

City Manager
Tom Moran

Port Director
Joy Baker

Harbormaster
Lucas Stotts



Nome Port Commission
Jim West, Jr., Chairman
Charlie Lean, Vice Chairman
Doug Johnson
Derek McLarty
Shane Smithhisler
Scot Henderson
Denise Michels

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Nome, Alaska 99762
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**NOME PORT COMMISSION
WORK SESSION & REGULAR MEETING AGENDA
THURSDAY, JULY 20, 2017 @ 5:30/7:00 PM
COUNCIL CHAMBERS IN CITY HALL**

WORK SESSION – 5:30PM (Meet on South Wall of Small Boat Harbor):

Field Trip on Harbor Moorage Congestion/Additional Ladders – followed by discussion in Chambers

REGULAR MEETING – 7:00PM:

- I. ROLL CALL**
- II. APPROVAL OF AGENDA**
- III. APPROVAL OF MINUTES**
 - 06.15.17 Regular Meeting
- IV. CITIZEN'S COMMENTS**
- V. COMMUNICATIONS**
 - 04.11.17 Alaska: U.S. Key to the Arctic by J. Musacchia, War College Student
 - 06.20.17 Letter from Steve Pomrenke on barge haulout
 - 06.26.17 Funding request to AOOS on wave/current sensor buoy
 - 06.29.17 US DOT Infrastructure for Rebuilding America Grant Info Notice
- VI. CITY MANAGER REPORT**
 - 17-07-10 City Manager Report
- VII. HARBORMASTER REPORT**
 - Verbal Update on Dock Operations/Schedule – Maintenance
- VIII. PORT DIRECTOR REPORT/PROJECTS UPDATE**
 - 17-07-06 Port Director/Projects Status Report
 - Snake River Moorage Facility & Vessel Haul Out
- IX. OLD BUSINESS**
 - None
- X. NEW BUSINESS**
 - EEIS Nome Bathhouse Project – 35% Narrative, Cost Estimate & Drawings
- XI. CITIZEN'S COMMENTS**
- XII. COMMISSIONER COMMENTS**
- XIII. NEXT REGULAR MEETING**
 - August 17, 2017 - 5:30 pm
- XIV. ADJOURNMENT**

**MINUTES
NOME PORT COMMISSION
REGULAR MEETING
June 15th, 2017**

The Regular Meeting of the Nome Port Commission was called to order at 5:30pm by Chairman West in Council Chambers at City Hall, located at 102 Division Street.

OATH OF OFFICE

Commissioner Denise Michels was sworn into office.

ROLL CALL

Members Present: C. Smithhisler; C. Lean; C. West Jr.; C. Henderson, C. Johnson; C. Michels;
C. McLarty

Also Present: Lucas Stotts, Harbormaster; Tom Moran, City Manager; Joy Baker, Port
Director (telephonically)

In the audience: Sandra Medearis, Arctic News;

APPROVAL OF AGENDA

Chairman West asked for a motion to approve the agenda.

A motion was made by C. Michels to approve the agenda as amended, and seconded by C. Lean.

At the Roll Call:

Ayes: Lean, West, Henderson, Johnson, Michels, McLarty,
Smithhisler

Nays:

Abstain:

The motion **CARRIED**.

APPROVAL OF MINUTES

May 18, 2017 Regular Meeting

A motion was made by C. Lean and seconded by C. McLarty to approve the minutes – with a minor amendment added by McLarty, requesting “ly” is added to “significant” in the last sentence on page one. Amendment was accepted by Lean.

At the Roll Call:

Ayes: West, Henderson, Johnson, McLarty, Smithhisler, Lean

Nays:

Abstain: Michels

The motion **CARRIED**.

CITIZENS’ COMMENTS

There were none.

COMMUNICATIONS

- 05.19.17 Letter to Mayor Beneville on Municipal Infrastructure Projects
- 06.01.17 Port of Nome: Rescoping and Moving Forward – Alaska Business Monthly
- 06.09.17 Letter to AK DMVA Commissioner Hummel from Mayor on Infrastructure
- USCG D17 Arctic Shield Environmental Assessment

Discussion: None

CITY MANAGER'S REPORT (06/09/17 Written)

Manager Moran expanded slightly on the USCG meeting in his written report; expressing the need to routinely update new command staff with Nome's ongoing discussions and requests regarding USCG Arctic operations and Nome's capabilities.

Discussion:

Commissioner Lean commented that there is long history for many agencies that have had staff rotate into Nome for only brief periods, resulting in little to no development of corporate memory of Nome's capabilities, at the agency level. History is now being repeated with the USCG, and perhaps that point needs to be made in writing. Manager Moran concurred and indicated the City continues to drive the message of traffic growth and increased activity at every possible opportunity, both in written and verbal form.

HARBORMASTER'S REPORT (Verbal)

Corps maintenance dredging is actively working in the entrance channel, and communicating with vessels for navigation adjustments. Crowley has conducting their initial lightering operations to get product into their harbor tanks, gravel staging started at the Causeway for project exports. Staffing is now up to full levels with both field assistants and office manager in place. This will allow the final season opening tasks to be completed in the next week, with larger projects scheduled with Public Works. Public Auction will be held tomorrow for the remaining unpaid items on the impound list.

Discussion:

Commissioner McLarty inquired about the survey that was completed and whether that will indicate what was accomplished in the river over the winter? HM Stotts replied that the pre-dredge survey is for the Corps project and will be compared against a post-dredge once dredging is complete. PD Baker clarified that the Snake River "post-dredge" survey is scheduled to be done when Hughes returns for the Corps interim survey after the channel work is finished. Commissioner Lean said he thought the river post-dredge survey was supposed to indicate whether the suction dredger was to recover the remaining sediment in the river under the project. PD Baker replied that was the plan after the excavation portion was completed, but as the ice became unstable earlier than anticipated, the remainder of the excavation work is now pushed to spring of 2018, so the need for any cleanup work won't be known until that time.

Commissioner West inquired about the status of the fresh water line. HM Stotts advised that NJUS has blown the water line and only had one dock line that remained frozen until yesterday. Water samples have been sent out for testing, and we hope to have results back by next week to allow us to begin selling water to vessels. There is consideration underway of installing heat trace to eliminate any future issues with lines freezing.

Port Director Report / Projects Update (06.08.17 Port Director/Projects Status Report)

PD Baker spoke briefly on the 5/19 letter to the Mayor requesting submissions on local Municipal Infrastructure Projects. Staff is currently updating drawings and cost estimates on the development along the Snake River to submit as one of the City's proposals, as it qualifies as shovel-ready.

Orion Marine is actively working on the concrete ramp extension as well as removing some anodes on the Mid Dock that were damaged by the ice. Q Trucking is currently building the runoff berm along the City/BFI property line, with pad fill to begin in a couple of weeks, followed by crushed. The Knik barge is due at the Cape tomorrow with project equipment, and they anticipate commencing rock placement within a few days.

Discussion:

Commissioner Michels stated that Craig Fleener spoke during the Arctic Ministerial in Fairbanks, indicating that he was gathering projects across Alaska for the next 50 years, do you know if the Hozey letter ties in with that effort? PD Baker responded that she was unaware if there was any connection but would inquire. Commissioner McLarty inquired about what was happening with the plan for the additional ladders on the South Wall? PD Baker replied that that PND had provided a suggested layout and that staff had requested an alternate design similar to the Causeway ladders and we are contemplating the number to be ordered. McLarty added consideration needs to be given to the handrails.

OLD BUSINESS

Port & Harbor Development Analysis (Final) Draft – Cordova Consulting

Manager Moran opened the discussion in an effort to bring the group up to speed, on the plan having been through several iterations and that staff is now hoping the Port Commission will concur to recommend the plan to the Council for adoption.

Discussion: None

Motion:

The following motion was moved by Michels and seconded by Lean

Recommend the Nome Common Council adopt the Nome Port & Harbor Development Analysis – by Cordova Consulting.

At the Roll Call:

Ayes: Henderson, Johnson, Michels, McLarty, Smithhisler,
Lean, West

Nays:

Abstain:

The motion **CARRIED.**

NEW BUSINESS

Waste Reception Facility Feasibility Proposal – Bristol Engineering

PD Baker explained that the proposal actually provided an extensive amount of feasibility detail, thereby escalating into the \$80-100K cost range, per Bristol's estimates. Baker highlighted some tasks that could serve as a Phase 1 portion at a lower cost. Phase 1 results would dictate additional efforts needed and the next phased costs could be identified.

Discussion:

Commissioner Lean commented that although the least glamorous of all projects, this facility would go a long way in attracting port facility users as we'd be the only place in Western Alaska where ships could dispose of their waste, and as a consequence vessels would be stopping. Another benefit is it would essentially supplement the City's existing infrastructure which is aging. A question for Joy, this is one of those things where we could propose to the state for projects to fund....is this on the list? Manager Moran responded that since it's a new project it has not made it on the City's priority list yet or been submitted for funding, but it should be added to our State Priorities. Commissioner Michels added that this is a priority of the Arctic Council's Executive Committee, especially the Pacific side; they'd be very excited about this. PD Baker added that she has discussed the PAME research and how this ties into the results of their work Waste Reception Facilities in the Arctic.

Discussion continued on proposed locations for handling additional waste between the port and the existing lagoons, as well as adding to the existing infrastructure and if we're already operating at capacity. Commissioner Lean suggested including condition of facilities in 2c under Phase 1 as that's an important part of the initial evaluation – PD Baker agreed that could be included at a general level without a great deal of detail to keep the costs manageable. Commissioner Michels indicated that 3d is identified in the 2009 AMSA shipping report – PD Baker replied, yes and also in the PAME report. Lean added that it's important to include the international perspective in the feasibility report.

PD Baker will make suggested additions to proposal and ask Bristol to price highlighted sections.

CITIZENS' COMMENTS - None

COMMISSIONERS' COMMENTS

C. McLarty – welcome to Denise.

C. Lean – thanks for getting the Port ship/shape, and welcome Denise. We go way back on stuff. Also, lost a friend to a drowning in the last couple days – he's one that always wore a life vest, except this one time. ALWAYS were one, as it could be the day you'll need it.

C. Johnson – welcome Denise.

C. Henderson – think the Cordova Consulting study is really good start for getting a better grip on what the future needs are and looking forward to Phase 2. Is there a way to cost effectively track how the projects/assumptions worked out?

C. Smithhisler – glad to have Denise onboard, she always has good information. Today I was working near the barge ramp and noticed there's a great deal happening there and noticed staff does a great job in managing all that is happening there.

C. Michels – went on the Resource Guide, and noticed it is the version from 2015, it has a USCG bulletin link that has been cancelled, and the link to the state's information shows very outdated information. Thank you, and looking forward to serving.

C. West - always glad to have Denise onboard as she has a wealth of information. She always has the heart of the port in mind. Looking forward to a busy season, start up is moving right along and things are already busy.....with the exception of fishing which should be moving soon. Yes, we've had 6 drownings, and there are jackets available, Kid's Don't Float jackets are available – grab one.

SCHEDULE OF NEXT MEETING

The next meeting: July 20, 2017 at 5:30PM.

ADJOURNMENT

Motion was made by C. Michels for adjournment – meeting adjourned at 6:39 PM.

APPROVED and **SIGNED** this 20 day of July, 2017.

Jim West, Chairman

ATTEST:

Joy Baker, Port Director

AIR WAR COLLEGE

AIR UNIVERSITY

ALASKA:
THE UNITED STATES' KEY TO THE ARCTIC

by

Joseph A. Musacchia, Lt Col, USAF

A Research Report Submitted to the Faculty

In Partial Fulfillment of the Graduation Requirements

Advisor: Dr. Howard Hensel

11 April 2017

DISCLAIMER

The views expressed in this academic research paper are those of the author and do not reflect the official policy or position of the US government, the Department of Defense, or Air University. In accordance with Air Force Instruction 51-303, it is not copyrighted, but is the property of the United States government.

Biography

Lt Col Joseph A. Musacchia is assigned to Air War College, Air University, Maxwell AFB, AL. Lt Col Musacchia earned a Bachelor of Criminal Justice degree, a Bachelor of Arts degree in Criminology with a minor in Political Science and a Master of Arts degree in Criminology from Louisiana State University. He entered the Air Force in 1996 as a Distinguished Graduate of the Air Force Reserve Officer Training Corps program, Detachment 310 at Louisiana State University. He is a fully qualified Security Forces officer with more than 20 years of experience. During his career, he has deployed on numerous occasion supporting joint task forces and real-world contingencies and has an extensive leadership background successfully completing 5 squadron commands.

Abstract

The United States has been distracted by aggressive military posturing by the Russian Federation in the Baltics after practicing hybrid *warfare* in the Ukraine and the Republic of Georgia. The People's Republic of China has also become a focus of the United States in what is termed as *the pivot to the Pacific*, in particular, the aggressive military posture and territorial claims being made by China in the South China Sea. Additionally, the United States is still actively engaged in the Global War on Terror with a troop presence in Afghanistan and military activities in the Syrian civil war. All the while, both Russia and China have made significant moves in the Arctic region, to include military buildup of forces and exercising Freedom of Navigation Patrols in United States' territorial waters of the Arctic. The United States has done little to respond to these moves. This paper will discuss the developing strategic significance of the Arctic, in particular the increased use of the maritime sea-lanes of the Northwest Passage and the Northern Sea Lane. This paper will also discuss the strategic military movements of Russia and China in the region and how the United States has been distracted by other strategic movements of these countries in other areas of the globe. It will discuss the strategic moves that the United States should take in the future to counter future threats to our sovereignty and position our nation strategically to address future issues in the region. Additionally, it will advocate for the development of infrastructure at the key location of Nome, Alaska that will allow for defense of the key maritime choke point, the Bering Strait.

Introduction

On the geopolitical strategic stage, the United States has been playing checkers, while our near peer competitors, in particular, the Russian Federation, (Russia) and the People's Republic of China, (China) have been playing chess. This is most evident with regards to the United States' strategic posture, or lack thereof, in the Arctic Ocean. Something that many citizens of our country may not realize is that the United States of America is an Arctic Nation. This is because the State of Alaska has a significant coast line along the Arctic Ocean, and also provides our nation with a key strategic advantage for the region, the Bering Strait. This maritime choke point will become strategically important in the future as the amount of trans-arctic sea travel increases. The United States has been distracted by aggressive military posturing of the Russian Federation in the Baltics after practicing hybrid *warfare* in the Ukraine and the Republic of Georgia. The People's Republic of China has also become a focus of the United States in what is termed as *the pivot to the Pacific*, in particular, the aggressive military posture and territorial claims being made by China in the South China Sea. Additionally, the United States is still actively engaged in the Global War on Terror with a troop presence in Afghanistan and military activities in the Syrian civil war. All the while, both Russia and China have made significant moves in the Arctic region, to include military buildup of forces and exercising Freedom of Navigation Patrols in United States' territorial waters of the Arctic. The United States has done little to respond to these moves. This paper will discuss the developing strategic significance of the Arctic, in particular the increased use of the maritime sea-lanes of the Northwest Passage and the Northern Sea Lane. This paper will also discuss the strategic military movements of Russia and China in the region, how the United States has been distracted by other strategic movements

To: Port of Nome and Port Commission

From: Pomrenke Mining

Date: June 20, 2017

We are planning to bring a barge to Nome in about 10 days to 2 weeks that is 160' long x 44' wide with approximate 15' sideshell. Our plan is to own and operate this barge out of Nome as a cargo or mining barge depending on the need for region. We would like to request authorization to haul out at the ramp each fall on air bags for winter storage.

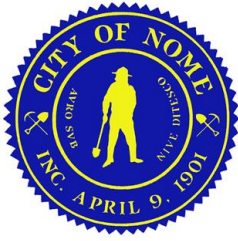
The barge does not have any internal fuel or ballast tanks, so would not pose a hazard during haulout or launch. Our existing vessel insurance would be extended to cover the barge during summer and winter, and we would be renting air bags from the local company that has made them available to several large vessel owners.

We are planning to request dockage space in the harbor in the most convenient location until we can facilitate haul out. We appreciate the opportunity to continue working with the Port of Nome and support the ongoing efforts to expand and develop the facility.

Thank you.

Steve Pomrenke
320-630-7260

A handwritten signature in black ink, appearing to read "Steve Pomrenke", written over a light gray background.



DATE: June 26, 2017

TO: Alaska Ocean Observing System (AOOS)

FROM: Joy Baker, Port Director

RE: **PORT OF NOME – WAVE AND CURRENT SENSOR BUOY**

I request AOOS fund the installation of a current and wave sensor buoy at the entrance to the Port of Nome to provide accurate real time environmental information to mariners aiding maritime safety and efficiency. The estimated cost of procuring the hardware and software for the requested buoy sensor and installation of the same is \$107,000. Ongoing support, annual servicing and deployment will be borne by the Port of Nome.

The safe and efficient operation of the Port of Nome is important to the communities in northwest Alaska. The increased maritime activity at the port is presenting an elevated risk of a marine casualty that could disrupt cargo operations negatively impacting neighboring communities. A recent study of the port's maritime operations identified a need for accurate wind, current and wave information be provided to mariners to aid vessels safe entry and departure through the narrow breakwater opening to the outer port.

