 20%; text-align: center;"> <small>MEMBER OF:</small> </div> <div style="width: 30%; text-align: center;"> <small>ASSE Standard 1011</small> </div> </div>					LOCATION 			
	<h1 style="margin: 0;">HOSE VALVES</h1>								
5670	DRAWING NUMBER s5670	SIZE A	SCALE: NONE	DATE: 01/11/11	APPROVED BY: CL	CHECKED BY: CL	DRAWN BY: JJ	DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCE AND CHANGE WITHOUT NOTICE	
	WE CAN ASSUME NO RESPONSIBILITY FOR USE OF SUPERSEDED OR VOID DATA								
<h2 style="margin: 0;">BENT NOSE WITH FLANGE</h2>									
<p>FUNCTION: For installation in interior and exterior wall locations of buildings that are not subject to freezing. Valves feature a replaceable cartridge which contains all wearing parts including the seat. Optional vacuum breaker prevents contamination of potable water supply and conforms to the requirements of ASSE Standard 1011.</p>									
<div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;"> <p>Fig. 5670 (Less Vacuum Breaker)</p> </div> <div style="text-align: center;"> <p>Fig. 5670 -H (With Vacuum Breaker)</p> </div> </div>									
<p>NOTES:</p> <ol style="list-style-type: none"> The AB1953, California Lead Law, and NSF/ANSI Standard 61-2008 - Drinking Water Components are not applicable to Jay R. Smith hydrants as they do not convey/dispense water for human consumption through drinking or cooking. Dimensions shown in parentheses are in millimeters. FOR IRRIGATION PURPOSES ONLY. 									
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>REGULARLY FURNISHED:</p> <p>Hose Valves have a Rough Finish Brass Body with Machined Brass Vandal-Resistant Lock Shield Bonnet, Removable Wheel Handle, 3/4"(19) NPT Female Threaded Inlet and 3/4"(19) Hose Connection.</p> </div> <div style="width: 45%;"> <p>OPTIONAL MATERIALS:</p> <p><input type="checkbox"/> Polished Chrome Plated -CP</p> <p><input type="checkbox"/> Rough Chrome Plated -CR</p> </div> </div>									
<p>NOTE: Dimensions shown in Parentheses are in millimeters.</p>									
FIGURE NUMBER 	C B A 	2-4-13 12-20-11 3-22-11	Revised Notes Rev. Function Rev. Reg. Furn., Opt. Mat	TBW TBW TBW	CL TK CL	WEIGHT POUNDS	VOLUME CUBIC FEET	FIGURE NUMBER <h1 style="margin: 0;">5670</h1>	
REV.	DATE	DESCRIPTION			BY	CKD. BY			

American Standard



BARRIER FREE

MADERA™ 17"H ELONGATED FLUSH VALVE TOILET

VITREOUS CHINA

MADERA™ 17"H ELONGATED 10" ROUGH

- Vitreous china
- Low-consumption (6.0 Lpf/1.6 gpf)
- 10" roughing-in
- 17" rim height
- Elongated bowl
- Direct-fed siphon jet action
- Fully glazed 2" ballpass trapway
- 10" x 12" water surface area
- 1-1/2" top spud
- 2 bolt caps
- 100% factory flush tested

☐ **3043.102** Top spud

☐ **3043.156** Top spud with slotted rim for bedpan holding (white only)

Nominal Dimensions:

765 x 381 x 438mm (30-1/8" x 15" x 17-1/4")

Recommended working pressure--between 25 psi at valve when flushing and 80 psi static

Fixture only, less seat and bolt caps

Compliance Certifications -

Meets or Exceeds the Following Specifications:

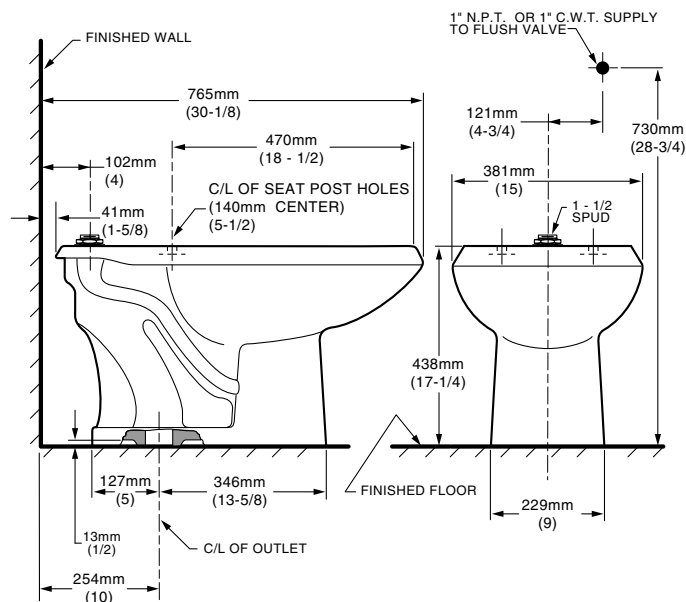
- ASME A112.19.2M (and 19.6M) for Vitreous China Fixtures - includes Flush Performance, Ball Pass Diameter, Trap Seal Depth and all Dimensions

To Be Specified

- ☐ Color: ☐ White ☐ Bone ☐ Silver ☐ Black ☐ Shell
- ☐ Seat: Olsonite #95 open front seat less cover
- ☐ Seat: Church #9500C open front seat less cover
- ☐ Alternate Seat:
- ☐ Flush Valve: Sloan Royal #111
- ☐ Alternate Flush Valve:



● When installed so top of seat is 432 to 483mm (17" to 19") from the finished floor.
MEETS THE AMERICAN DISABILITIES ACT GUIDELINES AND ANSI A117.1 REQUIREMENTS FOR ACCESSIBLE AND USEABLE BUILDING FACILITIES-CHECK LOCAL CODES.



NOTES:

PRODUCT 3043.102 SHOWN, 3043.156 SAME AS EXCEPT WITH SLOTTED RIM FOR BED PAN HOLDING.

THIS TOILET IS DESIGNED TO ROUGH-IN AT A MINIMUM DIMENSION OF 254MM (10") FROM FINISHED WALL TO C/L OF OUTLET.

TO COMPLY WITH AREA CODE GOVERNING THE HEIGHT OF VACUUM BREAKER ON FLUSH VALVE, THE PLUMBER MUST VERIFY DIMENSIONS SHOWN FOR SUPPLY ROUGH-IN.

FLUSH VALVE NOT INCLUDED AND MUST BE ORDERED SEPARATELY.

IMPORTANT: Dimensions of fixtures are nominal and may vary within the range of tolerances established by ANSI Standard A112.19.2.

These measurements are subject to change or cancellation. No responsibility is assumed for use of superseded or voided pages.