Providing accurate ocean observations to mariners comports with AOOS' mission to aid maritime safety and efficiency as decisions on arriving, entering and departing the port from the Bering Sea are based on the nearby sea state, currents and winds. The cross current at the breakwater entrance and wave heights have been risk factors of concern to mariners calling on the port. Accurate information on these environmental factors will aid mariners in addressing these elevated risks. The data received from the requested wave and current buoy will be disseminated to mariners via the cell network and web site provided by MXAK as well as by AOOS' integrated environmental display.

Amplifying information on this request is attached. The Port of Nome has a vessel that is presently used to set and recover navigational buoys that can be used to deploy and recover the requested wave/current buoy.

Submitted

Joy Baker
Port Director

Port of Nome Wave and Current Sensor Buoy

The attached documents present information on the requested wave and current buoy that would be deployed near the entrance to the Nome outer harbor to aid maritime safety and efficiency.

The Marine Exchange of Alaska (MXAK) has been contracted by the Port of Nome to identify technologies and cost of the same to enhance the safety and efficiency of port operations. MXAK presently has installed AIS receivers and transmitters in Nome and in the process of installing a weather sensor at the end of the causeway that will provide weather information to mariners that can be received and displayed via smart phones and AIS receivers. MXAK will incorporate current and wave information provided by the requested buoy into their system as they have done for the Port of Juneau.

Costs of the wave and current buoy include MXAK personnel travel to AXYS, the buoy manufacturer for training, AXYS representatives travel to Nome for the installation, shipping of equipment, MXAK tech support and procurement of ground tackle to moor the buoy.

These costs are as outlined below;

Wave and Current Buoy Platform:	\$ 72,952
Shipping and Handling:	\$ 2,500
Ground Tackle	\$ 2,100
AXYS Tech Travel to Nome to Assist Installation	\$ 11,000
MXAK Tech Travel to Nome to Assist Installation	\$ 5,800
MXAK Software Engineering for Dissemination of Data	\$ 3,000
Indirect/Admin Costs (10%)	\$ 9,735
Total	\$ 107,087



Technical Proposal

February 1, 2017

TRIAXYS Wave & Current Buoy





U.S. Department of Transportation
Office of the Under Secretary

INFRA INFRASTRUCTURE FOR REBUILDING AMERICA



Introduction

- ⦿ Discretionary grant program authorized under the FAST Act through 2020 - previously known as FASTLANE
- ⦿ Approximately \$1.5 billion available for infrastructure grants for FY 17 and FY18.
- ⦿ INFRA program preserves statutory requirements and utilizes updated criteria to evaluate projects and align with national and regional economic vitality goals.
 - Leveraging increased investment by state, local, and private partners.
 - Promoting improved project performance and accountability.
 - Providing project sponsors maximum flexibility to propose innovative solutions to address specific, local needs.
- ⦿ **APPLICATION DEADLINE: November 2, 2017 8 PM EST.**

Eligible Applicants

- ⦿ State(s)
- ⦿ Metropolitan Planning Organizations with 200,000 population
- ⦿ Local Government(s)
- ⦿ Political subdivision(s) or State or local government
- ⦿ Public authorities (including port authorities) with a transportation function
- ⦿ Federal land management agencies applying jointly with a State(s)
- ⦿ Tribal government/consortiums
- ⦿ Multi-State or multijurisdictional group of public entities



Eligible Projects

- ◎ Highway freight projects carried out on the National Highway Freight Network
- ◎ Highway or bridge projects carried out on the National Highway System, including:
 - Projects that add Interstate System capacity to increase mobility
 - Projects located in a national scenic area
- ◎ Grade crossing or grade separation projects
- ◎ Other freight projects that are:
 - Intermodal/rail freight project
 - Within the boundaries of a public or private freight rail, maritime (including ports) or intermodal facility





CITY OF NOME

City Manager's Office

P.O. Box 281

Nome, Alaska 99762

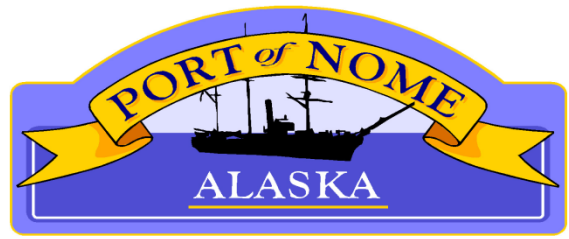
907.443.6600

tmoran@nomealaska.org

City Manager's Report

From: Tom Moran, City Manager
Reporting Period: June 27 – July 7, 2017

- Thanks again to everyone who attended the City/Sitnasuak Community Picnic on Friday, June 23rd. We estimate that we fed around 1,000 people, so hats off to all Sitnasuak, Bonanza, City, and NJUS personnel who helped plan and orchestrate. Thanks also to *The Nome Nugget* for discounted advertising and Northern Air Cargo (NAC) for the donation of freight.
- The Bering Straits Leadership Team (a consortium of Managers and Directors from local organizations) held its quarterly meeting on the afternoon of Thursday, June 29th. Among the discussion topics were: organizational protocol, regional wellness, and hosting a conference of the Arctic Domain Awareness Center in the spring of 2018.
- Congratulations to our June Employee of the Month, Caitlin LeClair (Clerk's Secretary). Caitlin came aboard at a very turbulent time in the Clerk's Office (with one employee resigning, one on maternity leave, Bryant on his way to a week-long training out-of-state, and tax bills needing to be printed/stuffed/mailed). She performed *excellently* for a brand new employee and we're very lucky to have her. Keep up the good work, Caitlin!
- Bravo to everyone who helped pull off another *spectacular* 4th of July celebration (the 118th in Nome). Special thanks to the City employees who gave up their holidays to run the festivities (John Handeland, Bryant Hammond, Marguerite LaRiviere, and Katy Spoden). And, of course, a well-deserved tip of the cap for our volunteer judges: Spencer Cook, Matt Culley, Lena Danner, Erin Lillie, and Traci McGarry.
- The Ad Hoc Cemetery Committee met on Wednesday, July 5th so that Staff could provide an update on headway that has been made since the Committee was convened last spring. Though the task is a monumental one, we've made great strides.
- I'll be taking a personal day on Friday, July 7th, so if you need any assistance, please contact Clerk Hammond or Executive Assistant Cheryl Thompson.
- I'll be in Anchorage on Friday, July 14th for the quarterly meeting of the KNOM Radio Mission (KRM) Board of Directors. This trip is paid for directly by KRM.
- Utility Manager Handeland and I will be in Anchorage on Friday, July 21st for an informal mediation with the Air Force and the Corps of Engineers regarding Lot 7 on Port Road. We remain confident that the site will be characterized as eligible for the FUDS (Formerly Used Defense Sites) Program and, accordingly, the accompanying federal funding.



Memo

To: Tom Moran – City Manager
From: Joy L. Baker – Port Director *JLB*
CC: Mayor & Nome Common Council
Nome Port Commission
Date: 7/6/2017
Re: Port & Harbor Report/Projects Update – July 2017

The following provides a status update on active issues and projects pertaining to the Port & Harbor.

Administrative:

Port & Harbor staff remain busy with ongoing maintenance and repair projects, as well as making a concerted effort to keep the collection of used sorbent materials burned, which is a challenge. Office staff are billing the remaining F17 billing activity so finance can begin their close out and preparation for audit. Although the Port experienced a brief lull in traffic, the schedule is ramping back up with gravel barges, cruise ships, fuel barges and research ships over the next several weeks. Harbor operations are already becoming congested with barge traffic, mixing with homeported fishing vessels, dredges and sailboats, while the Harbormaster and his staff continue to try and minimize maneuvering and moorage issues in the harbor.

The F17 Port Budget at 30 June 2017 shows revenue at 85.9% – with 52.2% expended. All four Port vehicles are in services and currently operating with no deficiencies.

Causeway:

Arctic Deep Draft Port (ADDP) Study:

The Alaska District has not yet received a response from Headquarters on the funding reconsideration request under the F17 Work Plan. A joint letter to the Corps is in circulation within the Alaska delegation offices, and we anticipate receiving a copy of the final document very soon.

There are several other potential paths available to prompt forward movement of the project, should federal funding not be made available through the F17 Work Plan. We are in discussions with the Alaska District on the pros/cons of these paths, and will advise when enough information is available for discussion and decisions.

Army Corps Maintenance Dredging:

The contractor for Army Corps completed the annual maintenance dredging of the navigation channel and east sediment trap. The post-dredge survey has been performed and showed a clear channel and trap, as well as no significant shoaling at the ramp approaches in the harbor, or along the sheet pile dock berthing areas.

Middle Dock Project (Concrete Ramp Extension):

The concrete ramp extension is complete and has passed inspection. The project will be closeout, with final costs submitted to the state grant for payment. Bristol will compile all project engineering documents into a binder for the historical record.

Port Industrial Pad:

Industrial Pad Development:

The post-dredge bathymetric survey of the winter river excavation has been performed, with survey data submitted to PND for compilation against the pre-construction survey performed in Nov 2016. Final quantities will be provided once the comparison is complete.

Q Trucking completing construction of the berm between City and Bonanza Fuel property and is currently crushing topping for the project. Hauling of the borrow material is anticipated to begin 7 July 2017, and continue through the following week, unless the contractor is diverted by weather or other project demands. Project completion date remains of 31 August 2017.

External Facilities:

Cape Nome:

Knik crew has been on site conducting equipment repairs on and off since the barge arrived in mid-June. Rock placement began on 29 June 2017 and continued through 6 July 2017, but the supply of A rock has been depleted. Therefore, the project is shutting down until the quarry can product enough A rock to finish the project. At that time, the equipment operator and project inspector will return to the site.

FEMA has completed their formal review of the revision to the Project Worksheet to account for redesign and reduced quantities on the project, and DHS is performing their follow up action to prepare the revised PW17 package and award documents for the City's execution.

Additional information on any of these projects is available upon request.

Nome Snake River Moorage Facility**COST ESTIMATE**

30-Jun-17

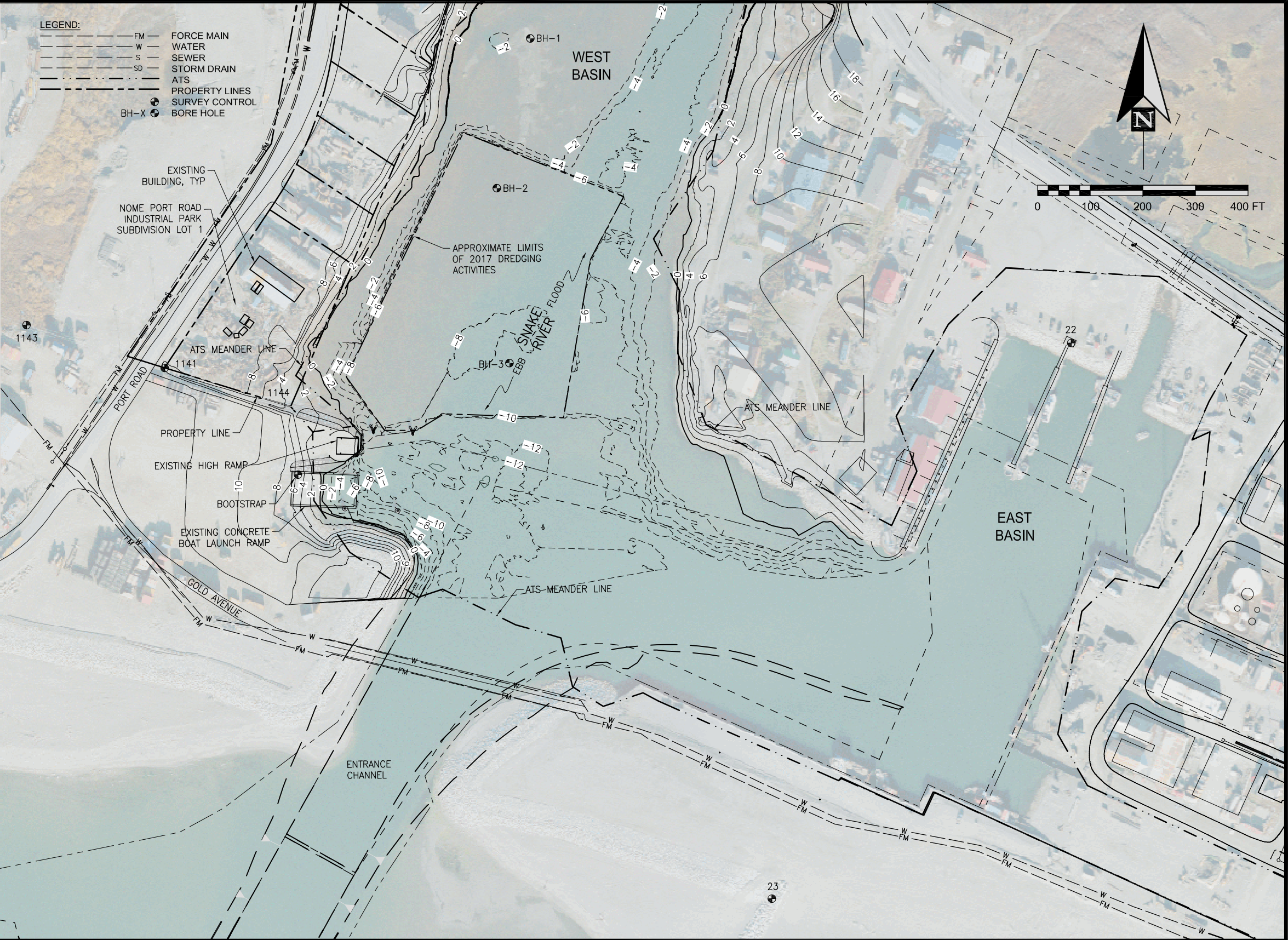
PND 171086

Snake River Moorage Facility					\$13,110,000
Item No.	Description	Pay Unit	Quantity	Unit Cost	Amount
1	Mobilization / Demobilization	LS	1	\$2,140,000	\$2,140,000
2	Dredging and Shore Protection	LS	1	\$3,490,000	\$3,490,000
3	Float System	LS	1	\$2,220,000	\$2,220,000
4	Boat Lift Bulkhead	LS	1	\$1,880,000	\$1,880,000
5	Launch Ramps	LS	1	\$70,000	\$70,000
6	Washdown Slab and Wastewater System	LS	1	\$610,000	\$610,000
7	Uplands Sitework	LS	1	\$570,000	\$570,000
8	Construction Survey	LS	1	\$50,000	\$50,000
9	Site Cleanup and Restoration	LS	1	\$30,000	\$30,000
10	Construction Administration, Inspection, Engineering Support	LS	1	\$450,000	\$450,000
11	Contingency (15% of Construction Cost)	LS	1	\$1,600,000	\$1,600,000

CONTROL NOTES:

1. TOPOGRAPHY AND BATHYMETRY IN PROJECT AREA (2' CONTOURS LABELED) ARE BASED ON AUGUST 9TH AND 10TH, 2016 HYDROGRAPHIC SURVEY BY HUGHES & ASSOCIATES. HUGHES OCCUPIED "KMJV-1" WITH AN RTK BASE STATION (TRIMBLE R8) AND VERIFIED HORIZONTAL AND VERTICAL ACCURACIES USING RTK ROVER (TRIMBLE R8) CHECK SHOTS TO "BOOTSTRAP".
2. THE VERTICAL TIDAL DATUM IS BASED ON THE 2011 NOAA/NOS TIDAL BENCH MARK LIST "946 8756 NOME, NORTON SOUND ALASKA", PUBLISHED 2-29-2009, BASED ON THE 1983-2001 TIDAL EPOCH, HOLDING PILE B AS 16.407' AND NOAA/USACE TIDAL BENCH MARK "8756 E 1992" AS 16.719'.
3. DATA WAS COLLECTED IN NAD 83, ZONE 8, STATE PLANE HORIZONTAL DATUM AND THE NOAA 2011 TIDAL DATUM. ACQUISITION SOFTWARE: TRIMBLE ACCESS AND HYPACK 2016 SEE REFERENCE DRAWINGS.
4. VERTICAL DATUM IS MLLW=0'. SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS NOTED OTHERWISE. HYDROGRAPHIC SURVEY DATA WAS COLLECTED USING RESCON 210 SINGLE BEAM SOUNDER WITH 3 DEGREE TRANSDUCER. HYDROGRAPHIC SURVEY DATA WAS VERIFIED BY OVERLAP BETWEEN HYDROGRAPHIC AND TOPOGRAPHIC SURVEY TECHNIQUES.
5. OTHER UPLAND PROPERTY LINES, CORNERS, STRUCTURES AND UPLAND CONTOURS ARE BASED ON VARIOUS PRIOR SURVEYS & INTERPRETATION AND MAY NOT REPRESENT CURRENT CONDITIONS.
6. CONTRACTORS SURVEYOR SHALL MATCH CONTROL OF THE 2016 SURVEY. CONTRACTOR SHALL OVERLAP THE CONCRETE RAMP AREA WITH BATHYMETRIC AND TOPOGRAPHIC SURVEY TO CONFIRM DATA. OVERLAP SHALL MATCH WITHIN 0.1' VERTICALLY.
7. APPROXIMATE LIMITS OF DREDGING ARE SHOWN AS BASE BID - AREA A FROM THORNBUSH SITE DEVELOPMENT AND SNAKE RIVER DREDGE PHASE II PROJECT.

STATION	NAD 83 EASTING(FT)	NOAA NORTHING(FT)	DATUM	DESCRIPTION
KMJV-1	1,729,283.15	3,827,168.87	16.46	3-1/4" USACE BRASS CAP
BOOTSTRAP	1,730,359.97	3,838,021.15		3-1/4" USACE BRASS CAP
NH02	1,731,835.93	3,838,271.55		3-1/4" USACE BRASS CAP
NH04	1,731,267.43	3,837,211.80		3-1/4" USACE BRASS CAP



6/30/2017

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

REV	DATE	DESCRIPTION

DATE: _____



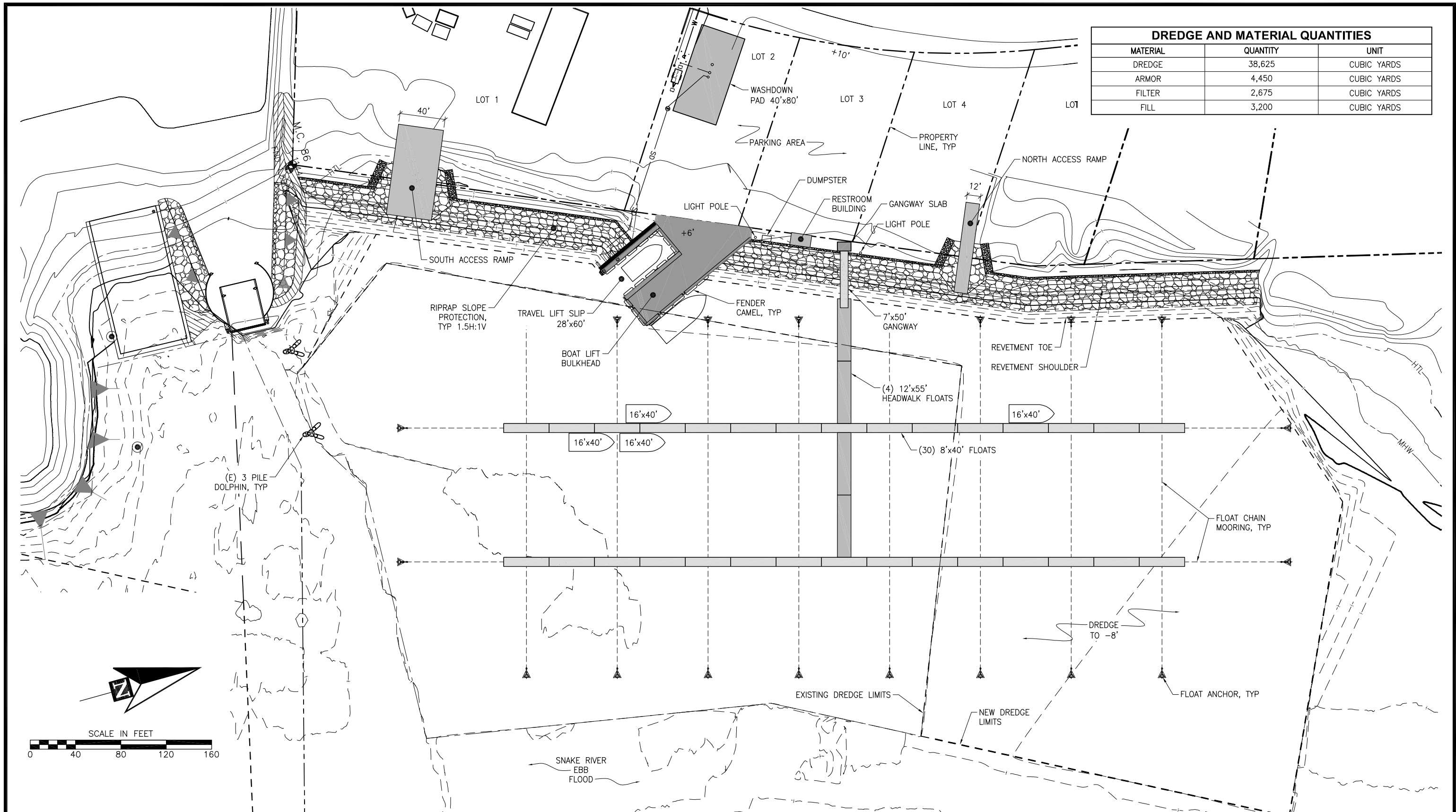
DATE: 6/30/17

1506 West 36th Avenue
Anchorage, Alaska 99503
Phone: 907.561.1011
Fax: 907.563.4220
www.pndengineers.com



PROJECT: CITY OF NOME SNAKE RIVER MOORAGE FACILITY & VESSEL HAULOUT			
TITLE: CONTROL PLAN AND EXISTING CONDITIONS			
DESIGNED BY: BJ/ZC/GH	DATE: 6/30/17	SHEET NO: 2 OF 21	
CHECKED BY: GH	PROJECT NO: 171086		

J:\2017\171086 Nome Floats & Boatlift\Drawings\03 Site Plan.dwg, 03, 6/30/2017 9:08:42 AM, james, 1:2



6/30/2017

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REV	DATE	DESCRIPTION

DATE: _____



DATE: 6/30/17

1506 West 36th Avenue
Anchorage, Alaska 99503
Phone: 907.561.1011
Fax: 907.563.4220
www.pndengineers.com

PND
ENGINEERS, INC.

CITY OF NOME SNAKE RIVER MOORAGE FACILITY & VESSEL HAULOUT			
TITLE: SITE PLAN			
DESIGNED BY: BJ/ZC/GH	DATE: 6/30/17	SHEET NO: 3	OF 21
CHECKED BY: GH	PROJECT NO: 171086		

NOME BATH HOUSE

ARCHITECTURAL DESIGN NARRATIVE

PROJECT SUMMARY

The building will provide a facility for public access to bathing, restrooms and a laundry. It is intended to be available for use from late spring to early fall season. During the remainder of the year, only minimal temperature will be maintained in the mechanical area.

DESIGN CRITERIA

Project design is in accordance with latest adopted codes and standards including:

- International Building Code
- International Mechanical Code
- Uniform Plumbing Code
- ASHRAE 62.2-2010

DESIGN DESCRIPTION

The facility will consist of 690 square feet concrete structure (walls and floor) with a wood framed roof/ceiling system. The roof will consist of a plywood deck, mylar/bitumastic membrane, 1x4 furring and 24 gauge flouro-coated metal roofing panels, trim and soffit. The ceiling will consist of 10 mil polyethylene vapor retarder, 5/8" cement fiber "type X" rated ceiling board and FRP finish material. The exterior wall will consist of the concrete structure, 4" furring with the cavity space filled with fiberglass batt insulation, exterior sheating, Vaproshield wicking membrane, 1" airspace furring and intergrated color heavy thickness vinyl siding.

Interior finishes will consist of Natatorium-rated polyurethane coatings. The floor coating will have non-skid texture material integrated into the material. Colors will be light toned picked by the owner from the manufacturer's color pallat.

All doors and frames will be galvanized and coated with polyurethane finish. Hardware will be Grade 1, brushed stainless steel for exterior applications. Latch sets will have lever handles and keyed to owner's requirements.

See attached plans for floor plan options.

EEIS CONSULTING ENGINEERS, INC.
NOME BATH HOUSE

STRUCTURAL NARRATIVE

Codes and References

Design of the building structural will follow the architectural concept and will conform to the latest adopted editions of the following building codes with amendments and revisions as adopted by the authority having jurisdiction.

IBC 2012	International Building Code
ASCE 7-10	Minimum Design Loads for Buildings
ACI 318-11	Building Code Requirements for Structural Concrete
NDS 2012	National Design Specification for Wood Construction

Structural Loads

Dead	50 psf Concrete walls 10 psf wood walls 15 psf roof
Snow	50 psf
Wind	160 mph Exposure D
Seismic	$C_s = 12.3\%$ $S_{DS} = 0.490$
Soil Brg	4000 psf net effective at 42" depth

Structural System Concept

The structure has been determined to consist of an 8" reinforced concrete foundation wall on continuous reinforced concrete footings at the building perimeter. All walls above grade, both exterior and interior, will be 4" reinforced concrete. The exterior walls will be furred out with 2x6 studs and plywood to hold insulation and cement board siding. The interior reinforced concrete walls will stand directly on the 4 inch floor slab. The top of the exterior wall will have a PT 4x10 plate anchored to the concrete wall. The roof system will consist of pre-engineered trusses and a 3/4 inch plywood deck. There will be a three foot overhang at both the eaves and the gable end.

For Further Design

The remainder of the design process will refine the structural system. Details will be developed which give specifics about concrete reinforcement and wood connections. The roof will be designed to resist wind uplift. Concrete shearwall details will be shown in elevation view. In combination with architectural design, details around openings will be refined. Material specifications and general notes will be refined.

NOME BATH HOUSE

MECHANICAL DESIGN NARRATIVE

MECHANICAL SYSTEM SUMMARY

The building will be provided with water heater, electric radiant heat panels, individual exhaust, and powder coated stainless steel plumbing fixtures. The building is intended to have seasonal operation.

The building heat will include electric radiant panels for each shower, toilet room and laundry room.

Ventilation system will consist of individual exhaust fans for each toilet room, and shower.

Domestic water heating will be two oil fired water heaters with 125 gallon storage tanks.

The building will not be sprinklered.

Controls will be electric/electronic for equipment and zone control.

DESIGN CRITERIA

Project design is in accordance with latest adopted codes and standards including:

- International Building Code
- International Mechanical Code
- Uniform Plumbing Code
- ASHRAE 62.2-2010

DESIGN CONDITIONS

Climate Zone 8 per International Energy Conservation Code. Winter Outdoor design temperature -28 degrees F per 2013 ASHRAE Handbook of Fundamentals. Seasonal low outdoor temperature is 28°F per May Monthly Climatic Design Conditions.

Monthly Climatic Design Conditions per 2013 ASHRAE Handbook of Fundamentals

	May	June	July	August	September
Average	36.8°F	47.8°F	52.1°F	50.3°F	43.0°F
Temperature					
Standard	8.35°F	6.78°F	5.53°F	4.93°F	6.74°F
Deviation					

Indoor heating design temperature 72 degrees F.

Heat loss calculations will be performed per 2013 ASHRAE Handbook of Fundamentals.

UTILITY REQUIREMENTS

Water: A 1-1/2" water service is required for domestic purposes. Domestic water is estimated to be 45 GPM. Water pressure available to the site is estimated to be at least 45 psi static.

Sanitary Sewer: A 4" sanitary sewer is required for the project which will discharge to city sewer.

COOLING

Mechanical cooling is not required or provided for this project.

VENTILATION

Mechanical ventilation is not required or provided for this project except for exhaust as discussed below.

EXHAUST VENTILATION

Exhaust ventilation systems will be as follows:

- 50 CFM exhaust fan with timer switch.
- Each shower room and toilet room will have an individual exhaust fan.

SUPPLY AIR SYSTEMS

Mechanical room combustion air through gravity openings.

Laundry makeup through screened louvers in door.

HEATING

Each shower and toilet room will have a 750 watt 24x48 electric radiant panel.

Laundry room shall be heated by a 5 KW ceiling mounted cabinet unit heater.

Mechanical room will be heater by a 5 KW unit heater.

TEMPERATURE CONTROLS

Factory analog electric/electronic controls for heating units and timer switches for exhaust fans.

PLUMBING

Total domestic water demand is 45 GPM requiring a 1-1/2" domestic service. The water pressure available is 45 psi. Domestic water mains and connections to public fixtures will be Type L copper.

Sanitary soil, waste and vent piping will be cast iron with no-hub fittings.

Water closets and lavatories will be stainless steel penal-ware. Lavatories will be provided with individual thermostatic mixing valves. Floor drains will be provided in mechanical room, laundry room, toilet rooms and shower rooms. Showers will have coin operated timers.

Domestic hot water will be generated with two fuel oil fired water heaters, equal to PVI Maxim 20L 125A-MXO, 199 MBH, 125 gallons storage. Water heater will be provided with expansion tank, thermostatic mixing.

Hot water will be insulated with 1/2 inch insulation. Cold water will be insulated with 1 inch insulation and vapor barrier jacket.

Air compressor for seasonal blow down of piping.

FUEL PIPING

All fuel piping shall be above ground, provide Schedule 40 ASTM A53 steel piping.

Provide Tigerloop Ultra de-aerator with filter for each water heater.

Above-ground 500 gallon double wall fuel tank and 25 gallon day tank with duplex pumps.

FIRE PROTECTION

The building will not be sprinklered.

ELECTRICAL NARRATIVES

Codes and References

Design of electrical power and lighting will conform to the latest adopted editions of the following building codes with amendments and revisions as adopted by the authority having jurisdiction.

NFPA 70 – National Electrical Code
NFPA 72 – National Fire Alarm Code
NFPA 101 – Life Safety Code
IEEE NESC National Electrical Safety Code
Illuminating Engineering Society of North America (I.E.S.N.A.) Lighting Handbook
IBC - International Building Code
IMC - International Mechanical Code
NESC – National Electrical Safety Code

Electrical Service and Distribution

Load calculations based on the proposed equipment show that a service rating of 240VAC 200A is required to provide 22% spare capacity for the Nome Bathhouse/Laundry. This load is calculated using worst case mechanical loads and the washer and dryer loads. If the laundry is not selected then the connected load would be less, however we still recommend a 200 Amp, 240 Vac service for either design.

General Power

Branch Circuit Grounding will be provided by separate grounding conductor runs in the same conduit with branch circuit conductors. Minimum requirements for interior branch circuits will be #12 wire. #10 wire will be provided for 20 amp circuits, with radial lengths in excess of 75 feet.

IMC conduit with a minimum size of ½" will be used for interior branch circuits. The final connection to mechanical equipment will consist of 3' of flexible metallic conduit. Connections to pumps or other mechanical equipment in areas that may be subject to water spray will be provided with liquid tight flexible metallic conduit.

20 amp, heavy duty receptacles will be provided throughout the building at 24 inches above the finished floor as required for convenience or to serve specific appliances and as shown on the drawings. Additionally USB charging ports are recommended in the receptacle adjacent to the waiting area in the laundry.

GFCI receptacles with 5mA ground fault trip ratings will be provided for interior receptacles adjacent to a water source and on the building exterior, we have accounted for one exterior receptacle to power the change machine. Exterior GFCI receptacles will be mounted in cast boxes, listed for wet locations, with spring loaded "in-use" covers with rubber gaskets.

Receptacles for other than 20 amp, 120 volt circuits will be provided from dedicated circuits, with ampere ratings, voltage ratings and grounding configurations to meet the specific requirements of the equipment to be connected such as the washers and dryers.

Lighting

Switches will be 20 amp, heavy duty, silent type located at entries inside the controlled area at a height of 48" above the floor. Switches at doors will be located adjacent to the open swing. We recommend a standard snap switch to control the lights in the mechanical/electrical space and prison grade occupancy sensors located in the bathrooms and showers. Note the exhaust fans will be controlled with the lighting with a delayed off.

Currently our plan shows exterior LED wall packs located over each door.

General area illumination will be provided with surface mounted LED fixtures with a color rendering index greater than 80. Interior lighting levels will be provided in accordance with IESNA guidelines.

Exterior fixtures will be building-mounted, photocell-controlled, wet and salt spray rated, LED with a cutoff distribution to control glare. We provided enough exterior lighting to illuminate the path of egress.

Emergency lighting in will be provided by wall mounted fixtures with twin lamp heads and nickel cadmium back-up batteries in the mechanical/electrical space and emergency ballast fixtures in the bathrooms and showers. In the event of a power outage, emergency lighting fixtures will provide an average illumination of 1 f.c. and a minimum illumination of 0.1 f.c. along routes of building egress.

Egress routes and building exits will be indicated by illuminated exit signs. Exit signs will be furnished with battery back-up and Light Emitting Diodes. In accordance with current IBC, a remote emergency lamp connected to an interior mounted battery back-up unit will be provided to illuminate the exterior immediately outside of the building exit.

Telecommunications

Conduit and wiring for Communications/Data System to Category 5e standards will be designed and terminated back at a common terminal board.

Security:

We are showing locations for four IP CCTV cameras that will be terminated back at a common terminal board shown adjacent to the panelboard

35% DESIGN SUBMITTAL
CONSTRUCTION COST ESTIMATE

PUBLIC BATH HOUSE AND LAUNDRY
NOME, ALASKA

PREPARED FOR:

EEIS Consulting Engineers, Inc.
624 West International Airport Road, Suite 104
Anchorage, Alaska 99518

June 20, 2017



NOTES REGARDING THE PREPARATION OF THIS ESTIMATE

DRAWINGS AND DOCUMENTS

Level of Documents: (15) 35% design drawings and systems narratives
Date: June 14, 2017
Provided By: EEIS Consulting Engineers, Inc. and MBA Consulting Engineers, Inc. of Anchorage, Alaska

RATES

Pricing is based on current material, equipment and freight costs.

Labor Rates: A.S. Title 36 working 60 hours per week
Premium Time: 16.70%

BIDDING ASSUMPTIONS

Contract: Standard construction contract without restrictive bidding clauses
Bidding Situation: Competitive bids assumed
Bid Date: April 2018
Start of Construction: June 2018
Contract Time: (5) months, including submittals, procurement, etc.
Months to Complete: (4) months

EXCLUDED COSTS

1. A/E design fees
2. Administrative and management costs
3. Contaminated soils remediation, if found during construction
4. Any other work not related to this project

NOTES REGARDING THE PREPARATION OF THIS ESTIMATE (Continued)

GENERAL

When included in HMS Inc.'s scope of services, opinions or estimates of probable construction costs are prepared on the basis of HMS Inc.'s experience and qualifications and represent HMS Inc.'s judgment as a professional generally familiar with the industry. However, since HMS Inc. has no control over the cost of labor, materials, equipment or services furnished by others, over contractor's methods of determining prices, or over competitive bidding or market conditions, HMS Inc. cannot and does not guarantee that proposals, bids, or actual construction cost will not vary from HMS Inc.'s opinions or estimates of probable construction cost.

This estimate assumes normal escalation based on the current economic climate. While the global economic downturn appears to be moderating, it remains unclear how its effects and subsequent economic recovery will affect construction costs. HMS Inc. will continue to monitor this, as well as other international, domestic and local events, and the resulting construction climate, and will adjust costs and contingencies as deemed appropriate.

GROSS FLOOR AREA

Bath House and Laundry Area	<u>690 SF</u>
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HMS Project No.: 17068

35% DESIGN COST SUMMARY

	<i>Material</i>	<i>Labor</i>	<i>Total</i>
01 - SITE WORK			
Site Preparation and Improvements	\$ 11,899	\$ 11,344	\$ 23,243
Site Mechanical	22,981	19,934	42,915
Site Electrical	1,704	3,361	5,065
02 - SUBSTRUCTURE	19,125	18,072	37,197
03 - SUPERSTRUCTURE	27,083	34,661	61,744
04 - EXTERIOR CLOSURE	24,985	14,176	39,161
05 - ROOF SYSTEMS	10,198	7,838	18,036
06 - INTERIOR CONSTRUCTION	8,477	9,916	18,393
07 - CONVEYING SYSTEMS	0	0	0
08 - MECHANICAL	53,464	44,011	97,475
09 - ELECTRICAL	35,065	31,265	66,330
10 - EQUIPMENT	10,040	770	10,810
11 - SPECIAL CONSTRUCTION	0	0	0
<i>SUBTOTAL DIRECT WORK:</i>	<i>\$ 225,021</i>	<i>\$ 195,348</i>	<i>\$ 420,369</i>
12 - GENERAL REQUIREMENTS			291,125
<i>SUBTOTAL:</i>			<i>\$ 711,494</i>
13 - CONTINGENCIES			94,002
<i>TOTAL ESTIMATED CONSTRUCTION COST (BID SPRING 2018):</i>			<i>\$ 805,496</i>
<i>COST PER SQUARE FOOT:</i>			<i>\$ 1,167.39 /SF</i>
<i>GROSS FLOOR AREA:</i>			<i>690 SF</i>

PUBLIC BATH HOUSE AND LAUNDRY
 NOME, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

PAGE 5

DATE: 6/20/2017

HMS Project No.: 17068

01 - SITE WORK Site Preparation and Improvements	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
Site survey and staking	0.11	AC	1000.00	110	7000.00	770	8000.00	880
Erosion and pollution control	4,060	SF	0.03	122	0.07	284	0.10	406
Temporary nylon construction fencing and posts	290	LF	3.90	1,131	2.50	725	6.40	1,856
Traffic control (minimal)	1	LOT	150.00	150	250.00	250	400.00	400
Grade existing site pad	4,750	SF			0.18	855	0.18	855
Average 6" gravel fill to raise elevation	106	CY	38.00	4,028	10.00	1,060	48.00	5,088
Finish grade parking area	4,060	SF			0.20	812	0.20	812
4" mesh reinforced concrete apron around building	620	SF	4.70	2,914	4.25	2,635	8.95	5,549
Cut and patch road for utilities	300	SF	3.70	1,110	4.20	1,260	7.90	2,370
ADA parking sign	1	EA	165.00	165	130.00	130	295.00	295
6'0" fencing at fuel tank	33	LF	43.00	1,419	20.00	660	63.00	2,079
5'0"x6'0" gate	1	EA	750.00	750	280.00	280	1030.00	1,030
SUBTOTAL:				\$ 11,899		\$ 9,721		\$ 21,620
Labor Premium Time	16.70%					1,623		1,623
TOTAL ESTIMATED COST:				\$ 11,899		\$ 11,344		\$ 23,243

PUBLIC BATH HOUSE AND LAUNDRY
 NOME, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

PAGE 6

DATE: 6/20/2017

HMS Project No.: 17068

01 - SITE WORK Site Mechanical	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

WATER

12" insulated CMP jacket with 4" diameter carrier pipe and 2" diameter HDPE water line	56	LF	43.00	2,408	48.50	2,716	91.50	5,124
12"x4"x2" fittings/couplings	4	EA	140.00	560	175.00	700	315.00	1,260
2" fitting and connection to existing 10" diameter water main, including NJUS connection fee	1	LOT	1500.00	1,500	500.00	500	2000.00	2,000
2" gate valve and box	1	EA	380.00	380	255.00	255	635.00	635
12"x4"x2" building connection and sleeve	1	LOT	185.00	185	220.00	220	405.00	405
Test and disinfect piping	1	LOT	50.00	50	175.00	175	225.00	225

SEWER

14" insulated CMP jacket with 6" diameter carrier pipe and 4" diameter HDPE sewer line	46	LF	47.00	2,162	52.00	2,392	99.00	4,554
14"x6"x4" fittings/couplings	4	EA	170.00	680	210.00	840	380.00	1,520
4" fitting and connection to 8" diameter sewer main, including NJUS connection fee	1	EA	1200.00	1,200	500.00	500	1700.00	1,700
4" cleanout, tee, and box	1	EA	370.00	370	255.00	255	625.00	625
14"x6"x4" building connection and sleeve	1	EA	210.00	210	235.00	235	445.00	445
Pressure test piping	1	LOT	50.00	50	150.00	150	200.00	200

PUBLIC BATH HOUSE AND LAUNDRY
 NOME, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

PAGE 7

DATE: 6/20/2017

HMS Project No.: 17068

01 - SITE WORK Site Mechanical	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

FUEL OIL

500 gallon, double wall, skid mounted fuel tank complete with vents, manholes, etc.	1	EA	3475.00	3,475	950.00	950	4425.00	4,425
Warning labels and signs	1	LOT	100.00	100	50.00	50	150.00	150
Fill fuel tank with #2 fuel	500	GALS	3.00	1,500			3.00	1,500
1/2" to 3/4" diameter fuel lines and brackets (2)	30	LF	8.70	261	12.50	375	21.20	636
1/2" to 3/4" diameter valves and flexible connections	2	EA	57.00	114	75.00	150	132.00	264
Tank and building connections	4	EA	28.00	112	45.00	180	73.00	292
Test system	1	LOT	50.00	50	150.00	150	200.00	200

TRENCHING FOR WATER AND SEWER MAINS

Excavate and dispose	160	CY			10.00	1,600	10.00	1,600
Bedding material	13	CY	38.00	494	10.00	130	48.00	624
Native NFS backfill, compacted	177	CY	17.00	3,009	8.50	1,505	25.50	4,514
6" PVC marker tape (2)	90	LF	0.32	29	0.23	21	0.55	50
Dewatering allowance (15% of trenching)	24	CY	10.50	252	7.75	186	18.25	438

SUBTOTAL:				\$ 19,151		\$ 14,235		\$ 33,386
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PUBLIC BATH HOUSE AND LAUNDRY
 NOME, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

PAGE 8

DATE: 6/20/2017

HMS Project No.: 17068

01 - SITE WORK Site Mechanical	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
Labor Premium Time	16.70%					2,377		2,377
SUBTOTAL:				\$ 19,151		\$ 16,612		\$ 35,763
Subcontractor's Overhead and Profit on Material and Labor	20.00%			3,830		3,322		7,152
TOTAL ESTIMATED COST:				\$ 22,981		\$ 19,934		\$ 42,915

PUBLIC BATH HOUSE AND LAUNDRY
 NOME, ALASKA
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

PAGE 9

DATE: 6/20/2017

HMS Project No.: 17068

01 - SITE WORK Site Electrical	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

POWER

200 amp, 3 wire overhead power to building from existing pole	50	LF	6.50	325	8.70	435	15.20	760
Pole connections and surge arrestors	3	EA	150.00	450	225.00	675	375.00	1,125
Building weatherhead connection	1	EA	50.00	50	110.00	110	160.00	160

TELECOMMUNICATIONS

Overhead telecommunications cables to building from existing pole (2)	100	LF	3.70	370	5.50	550	9.20	920
Pole connections	1	LOT	75.00	75	120.00	120	195.00	195
Building weatherhead connection	1	LOT	50.00	50	110.00	110	160.00	160

MISCELLANEOUS

Test and tag electrical system	1	LOT	100.00	100	400.00	400	500.00	500
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SUBTOTAL:				\$ 1,420		\$ 2,400		\$ 3,820
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Labor Premium Time	16.70%					401		401
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SUBTOTAL:				\$ 1,420		\$ 2,801		\$ 4,221
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HMS Project No.: 17068

01 - SITE WORK Site Electrical	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

Subcontractor's Overhead and Profit on Material and Labor	20.00%	284	560	844
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TOTAL ESTIMATED COST:	\$ 1,704	\$ 3,361	\$ 5,065
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HMS Project No.: 17068

02 - SUBSTRUCTURE	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

FOUNDATIONS

Excavate and backfill for foundations	78	CY	17.00	1,326	10.50	819	27.50	2,145
4,000 psi concrete strip footings, including waste, direct poured	5	CY	375.00	1,875	120.00	600	495.00	2,475
8" concrete foundation walls, direct poured	9	CY	375.00	3,375	135.00	1,215	510.00	4,590
Bar reinforcement	1,700	LBS	0.75	1,275	0.70	1,190	1.45	2,465
Formwork to footings	175	SF	2.10	368	5.20	910	7.30	1,278
Formwork to walls	668	SF	2.90	1,937	6.15	4,108	9.05	6,045
5/8"x12" 'J' embedded anchor bolts, 16" o/c	80	EA	8.50	680	15.00	1,200	23.50	1,880
Membrane waterproofing	456	SF	1.75	798	2.20	1,003	3.95	1,801
2" rigid insulation	456	SF	0.90	410	0.50	228	1.40	638
1/8"x14"x22 gauge insulation protection cover	105	LF	2.15	226	1.50	158	3.65	384

SLAB ON GRADE

6" NFS fill under slab, compacted	14	CY	22.00	308	8.50	119	30.50	427
4" concrete slab, including waste, direct poured	9	CY	375.00	3,375	115.00	1,035	490.00	4,410
Extra for thickened slab at interior walls	2	CY	375.00	750	130.00	260	505.00	1,010

PUBLIC BATH HOUSE AND LAUNDRY
 NOME, ALASKA
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02 - SUBSTRUCTURE	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

SLAB ON GRADE (Continued)

Extra for drain slopes	240	SF			1.50	360	1.50	360
Cure and finish slab	619	SF	0.30	186	1.25	774	1.55	960
Extra for non-skid floor coating integrated into slab	619	SF	2.70	1,671	1.50	929	4.20	2,600
6"x6"-W1.4x1.4 mesh reinforcement	619	SF	0.55	340	0.40	248	0.95	588
1/2"x4" construction joints	150	LF	1.50	225	2.20	330	3.70	555
SUBTOTAL:				\$ 19,125		\$ 15,486		\$ 34,611
Labor Premium Time	16.70%					2,586		2,586

TOTAL ESTIMATED COST:	\$ 19,125	\$ 18,072	\$ 37,197
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PUBLIC BATH HOUSE AND LAUNDRY
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03 - SUPERSTRUCTURE	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

INTERIOR AND EXTERIOR CONCRETE WALLS

4" concrete walls, including waste, direct poured	22	CY	375.00	8,250	140.00	3,080	515.00	11,330
Bar reinforcement	2,750	LBS	0.75	2,063	0.70	1,925	1.45	3,988
Formwork to each side (3 uses)	3,602	SF	2.20	7,924	5.50	19,811	7.70	27,735
Extra for door blocking	136	LF	1.55	211	2.70	367	4.25	578

ROOF STRUCTURE

4'0" peak x 2" pre-engineered wood trusses, 24" o/c (15)	515	LF	9.20	4,738	3.50	1,803	12.70	6,541
3/4" CDX plywood sheathing	1,093	SF	1.05	1,148	0.90	984	1.95	2,132
2"x blockings	205	LF	0.70	144	1.50	308	2.20	452
Vent baffles, 24" o/c	52	EA	16.00	832	20.00	1,040	36.00	1,872

MISCELLANEOUS

Special inspections of structure	1	LOT	1500.00	1,500			1500.00	1,500
Temporary shoring	1,093	SF	0.25	273	0.35	383	0.60	656

SUBTOTAL:

\$ 27,083

\$ 29,701

\$ 56,784

HMS Project No.: 17068

03 - SUPERSTRUCTURE	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
Labor Premium Time	16.70%					4,960		4,960

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04 - EXTERIOR CLOSURE	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

EXTERIOR WALLS/SOFFITS

2"x6" treated wood sill plate anchored to concrete foundation wall	81	LF	2.70	219	1.75	142	4.45	361
2"x6" top plate	105	LF	1.50	158	1.60	168	3.10	326
3"x10" wood wall cap	105	LF	4.50	473	2.25	236	6.75	709
2"x6" studs, 16" o/c at walls and gables	810	LF	1.10	891	1.25	1,013	2.35	1,904
6 mil vapor retarder	1,085	SF	0.07	76	0.10	109	0.17	185
6" R-19 batt insulation	1,085	SF	0.80	868	0.45	488	1.25	1,356
5/8" CDX plywood sheathing	1,085	SF	0.75	814	0.70	760	1.45	1,574
Frog skin vapor retarder	1,085	SF	0.18	195	0.22	239	0.40	434
Royal AlumiPro aluminum siding and trims (net area)	917	SF	8.45	7,749	3.50	3,210	11.95	10,959
22 gauge prefinished metal soffit fixed to truss tails	263	SF	5.20	1,368	2.70	710	7.90	2,078
10" metal fascias	122	LF	2.55	311	1.90	232	4.45	543
Extra for cutting mechanical vent openings (13)	10	SF			7.50	75	7.50	75

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04 - EXTERIOR CLOSURE	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

DOORS

3'0"x7'0" insulated galvanized steel frames anchored to concrete walls	8	EA	195.00	1,560	110.00	880	305.00	2,440
3'0"x7'0"x1 3/4" insulated galvanized steel, polyurethane coated single doors	8	EA	385.00	3,080	70.00	560	455.00	3,640
Single door hardware to mechanical room	1	EA	520.00	520	295.00	295	815.00	815
Single door hardware to showers and laundry with panic hardware	7	EA	770.00	5,390	340.00	2,380	1110.00	7,770

MISCELLANEOUS

2"x12" high 'Bath House' letters mounted to exterior walls	18	EA	48.50	873	25.00	450	73.50	1,323
1"x4" door name plate signs	8	EA	55.00	440	25.00	200	80.00	640

SUBTOTAL:				\$ 24,985		\$ 12,147		\$ 37,132
Labor Premium Time	16.70%					2,029		2,029

TOTAL ESTIMATED COST:				\$ 24,985		\$ 14,176		\$ 39,161
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PUBLIC BATH HOUSE AND LAUNDRY
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05 - ROOF SYSTEMS	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

Note: Above soffit insulation with Interior Construction.

Ice/water shield (assumed)	1,093	SF	0.75	820	0.70	765	1.45	1,585
Prefinished standing seam metal roofing	1,093	SF	5.80	6,339	3.50	3,826	9.30	10,165
12" wide ridge vent with filter fabric	30	LF	6.75	203	3.80	114	10.55	317
Eave/gable flashings	122	LF	2.20	268	1.70	207	3.90	475
Snow guards at mechanical vents (3)	3	SF	75.00	225	50.00	150	125.00	375
12" diameter x 18" flue flashing	1	EA	60.00	60	75.00	75	135.00	135
6" diameter x 12" vent flashings	2	EA	42.00	84	70.00	140	112.00	224

MISCELLANEOUS

Temporary fall protection railings	128	LF	3.90	499	2.50	320	6.40	819
SUBTOTAL:				\$ 8,498		\$ 5,597		\$ 14,095
Labor Premium Time	16.70%					935		935
SUBTOTAL:				\$ 8,498		\$ 6,532		\$ 15,030
Subcontractor's Overhead and Profit on Material and Labor	20.00%			1,700		1,306		3,006
TOTAL ESTIMATED COST:				\$ 10,198		\$ 7,838		\$ 18,036

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06 - INTERIOR CONSTRUCTION	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

Concrete partitions	1	LOT						With Element 03
Doors	1	LOT						None

FINISHES

Floors

Floor coating	619	SF						With Element 02
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Walls

Polyurethane coating to concrete walls (sub)	2,489	SF	0.30	747	1.75	4,356	2.05	5,103
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Ceilings

12" R-30 fiberglass insulation above ceiling	689	SF	1.15	792	0.60	413	1.75	1,205
6 mil vapor retarder	689	SF	0.07	48	0.10	69	0.17	117
5/8" FRP panels and trims at ceilings	689	SF	3.95	2,722	2.50	1,723	6.45	4,445
Paint door frames (sub)	136	LF	0.80	109	3.50	476	4.30	585

Note: Doors are factory finished.

SPECIALTIES

Vandal Proof Toilet Accessories

Twin roll toilet paper holders	2	EA	43.00	86	25.00	50	68.00	136
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HMS Project No.: 17068

06 - INTERIOR CONSTRUCTION	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

SPECIALTIES (Continued)

Vandal Proof Toilet Accessories (Continued)

18"x30" stainless steel mirrors	2	EA	152.00	304	45.00	90	197.00	394
42" grab bars and blockings	2	EA	58.00	116	35.00	70	93.00	186
30" grab bars and blockings	6	EA	45.00	270	30.00	180	75.00	450
Sanitary napkin disposal	1	EA	48.00	48	20.00	20	68.00	68
Paper towel dispensers	2	EA	67.00	134	25.00	50	92.00	184
Soap dispensers	6	EA	28.00	168	15.00	90	43.00	258
Twin coat hooks at toilets	2	EA	13.00	26	10.00	20	23.00	46

MISCELLANEOUS

18" deep x 36" wall mounted stainless steel benches at showers	4	EA	545.00	2,180	150.00	600	695.00	2,780
4-hook, 30" clothes pegs	4	EA	58.00	232	30.00	120	88.00	352
18" deep x 60" laundry room counter	1	EA	365.00	365	120.00	120	485.00	485
10# bracket mounted fire extinguishers	2	EA	65.00	130	25.00	50	90.00	180

SUBTOTAL:

\$ 8,477

\$ 8,497

\$ 16,974

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06 - INTERIOR CONSTRUCTION	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
Labor Premium Time	16.70%					1,419		1,419
TOTAL ESTIMATED COST:			\$ 8,477		\$ 9,916		\$ 18,393	

HMS Project No.: 17068

08 - MECHANICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

PLUMBING

Note: All fixtures are penal ware type.

P-1: Elongated bowl barrier free water closets with concealed lever flush valve	2	EA	845.00	1,690	230.00	460	1075.00	2,150
P-2: Wall mounted lavatories with dual temperature pneumatic mixing valve, thermostatic mixing valve, drains, and faucets	2	EA	670.00	1,340	195.00	390	865.00	1,730
P-3: Shower heads with temperature balance mixing valve	4	EA	345.00	1,380	170.00	680	515.00	2,060
P-4: Washer box assemblies recessed in concrete wall	2	EA	85.00	170	60.00	120	145.00	290
FD-1: 2"x6" round top floor drains with sediment bucket	3	EA	165.00	495	150.00	450	315.00	945
FD-2: 2"x6" round top floor drains with sediment bucket, including hair trap at showers	4	EA	190.00	760	165.00	660	355.00	1,420
FD-3: 4" mechanical room drains (assumed)	2	EA	170.00	340	155.00	310	325.00	650
HB-1: 3/4" lockable non-frost hose bibbs	2	EA	170.00	340	225.00	450	395.00	790
WH-1 and 2: PV Model Maxim 20L-125A, 125 gallon, 199 MBH fuel fired water heater and controls	2	EA	3850.00	7,700	930.00	1,860	4780.00	9,560

HMS Project No.: 17068

08 - MECHANICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

PLUMBING (Continued)

5" diameter stack through roof	24	LF	23.50	564	17.00	408	40.50	972
Stack caps	2	EA	130.00	260	105.00	210	235.00	470
Hot and cold water connections to washers	2	EA	70.00	140	120.00	240	190.00	380
ET-1: 14 gallon Amtrol expansion tank and valves	1	EA	570.00	570	190.00	190	760.00	760
Plumbing rough-ins to fixtures	8	LOTS	875.00	7,000	1050.00	8,400	1925.00	15,400
Plumbing rough-ins to drains, etc.	3	EA	520.00	1,560	750.00	2,250	1270.00	3,810
Water service entrance assembly with valves and gauges	1	EA	1850.00	1,850	1400.00	1,400	3250.00	3,250
Test and disinfect plumbing	1	LOT	100.00	100	500.00	500	600.00	600

HVAC

EF-1: 50 CFM, fractional HP exhaust fans with timer switch	6	EA	220.00	1,320	115.00	690	335.00	2,010
CUH-1: 300 CFM, 5 KW electric cabinet unit heater	1	EA	565.00	565	180.00	180	745.00	745
UH-1: 350 CFM, 5 KW electric cabinet unit heater	1	EA	640.00	640	210.00	210	850.00	850

HMS Project No.: 17068

08 - MECHANICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

HVAC (Continued)

RP-1: 4'0"x2'0"x0.75 KW radiant heat ceiling panels and valves	6	EA	655.00	3,930	220.00	1,320	875.00	5,250
EF-1: Wall caps	6	EA	67.00	402	75.00	450	142.00	852
6" diameter insulated ducts connected to EF-1 and wall caps (6)	56	LF	9.40	526	6.50	364	15.90	890
6" wall sleeves	6	EA	38.00	228	47.00	282	85.00	510
4" diameter clothes dryer vents (2)	24	LF	5.70	137	3.50	84	9.20	221
4" roof caps	2	EA	55.00	110	65.00	130	120.00	240
4" vent connections to dryers	2	EA	35.00	70	50.00	100	85.00	170
12"x12"x24" combustion air boot inside building	1	EA	95.00	95	75.00	75	170.00	170
12"x12" motor operated damper	1	EA	135.00	135	70.00	70	205.00	205
12"x12"x24" outside air hood with bird screen	1	EA	165.00	165	120.00	120	285.00	285

CONTROLS, TEST, AND BALANCE

Thermostats, including wiring and T-stat lockable boxes	8	EA	93.00	744	75.00	600	168.00	1,344
Electric/electronic controls	18	PTS	290.00	5,220	170.00	3,060	460.00	8,280

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08 - MECHANICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

CONTROLS, TEST, AND BALANCE (Continued)

Test and balance system	16	HRS			160.00	2,560	160.00	2,560
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FIRE PROTECTION

None

SPECIAL SYSTEMS

ACC-1: 6 gallon, 1.5 HP, single stage air compressor with control and hose for seasonal piping blow down	1	EA	940.00	940	360.00	360	1300.00	1,300
25 gallon fuel day tank with 3/4 HP pump at controls	1	EA	2475.00	2,475	750.00	750	3225.00	3,225
Tiger loops to burner with deaerators	2	LOTS	137.00	274	155.00	310	292.00	584
1/2" diameter fuel oil piping	30	LF	5.20	156	8.50	255	13.70	411
Burner and day tank connections	4	EA	28.00	112	45.00	180	73.00	292
Test special systems	1	LOT	50.00	50	300.00	300	350.00	350

SUBTOTAL:

	\$ 44,553	\$ 31,428	\$ 75,981
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Labor Premium Time

16.70%

5,248	5,248
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SUBTOTAL:

\$ 44,553	\$ 36,676	\$ 81,229
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HMS Project No.: 17068

08 - MECHANICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
Subcontractor's Overhead and Profit on Material and Labor	20.00%			8,911		7,335		16,246
TOTAL ESTIMATED COST:				\$ 53,464		\$ 44,011		\$ 97,475

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09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

SERVICE AND DISTRIBUTION

200 amp meter base and socket	1	EA	870.00	870	355.00	355	1225.00	1,225
200 amp disconnect switch	1	EA	520.00	520	170.00	170	690.00	690
240 amp, 32 circuit, 3 wire, 1 phase panel board and directory	1	EA	2125.00	2,125	950.00	950	3075.00	3,075
1 1/4" diameter EMT conduit	20	LF	3.20	64	6.65	133	9.85	197
#3/0 conductors (4)	80	LF	3.40	272	1.85	148	5.25	420
Equipment grounding	1	LOT	170.00	170	225.00	225	395.00	395
Test and tag service and distribution	1	LOT	50.00	50	175.00	175	225.00	225

LIGHTING AND POWER

Note: All fixtures LED type.

Type A/40: 24" long, wall mounted fixtures, wet label, 2,968 LM	4	EA	275.00	1,100	110.00	440	385.00	1,540
Type AE/40: 24" long, wall mounted fixtures with emergency ballast, wet label, 2,968 LM	4	EA	355.00	1,420	125.00	500	480.00	1,920
Type B/70: 48" long wall/ceiling mounted fixtures, 6,541 LM	4	EA	335.00	1,340	120.00	480	455.00	1,820

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09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

LIGHTING AND POWER (Continued)

Type C/30: 48" long, surface mounted fixtures, 2,000 LM	6	EA	305.00	1,830	110.00	660	415.00	2,490
Type EM: Twin head, impact resistant emergency lights with battery back-up	3	EA	295.00	885	125.00	375	420.00	1,260
Type EX: Single face exit sign	1	EA	160.00	160	80.00	80	240.00	240
Type EX: Double face exit sign	1	EA	195.00	195	95.00	95	290.00	290
Type X/30: Low profile, wall mounted, weatherproof exterior fixtures, 2,529 LM	13	EA	435.00	5,655	150.00	1,950	585.00	7,605
Photocell and contactor	1	EA	285.00	285	170.00	170	455.00	455
Occupancy sensor	1	EA	115.00	115	75.00	75	190.00	190
Single pole switches	2	EA	12.00	24	45.00	90	57.00	114
Occupancy sensor switches	6	EA	27.00	162	52.00	312	79.00	474
Duplex receptacles	7	EA	12.00	84	45.00	315	57.00	399
Duplex receptacles, GFCI	8	EA	27.00	216	58.00	464	85.00	680
Quadruplex receptacle	1	EA	32.00	32	65.00	65	97.00	97
Special purpose outlets	2	EA	48.00	96	65.00	130	113.00	226

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09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

LIGHTING AND POWER (Continued)

Radiant heat panel connections	6	EA	35.00	210	60.00	360	95.00	570
Thermal switch and mechanical equipment connections	3	EA	78.00	234	120.00	360	198.00	594
1" diameter IM conduit	150	LF	2.30	345	6.10	915	8.40	1,260
3/4" to 1/2" diameter IM conduit	700	LF	1.70	1,190	5.10	3,570	6.80	4,760
#10 wiring (3)	450	LF	1.10	495	5.20	2,340	6.30	2,835
#12 wiring (3)	2,100	LF	0.17	357	0.60	1,260	0.77	1,617
Test and tag lighting and power	1	LOT	150.00	150	450.00	450	600.00	600

SPECIAL SYSTEMS

4'0"x4'0"x3/4" plywood telephone terminal board with duplex receptacle	1	EA	145.00	145	180.00	180	325.00	325
3/4" diameter EMT conduit with pull wires	20	LF	1.30	26	5.70	114	7.00	140
Exterior building mounted IP-CCTV cameras in heated enclosures	4	EA	1645.00	6,580	550.00	2,200	2195.00	8,780
Surveillance recording equipment	1	LOT	1050.00	1,050	370.00	370	1420.00	1,420
1" diameter IM conduit	125	LF	2.10	263	7.20	900	9.30	1,163

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09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

SPECIAL SYSTEMS (Continued)

Power and signal wiring (3)	375	LF	0.75	281	1.20	450	1.95	731
Camera and panel connections	5	EA	35.00	175	50.00	250	85.00	425
Test and tag special systems	1	LOT	50.00	50	250.00	250	300.00	300
SUBTOTAL:				\$ 29,221		\$ 22,326		\$ 51,547
Labor Premium Time	16.70%					3,728		3,728
SUBTOTAL:				\$ 29,221		\$ 26,054		\$ 55,275
Subcontractor's Overhead and Profit on Material and Labor	20.00%			5,844		5,211		11,055

TOTAL ESTIMATED COST:				\$ 35,065		\$ 31,265		\$ 66,330
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10 - EQUIPMENT	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$
Top loading commercial clothes washers	2	EA	2750.00	5,500	180.00	360	2930.00	5,860
Front loading commercial clothes dryers	2	EA	2270.00	4,540	150.00	300	2420.00	4,840
Furniture and furnishings	1	LOT						By Owner
SUBTOTAL:				\$ 10,040		\$ 660		\$ 10,700
Labor Premium Time	16.70%					110		110

TOTAL ESTIMATED COST:	\$ 10,040	\$ 770	\$ 10,810
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PUBLIC BATH HOUSE AND LAUNDRY
NOME, ALASKA
35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

PAGE 31

DATE: 6/20/2017

HMS Project No.: 17068

12 - GENERAL REQUIREMENTS	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

MOBILIZATION

Mobilization/demobilization and set-up	1	LOT	1500.00	1,500	3500.00	3,500	5000.00	5,000
Barge freight FOB site	28	TONS	575.00	16,100	100.00	2,800	675.00	18,900
Miscellaneous air freight	750	LBS	1.25	938	0.25	188	1.50	1,126

OPERATION COSTS

Project manager (part time)	160	HRS			115.00	18,400	115.00	18,400
Superintendent/working foreman	5	MOS	150.00	750	7000.00	35,000	7150.00	35,750
Quality control	4	MOS						By Superintendent
Field engineering	24	HRS			95.00	2,280	95.00	2,280
Expediting (part time)	4	MOS	150.00	600	2850.00	11,400	3000.00	12,000
Scheduling and estimating (part time)	3	MOS	150.00	450	3200.00	9,600	3350.00	10,050
Clerical/time keeper (minimal)	4	MOS	100.00	400	1500.00	6,000	1600.00	6,400
Site offices and equipment (minimal)	0	MOS						Not Required
Materials storage van (1)	4	MOS	500.00	2,000			500.00	2,000
Consumables (minimal)	4	MOS	350.00	1,400			350.00	1,400

HMS Project No.: 17068

12 - GENERAL REQUIREMENTS	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

OPERATION COSTS (Continued)

Miscellaneous construction equipment, pick ups, etc.	4	MOS	3200.00	12,800	500.00	2,000	3700.00	14,800
Tools, etc.	4	MOS	1500.00	6,000	200.00	800	1700.00	6,800
Fuel, oil, and gas for equipment (350 gallons per month)	4	MOS	1250.00	5,000			1250.00	5,000
Temporary utilities - power, lighting, water, sewer, etc.	4	MOS	750.00	3,000	150.00	600	900.00	3,600
Communications, faxes, etc.	4	MOS	350.00	1,400			350.00	1,400
Daily loading/unloading (minimal)	4	MOS	125.00	500	525.00	2,100	650.00	2,600
Dumpster (1)	4	MOS	450.00	1,800			450.00	1,800
Porta cans and maintenance (2)	4	MOS	200.00	800	50.00	200	250.00	1,000
Temporary barriers, protection, signage, etc. (minimal)	1	LOT	250.00	250	350.00	350	600.00	600
As-builts, schedules, submittals, etc.	1	LOT	150.00	150	1850.00	1,850	2000.00	2,000
Regular clean-up	4	MOS	50.00	200	250.00	1,000	300.00	1,200
Regular debris disposal and dump fee	4	MOS	150.00	600	250.00	1,000	400.00	1,600

PUBLIC BATH HOUSE AND LAUNDRY
NOME, ALASKA

DATE: 6/20/2017

HMS Project No.: 17068

[illegible]OPERATION COSTS (Continued)

Final clean-up, punch list and trade damage repairs	690	SF	0.30	207	0.55	380	0.85	587
Building permits	1	LOT						By Owner
Plan check fees	1	LOT	800.00	800			800.00	800
Miscellaneous materials testing	1	LOT						By Owner
Alaska Dept. of Labor contract labor filing fee (1% of labor)	1	LOT	1900.00	1,900			1900.00	1,900
Per diem (prime and subs, imported trades)	250	MD	160.00	40,000			160.00	40,000
Travel cost	10	RT	475.00	4,750			475.00	4,750
<i>SUBTOTAL:</i>				<i>\$ 104,295</i>		<i>\$ 99,448</i>		<i>\$ 203,743</i>
Home Office	3.00%							18,723
Overhead and Profit	8.50%							54,641
Bonds	0.85%							5,929
Insurances	1.15%							8,089
<i>TOTAL ESTIMATED COST:</i>								<i>\$ 291,125</i>

HMS Project No.: 17068

13 - CONTINGENCIES	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL	TOTAL
			RATE	TOTAL	RATE	TOTAL	UNIT RATE	MATERIAL/LABOR
			\$	\$	\$	\$	\$	\$

ESTIMATOR'S CONTINGENCY

The estimator's allowance for architectural and engineering requirements that are not apparent at an early level of design documentation	10.00%			\$ 71,149
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ESCALATION CONTINGENCY

The allowance for escalation from the date of estimate to the proposed bid date of April 2018 at the rate of 3.50% per annum (10 months)	2.92%			\$ 22,853
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TOTAL ESTIMATED COST:	\$ 94,002
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NOME BATHHOUSE

NOME, ALASKA

DRAWING INDEX

DWG#	DRAWING TITLE	REV#	DATE
G1.0	GENERAL	A	06-14-17
G2.0	GENERAL NOTES	A	06-14-17
C1.0	SITE LAYOUT	A	06-14-17
L1.0	FLOOR PLAN	A	06-14-17
L1.5	FLOOR PLAN - OPTION B	A	06-14-17
L2.0	ELEVATIONS	A	06-14-17
L4.0	ROOF PLAN	A	06-14-17
L3.0	SECTIONS	A	06-14-17
S5.0	WALL DETAILS	A	06-14-17

ATTACHMENTS

DOCUMENT
QUADRA - WATER & SEWER - PLAN & PROFILE
SITE SATELLITE IMAGE

ABBREVIATIONS

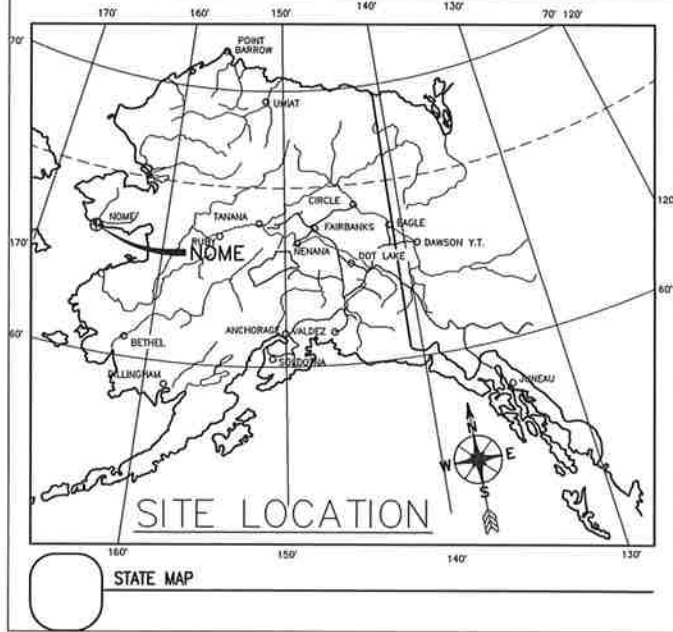
AFF	ABOVE FINISHED FLOOR
ADJ.	ADJUSTABLE
AND	AND
A.B.	ANCHOR BOLT
L	ANGLE
@	AT
BM.	BEAM
BRG.	BEARING
BLK.	BLOCK
BLKG.	BLOCKING
BD.	BOARD
B.O.	BOTTOM OF
BTU	BRITISH THERMAL UNIT
CAB.	CABINET
CPT.	CARPET
CTR	CENTER
C.L.	CENTER LINE
C.	CHANNEL
CLR.	CLEAR
CONC.	CONCRETE
CONN.	CONNECTION
CONT.	CONTINUOUS
CORR.	CORRIDOR
CMP	CORRUGATED METAL PIPE
DIA.	DIAMETER
DIM.	DIMENSION(S)
DBL	DOUBLE
DR	DOOR
DN.	DOWN
E.W.	EACH WAY
ELEC.	ELECTRICAL
ELEV.	ELEVATION
EQ.	EQUAL
EQUIP.	EQUIPMENT
EXP.	EXPANSION
EXT.	EXTERIOR
F.O.C.	FACE OF CHANNEL
F.V.	FIELD VERIFY

F.O.S.	FACE OF STUD
FIN.	FINISHED
F.F.	FINISHED FLOOR
F.E.	FIRE EXTINGUISHER
FR	FIRE RETARDANT
F.F.L.	FINISH FLOOR LINE
FLASH.	FLASHING
FL.	FLOOR
F.D.	FLOOR DRAIN
FLUOR.	FLUORESCENT
FTG.	FOOTING
GALV.	GALVANIZED
GA.	GAUGE
G.L.	GLULAMINATED
GYP, GWB	GYPSON BOARD
HC	HANDICAPPED
HD.	HEAD
HRV	HEAT RECOVERY VENTILATOR
H.M.	HOLLOW METAL
HD.	HOLD DOWN
INFO.	INFORMATION
INS.	INSULATION
INT.	INTERIOR
IBC	INTERNATIONAL BUILDING CODE
JT.	JOINT
LAM.	LAMINATE
LAV.	LAVATORY
MAINT.	MAINTENANCE
MFGR.	MANUFACTURER
MBR.	MASTER BEDROOM
MAT'L.	MATERIAL
MAX.	MAXIMUM
MECH.	MECHANICAL
MTL.	METAL
MIN.	MINIMUM
MISC.	MISCELLANEOUS
M.L.	MICROLAM
NFS	NON-FROST SUSCEPTIBLE

N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
#	NUMBER
O.C.	ON CENTER
PR.	PAIR
PL	PLATE
PLYWD.	PLYWOOD
P.L.F.	POUNDS PER LINEAL FOOT
PPT	PRESSURE PRESERVATIVE TREATED
PSF	POUNDS PER SQUARE FOOT
REFRIG.	REFRIGERATOR
REQD.	REQUIRED
REQMTS.	REQUIREMENTS
REINF.	REINFORCED
REV.	REVERSE
RM.	ROOM
R.O.	ROUGH OPENING
SCHED.	SCHEDULE
SHT.	SHEET(S)
SIM	SIMILAR
SV	SHEET VINYL
S.D.	SOAP DISPENSER
SQ FT	SQUARE FEET
STD.	STANDARD
STL.	STEEL
STG.	STORAGE
S.D.	STORM DRAIN
SUSP.	SUSPENDED
SS	STAINLESS STEEL
STRUC.	STRUCTURAL
T&G	TONGUE & GROOVE
TEMP.	TEMPERED
T.O.S.	TOP OF STEEL
TYP.	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT.	VERTICAL
W/	WITH
WBM	WIDE FLANGE BEAM

SYMBOLS

	SECTION CUT SECTION IDENTIFICATION SHEET WHERE DETAIL IS DRAWN
	DETAIL SECTION IDENTIFICATION SHEET WHERE DETAIL IS DRAWN
	MEMBER CALL OUT
	2A 10BC FIRE EXTINGUISHER
	EMERGENCY EXIT SIGN
	EMERGENCY/EGRESS LIGHT



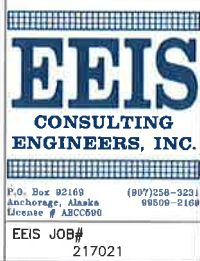
INSURANCE CONSULTANT

ALASKA NATIONAL INSURANCE COMPANY
SENIOR CLAIM EXAMINER
7001 JEWEL LAKE ROAD
ANCHORAGE, AK 99502
(907) 266-9290
CONTACT - FERD LASINSKI

PRIME CONSULTANT

EEIS CONSULTING ENGINEERS, INC
PO BOX 92169
ANCHORAGE, ALASKA 99509
(907) 258-3231
CONTACT - RICK BUTTON

WORK IN PROGRESS



35%	
TITLE	
NOME BATHHOUSE	
GENERAL	
GENERAL	
DATE	06-14-17
SCALE	AS NOTED
EEIS DWG. NO.	G1.0
REVISION	A

File Name: F:\ACAD\2017\217021_Name_Bathroom\Drawings\GENERAL\G2.0 GENERAL NOTES.dwg
PlotStyle: NCS 4.0.ctb - Page Setup: XEROX (11x17) - LTScale: 1 - DimScale: 1 - VisRetain: 0

GENERAL NOTES

CODE REQUIREMENTS

All design and construction shall conform to the International Building Code, 2012 Edition (IBC 2012).

STRUCTURAL DESIGN LOADS

GENERAL Building Risk Category	II
DEAD Structural Weight	
Roof	15 psf
4" Concrete Walls	50 psf
Exterior Walls	
LIVE N/A	
SNOW Snow Importance Factor	1.00
Ground Snow Pg	70 psf
EARTHQUAKE	
Seismic Importance Factor	1.00
Mapped Spectral Response Ss	0.537
Mapped Spectral Response S1	0.190
Soil Site Class	D
Response Modification Factor RMF	4.0 (ORCSW)
Seismic Response Coefficient Cs	12.3% (LRFD)
Seismic Design Category D	
Analysis Procedure	ELF
Short Period Spectral Acceleration SDS	0.490
WIND Wind Speed 3 sec Gust V3S	160 mph (LRFD)
Exposure	D
OTHER Soil Bearing Capacity	4000 psf

BOLTS, ANCHORS, & THREADED STEEL RODS

Structural steel bolts shall conform to the following specifications:
Threaded Steel RodASTM A36 or A307
Anchor Bolts ASTM A36 or A307
Anchor Rod ASTM F1554 Gr 36 or Gr 55 Rods

All steel connectors placed in contact with pressure preservative treated wood shall be stainless steel. Design of bolts is based on simple shear in non-slip critical connections; therefore, make bolts snug tight. Minimum Anchorage depth shall be 6 inches unless otherwise noted.

LAG SCREWS

Lag screws shall conform to ASTM A-307 unless noted otherwise. Lag screws in wood connection shall have predrilled pilot holes 1/2 the diameter of the lag screw to prevent wood from splitting. Lag screw installation shall be ratchet tightened. Do not install lag screws with electric or air driven power tools. Do not hammer lag screws into wood

CONCRETE

Concrete shall conform to American Concrete Institute Standard 301, "Specifications for Structural Concrete." Cement shall conform to ASTM C150, type II. Aggregate shall conform to ASTM C33. Concrete shall be ready mixed in accordance with ASTM C94 and shall obtain 28 day strength of f'c = 4000 psi and the mix shall contain not less than 5 sacks of cement per cubic yard of concrete. Anchor bolts for sills shall be 3/4" diameter stainless steel with 6" embedment (minimum) spaced at 4'-0" o.c. and within 6" of all corners and wall ends. All concrete shall contain 4 to 7% air entrainment. Admixtures may be added with approval by engineer. Check temperature by ASTM C1064 and Check air content by ASTM C231/173/138.

Joists and Beams shall be poured integrally with their floor slabs.

See Architectural, Mechanical, and Electrical plans for verification of depressions, openings, and cast in place accessories. Provide (1)#4 Bar Each edge of each slab opening and extend bars 12" past opening.

Provide keyways for construction joints. Roughen and moisten existing concrete before pouring fresh concrete against it.

Mechanically vibrate all concrete when placed, except that slabs on grade need be vibrated only around under floor ducts, grade beams, and openings. Do not drop concrete more than five feet without the use of tremies. Unless approved otherwise in writing by the architect, all concrete slabs on grade shall be bound by control joints (keyed or saw cut), such that the joint spacing does not exceed 36 times the slab thickness or and the aspect ratio of the enclosed area does not exceed 1.5 to 1. Sawn joints shall be 1/8" wide by ¼ the slab thickness in depth. Keyed control joints need only occur at exposed edges during pouring. All other joints may be saw cut. Cast closure pour around column after column dead load is applied.

Concrete construction shall be inspected. Testing of compressive strength and slump shall conform to ASTM C31, C39, and C143. Provide a minimum

of 3 cylinders for each day's placement. A qualified testing laboratory shall test one cylinder at 7 days and two cylinders at 28 days.

DRY PACK GROUT

Euclid Chemical "Dry Pack Grout" non-shrink grout or similar grout meeting ASTM C1107 formulated to reach 6000 psi strength in 7 days and suitable to be placed at damp, cohesive consistency. Pre heat base materials to 40°F before installing. Maintain 40°F minimum temperature for one week after placing. Mix grout to a stiff consistency that can be molded with the hands but does not slump. Compact the mortar into the gap by tamping with blunt tools and confining the free sides of the gap. Finish exposed surfaces to a smooth plane.

REINFORCING STEEL

Reinforcing steel shall conform to ASTM A615, Grade 60, Fy = 60,000 psi or ASTM A706 for weldability, except allow Fy = 40,000 psi for #3 bar. Latest ACI code and detailing manual apply.

Accurately place or support all reinforcing, including welded wire fabric with galvanized metal chairs, spacers, or hangers for the following concrete coverages:

Concrete poured against earth 3"
Formed surface in contact with earth or weather2"
Beams and columns 1-1/2"
Surfaces exposed to weather1-1/2"
Interior slabs 3/4"

Concrete Reinforcing dimensions shall be as follows:
Bend Diameter6 Db
Lap Splice 48 Db
90° Hook Length 12 Db
Db = One bar diameter.

All splice location are subject to the approval of the engineer. Spliced bars shall be placed at the same effective depth. All reinforcing noted as continuous shall be continuous or spliced with lap splices or mechanical splices rated for the full strength of the rebar. Provide bent corner bars to match and lap with horizontal bars at all corners and intersections.

Skew hooks as required to maintain required cover. Bars may be field bent and re-bent only once.

Welded wire mesh for slabs shall be 6x6 - W1.4xW1.4, shall come in flat sheets and shall conform to ASTM A-185. Lap adjacent mats of welded wire fabric one full mesh plus 2" at both sides and ends. Mesh shall be well supported at depth shown on drawings by clips or other suitable support.

All bars shall be free of loose, flaky rust and scale, grease, or other material which may impair bond.

CONCRETE OR MASONRY ADHESIVE

All-thread rod (A36) or reinforcing bars shall be secured to concrete or masonry with Hilti HIT RE 500SD adhesive manufactured by Hilti Inc., 5400 South 122 East Avenue, Tulsa, OK, 74146, ICC Report #ESR-2322. Install per manufacturer's instructions.

PLYWOOD SHEATHING

Location	Thickness	Exposure	Veneer	Grade	Span	Rating
Roof	23/32"	Exp 1	CD	Sheathing	40/20	
Walls, Interior	15/32"	Exp 1	CD	Sheathing	32/16	
Walls, Exterior	15/32"	Exterior	CD	Sheathing	32/16	
Floors, T&G	23/32"	Exp 1	AC	Sheathing	24	

Location	Grade	Typical Nailing
Roof	APA Rated 10d (10d = 0.148" x 3")	⊗ 6" edge, 12" field
Walls, Int	APA Rated 10d	⊗ 6" edge, 12" field
Walls, Ext	APA Rated 10d	⊗ 6" edge, 12" field
Floors	APA Sturd-i-floor	

Unless otherwise noted, block all wall plywood edges, and glue and nail floor plywood T&G Edges

On-site adjustment of staple and nail guns shall assure, to the owner's satisfaction, installation of fastener heads flush with the sheathing surface. If fasteners penetrate more than 1/16" beyond the sheathing surface, remediation may be required according to APA recommendations which may include additional fasteners or sheathing replacement.

All sheathing shall conform to U.S. Product Standard PS-1 and APA Product standards. All sheathing shall be stamped with APA trademark

showing rating. All plywood in contact with the earth shall be pressure-preservative-treated in accordance with AWP Standard C9-85, C1-84.

Floor and roof plywood shall be installed with face grain perpendicular to supports and in a staggered pattern. Wall plywood shall be installed with face grain parallel to studs, long dimension vertical. Utilize full 4x8 sheets wherever possible. Glue and nail floor plywood to joists, beams, and blocking. Glue T&G edges. Use Liquid Nails floor adhesive. Where blocking is required, nail plywood to blocking at 6" o.c. minimum. Nail adjacent plywood edges to a common framing member for lateral load path continuity. Nail plywood panels meeting at a corner to a common corner stud. Use common wire nails.

ROOF TRUSSES

The roof truss design shall be prepared by a registered professional engineer under the builder's direction. Roof trusses shall be furnished to bear on the walls as shown in the plans. The roof truss design shall include connection hardware. Minimum roof truss end holdown shall be Simpson H2.5. Provide roof truss calculations and shop drawings for review by the engineer of record.

WOOD FRAMING, NAILING, AND CONNECTIONS

Framing lumber shall be graded and marked in accordance with WWP or WCLIB Standard Grading and Dressing Rules for West Coast Lumber, Latest Edition. Furnish to the following standards:

Joists HF#2
Beams and Stringers HF#2
Posts and Timbers HF#2
Studs and Misc FramingHF#2
Plates, First Story DF#2
Plates, Upper Stories HF#2

All wood framing details not shown otherwise shall be constructed to the minimum standards of the IBC. Nailing not shown shall be in per table 2304.9.1 of the IBC. All nails shall be common wire nails. Whenever possible, nails driven perpendicular to the grain shall be used, instead of toenails. There shall be a minimum of two nails at all wood contacts and joists using 8d (8d = 0.131" x 2.5") nails for 1" thick material, 16d (16d = 0.162" x 3.5") nails for 2" thick material, and 40d (40d = 0.225" x 5") nails for 3" thick material. At continuous contacts, provide nails at 12" o.c. with nail sizes as called for above. All nails in pressure treated materials shall be stainless steel. At multiple joist bearings provide multiple studs for bearing and carry to foundation wall.

Provide washers under all bolt heads with wood contact.

All exterior walls shall be minimum 2x6 studs. All nonbearing walls 2x4, except plumbing walls, which shall be 2x6. Provide continuous solid blocking at mid-heights of all stud-bearing walls over 8'-0" in height. Individual members of built-up posts shall be glued and attached with 16d (16d = 0.162" x 3.5") spikes at 12" o.c. staggered minimum. In a 3-member built-up member nail each member to the adjacent member with 16d (16d = 0.162" x 3.5") at 12" o.c.

All wood stud walls shall have lower wood plate attached to wood framing below, with 16d (16d = 0.162" x 3.5") nails at 16" o.c. staggered unless shown otherwise. Install solid blocking under all posts between joists. In stud walls or pony walls, install additional studs and blocking under concentrated loads to carry load to foundation. All roof joists or trusses shall be attached at top framing plate with one Simpson H1 Hurricane Tie at each end.

Provide flat blocking between studs at top and bottom of wall and base cabinets, for toilet partitions, grab bars, towel bars and any other item or accessory supported by walls.

Provide solid blocking at bearing points.

Bearing wall studs shall be sheathed on one side with either plywood or a gypsum wall board assembly rated for bearing walls.

All wood foundation walls resting on concrete shall be attached to the footing with ____" diameter stainless steel anchor bolts at ____'-____" o.c. unless noted otherwise on drawings. All wood left in permanent contact with masonry or concrete shall be pressure preservative treated.

Notations on drawings relating to framing clips, joist hangers, and other connecting devices refer to catalog numbers of Strong-Tie connectors manufactured by the Simpson Company, San Leandro, CA. Where the catalog shows different fastening schedules for a certain connector, the highest number of fasteners shall be used unless otherwise noted. Equivalent devices by other manufacturers may be substituted provided they

have ICBO approval for equal load capacities approved by the Engineer. Where connectors strap two members together, place one half of the nails or bolts in each member.

Maximum moisture contact during construction shall be 19%. Control moisture to avoid problems with differential shrinkage perpendicular to the wood grain.

See architectural drawings for locations of interior nonbearing stud partitions for location and size of openings in stud walls, and for all stud wall finish details. Drawings indicate general and typical details of construction. Where conditions are not specifically indicated but are of similar character to details shown, similar details of construction shall be used, subject to review and approval of the Engineer. If any errors or omissions appear in the drawings, specifications, or other documents, the contractor shall notify the Owner or Engineer in writing of such omission or error before proceeding with the work or accept full responsibility for costs to rectify the error.

WOOD PRESERVATIVE TREATMENT

Glulam beams and solid sawn joists shall be pressure preservative treated following Western Wood Preservers Institute use category UC3B 4% Chromated Copper Arsenic. Western Red Cedar and Alaskan Yellow Cedar decking and guardrails may be left untreated. In pressure-preservative-treated wood shall be painted with three generous coats of copper-naphthanate (CuN) 2% solution in heavy oil, type A solvent, before installing fasteners.

All lumber in contact with concrete or earth shall be preservative treated.

Framing accessories and fasteners in preservative treated wood shall be stainless steel.

SPECIAL INSPECTIONS

Special inspections shall be performed by qualified personnel independent from the builder. Contractor shall submit inspector's resumes to the building department for approval.

Special inspectors shall observe the work assigned for conformance with approved design drawings and specifications. Inspection reports shall be furnished to the Municipal Building Department, Owner and the Engineer of Record. All discrepancies shall be brought to the immediate attention of the Contractor for correction, and to the attention of the Engineer of Record.

The special inspectors shall submit a final signed report stating whether the work requiring special inspection was, to the best of the inspector's knowledge, in conformance with the approved plans and specifications and the applicable workmanship provisions of the applicable codes.

Provide the following special inspections per chapter 17 of the 2012 International Building Code (IBC).


Item	Description	Frequency
Excavation	Confirm depth and bearing	Upon Completion
Reinforcing Steel	Visual Observation	Before closing forms
Concrete Formwork	Visual Observation	Before placing concrete
Concrete	Slump, air, temperature	Each pour or each 100 CY
	Compressive Strength	
	Cylinders	

GENERAL

- These plans do not purport to show every aspect of the work required for completion. It shall be the builders' responsibility to:
- Verify dimensions and field conditions. Notify the engineer of discrepancies and obtain approval for proposed field changes prior to construction or modification.
 - Contact Utilities for field locates. Buried or covered utilities may exist which are not shown on the plans.
 - Dispose of soil waste and demolished materials.
 - Remove snow during construction.
 - Obtain building permits.
 - Notify the local building official at construction stages requiring inspection.
 - Perform all construction with materials, methods, and workmanship accepted as good practice in the construction industry.
 - Provide adequate shoring, bracing, and formwork as required for the protection of life and property during construction.
 - Follow manufacturers' recommendations.
 - Control water runoff and drainage.
 - Make all precaution to insure jobsite safety.

WORK IN PROGRESS

DWG.No.	TITLE	A	06-14-17	CLIENT REVIEW	NA	RB	RB	RB	RB	
REFERENCE DRAWINGS		No.	DATE	DESCRIPTION	DWN.	CHK'D	D. ENG	P. ENG	P. MGR	CLIENT
		ISSUES / REVISIONS			ENGINEERING APPROVALS					
					COPYRIGHT © EEIS 2017					



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Anchorage, Alaska
License # ABCX500

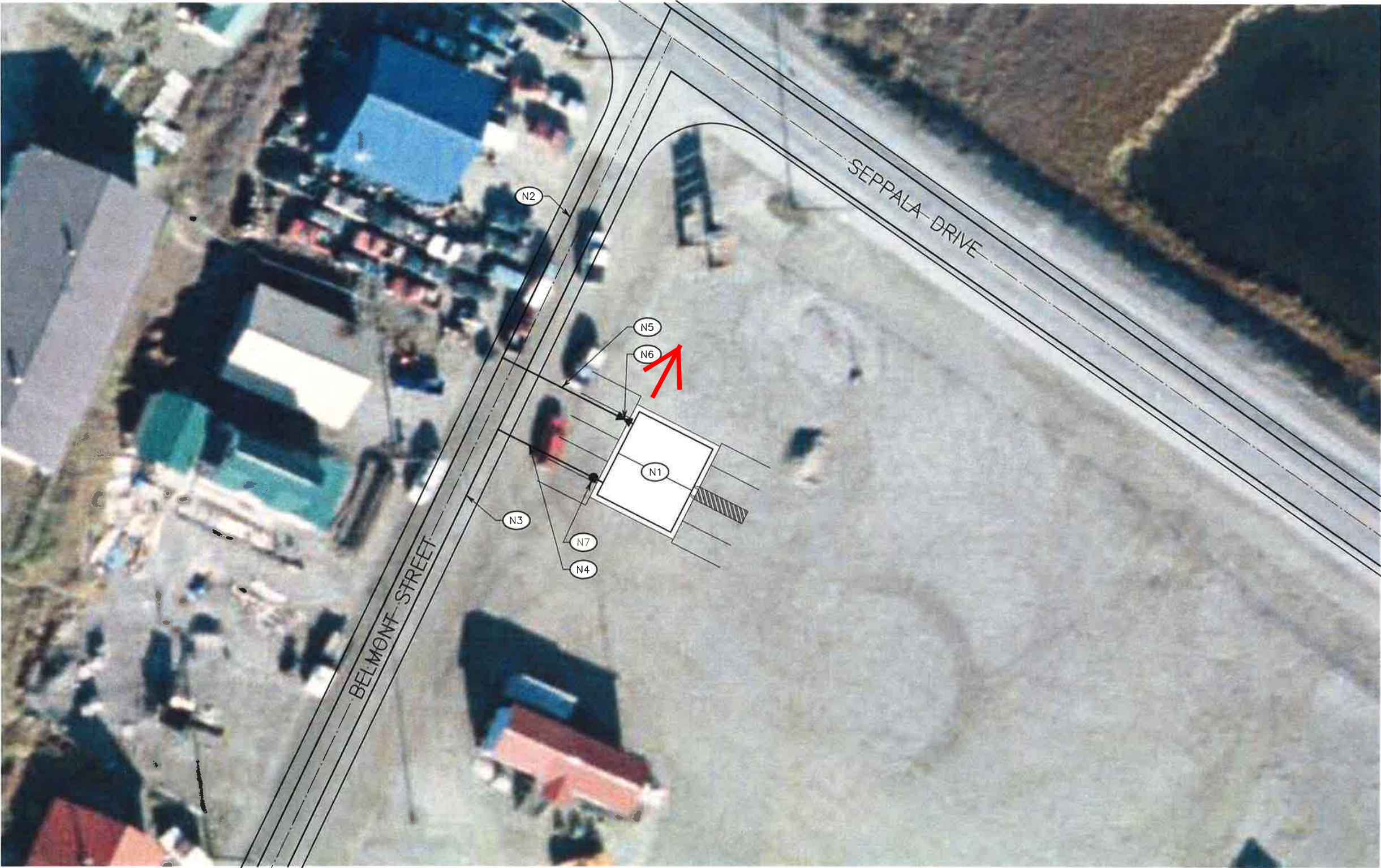
(907)556-3031
855-506-2169

EEIS JOB# 217021

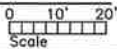
CLIENT DOC#

35%	
NOME BATHHOUSE	
GENERAL NOTES	
GENERAL	
DATE 06-14-17	REVISION
SCALE AS NOTED	EEIS DWG. NO.
G2.0	
A	

- NOTES (FOR THIS SHEET)
- N1 NEW NOME BATHHOUSE
 - N2 NOME 10" WATER LINE STEEL
 - N3 8" SEWER LINE
 - N4 4" INSULATED HDPE WASTE LINE
 - N5 2" INSULATED HDPE WATER LINE
 - N6 SERVICE SHUT-OFF VALVE
 - N7 CLEANOUT



2.1 SITE PLAN
S(240) G(A) P(H) D(EEIS)



WORK IN PROGRESS

DWG.No.	TITLE	No.	DATE	DESCRIPTION	ISSUES / REVISIONS	DWN.	CHK'D	D. ENG	P. ENG	P. MGR	CLIENT
		A	06-14-17	CLIENT REVIEW		NA	RB	RB	RB	RB	

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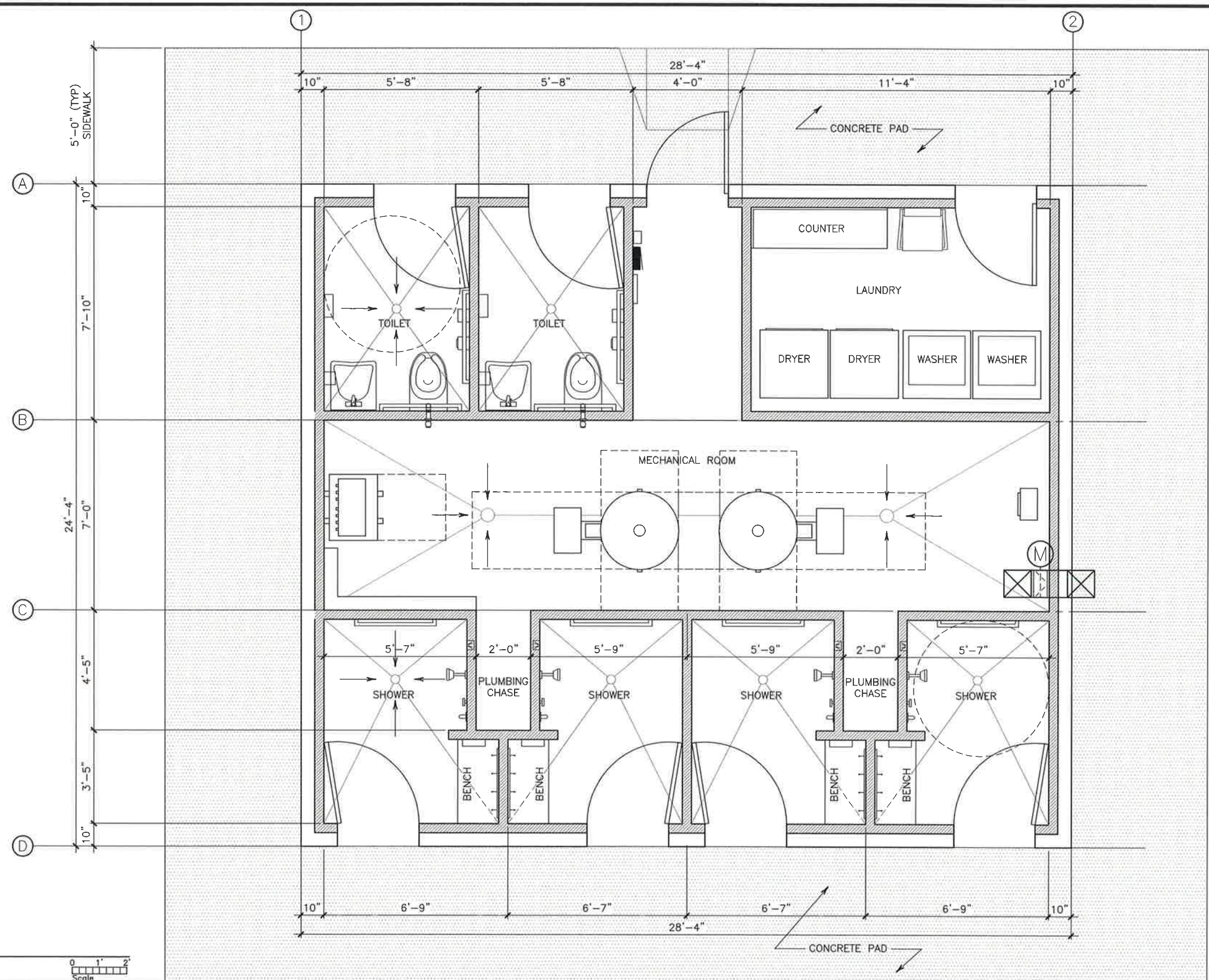
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DATE 06-14-17
SCALE AS NOTED

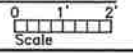
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REVISION

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2.1 OPTION - A
FLOOR PLAN
S(24) G(A) P(H) D(EEIS)



WORK IN PROGRESS

DWG.No.	TITLE	REFERENCE DRAWINGS	ISSUES / REVISIONS	ENGINEERING APPROVALS	CLIENT
A	05-16-17	CLIENT REVIEW	NA RB RB RB RB	DWN. CHK'D D. ENG P. ENG P. MGR	CLIENT

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TITLE NOME BATHHOUSE FLOOR PLAN LAYOUT

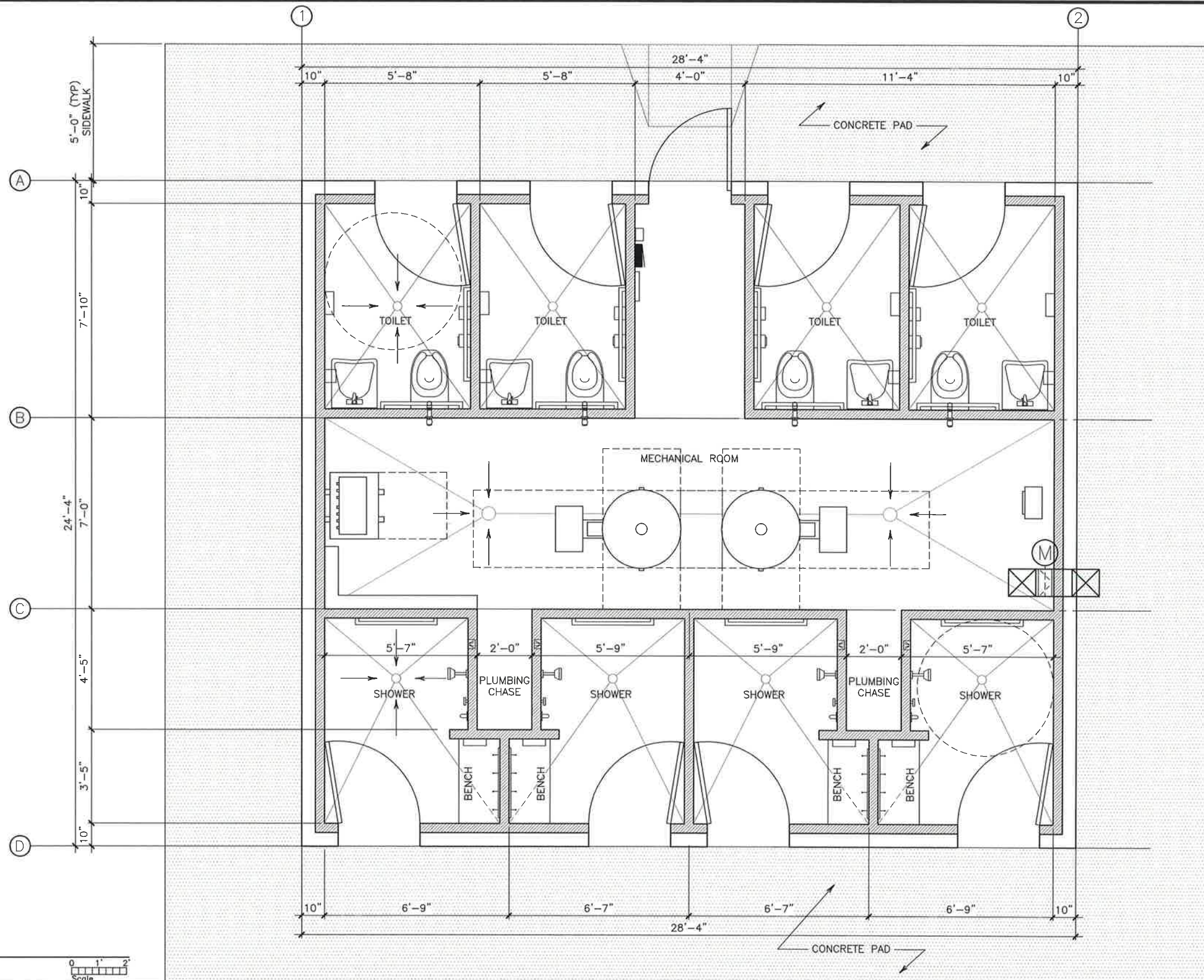
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REVISION A

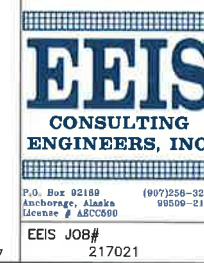
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OPTION - B
FLOOR PLAN




WORK IN PROGRESS

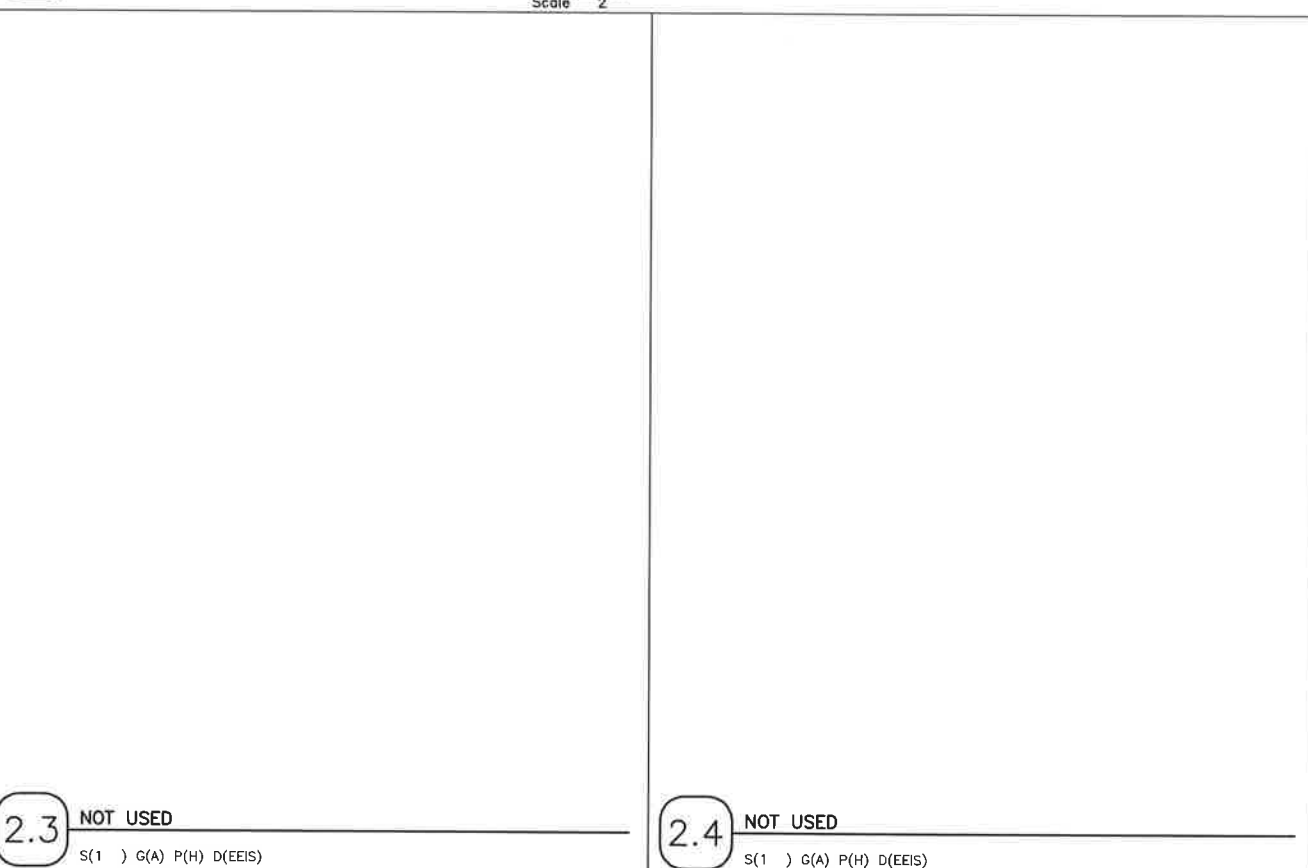
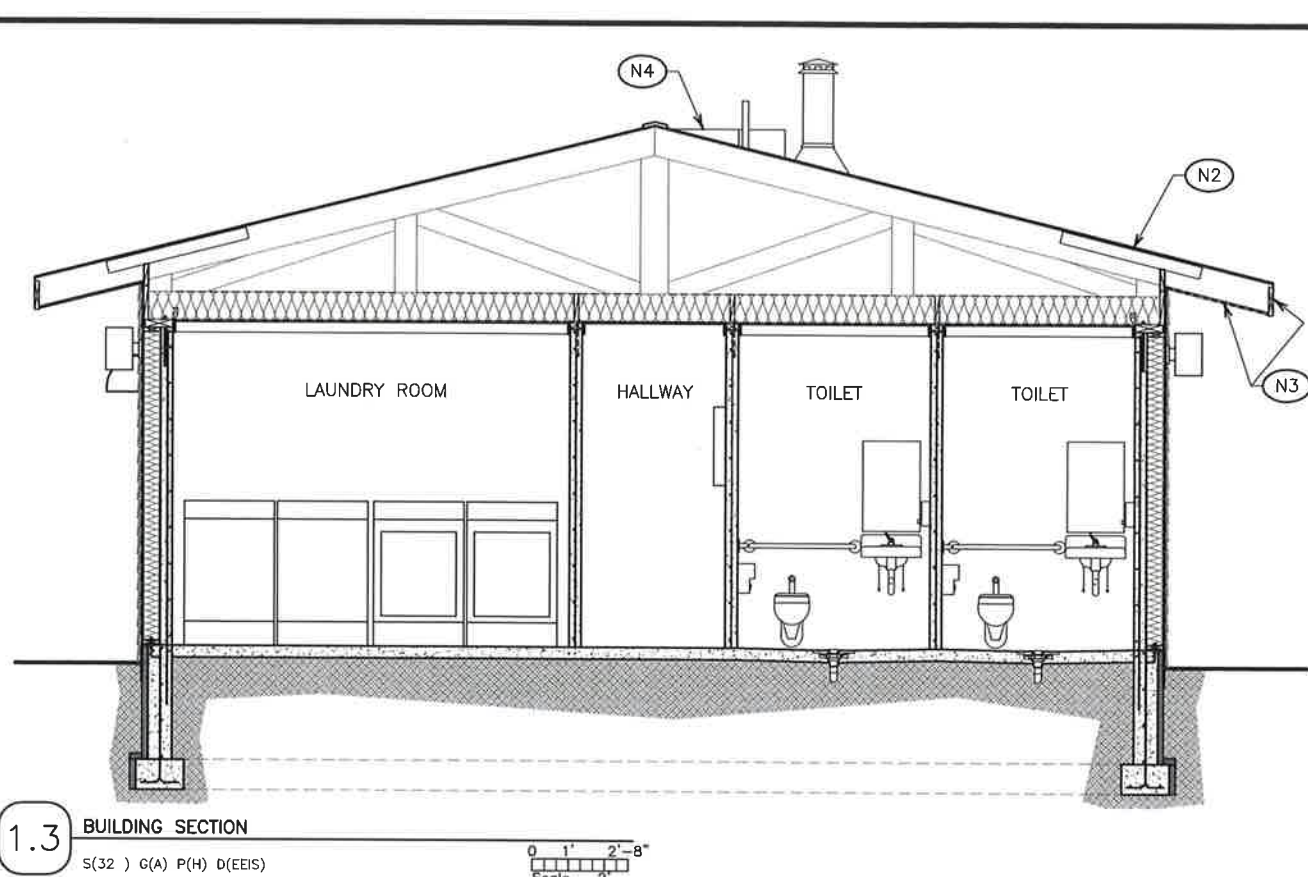
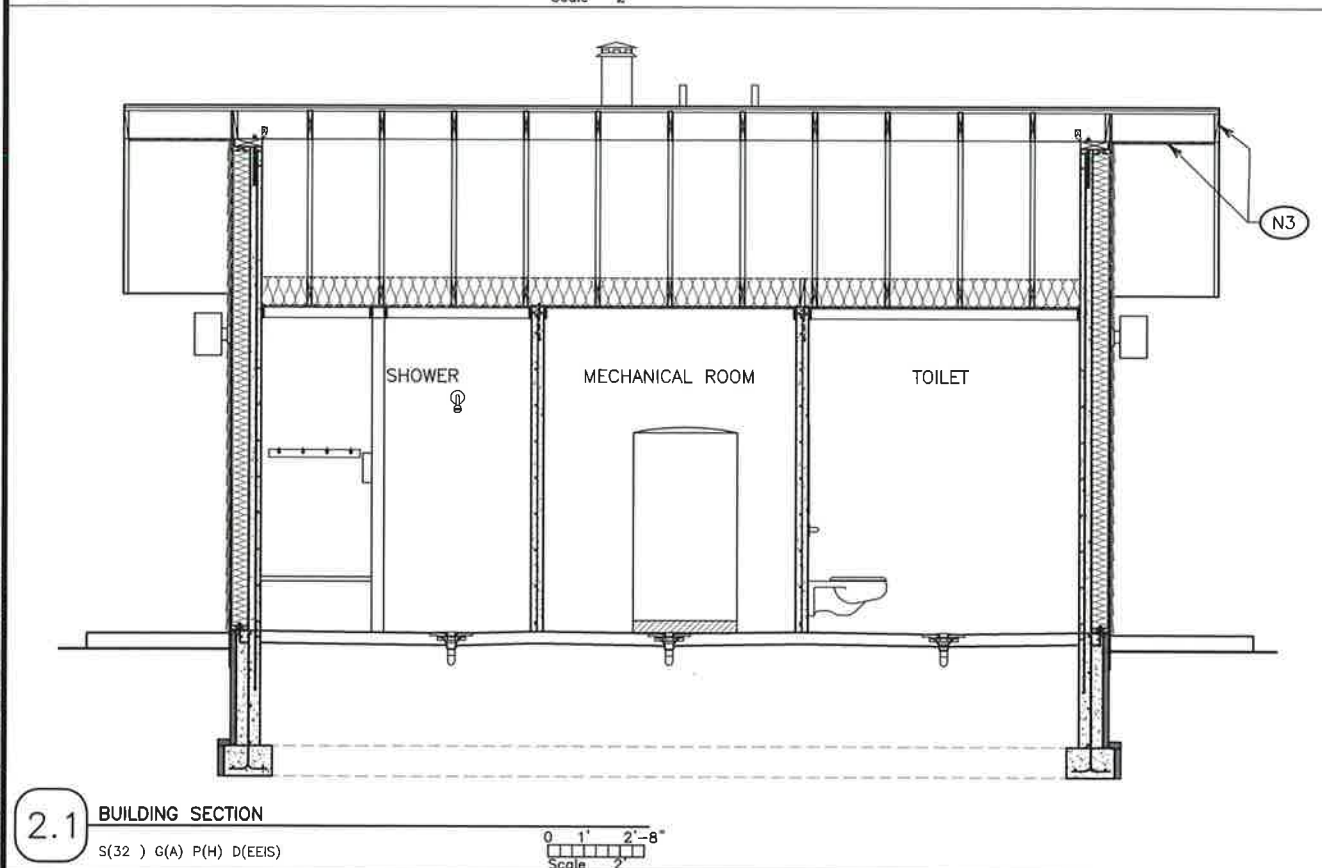
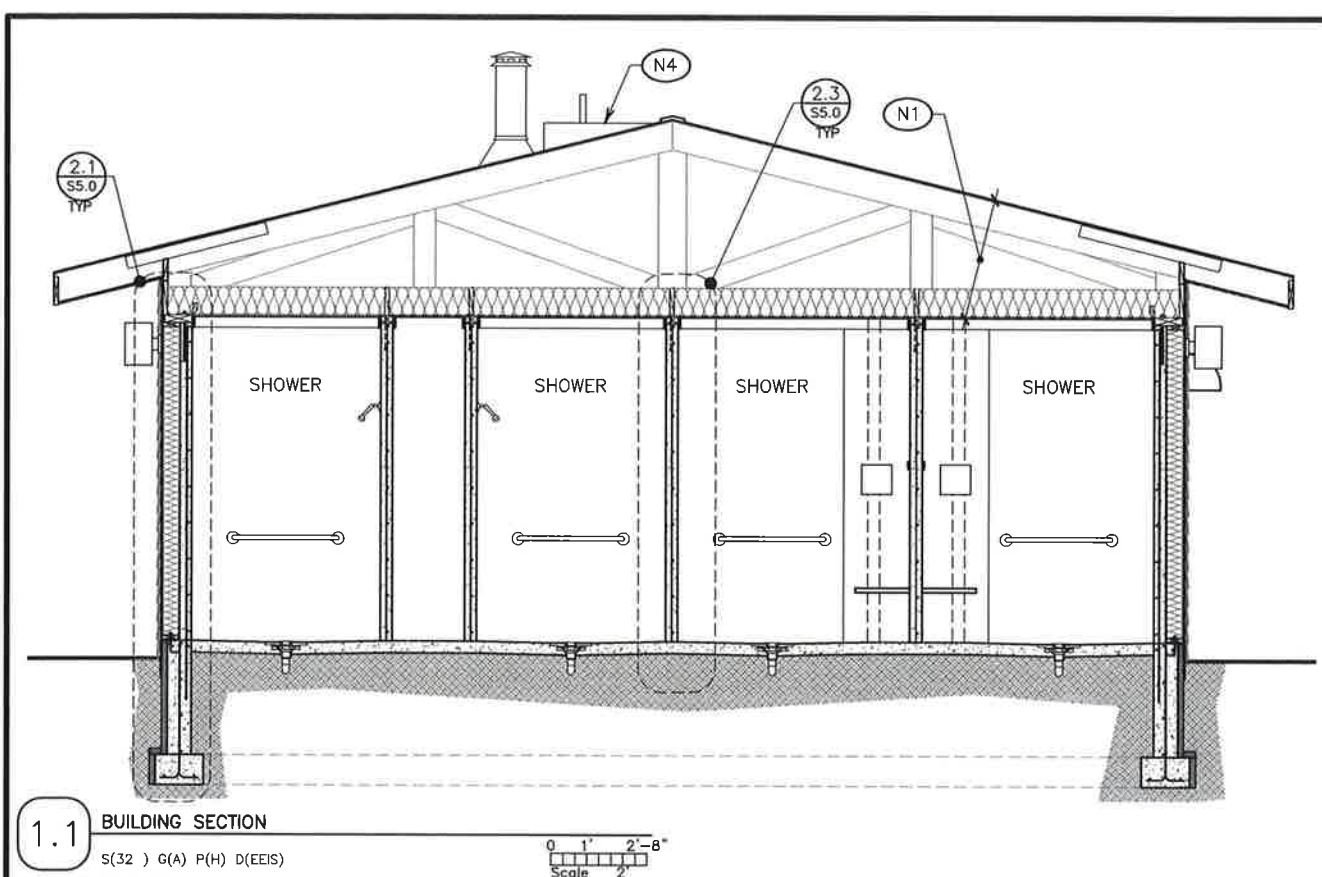
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No.	DATE	DESCRIPTION			DWN.	CHK'D	D. ENG	P. ENG	P. MGR	CLIENT
ISSUES / REVISIONS					ENGINEERING APPROVALS					



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TITLE			
NOME BATHHOUSE			
FLOOR PLAN - OPTION B			
LAYOUT			
DATE	EEIS DWG. NO.		REVISION
05-18-17			
SCALE	EEIS DWG. NO.	L1.5	A
AS NOTED			



- NOTES (FOR THIS SHEET)
- N1 ROOFING ASSEMBLY
 - STANDING SEAM METAL ROOF PANEL
 - 3/4" CDX T&G PLYWOOD
 - ROOF TRUSSES @ 2'-0" O.C.
 - FIBERGLASS BATT INSULATION - R-30
 - 6 MIL POLYETHYLENE
 - FRP PANELS AND TRIM
 - N2 VENT BAFFLE
 - N3 22 GAGE METAL FACIA AND SOFFIT COVER
 - N4 SNOW GUARD
 - N5 ALL FIXTURES TO BE PRISON GRADE STAINLESS STEEL, INCLUDING MIRRORS
 - N6 EAVES VENT W/ INSET SCREEN AND FILTER FABRIC

WORK IN PROGRESS

DWG.No. TITLE

REFERENCE DRAWINGS

No. DATE DESCRIPTION

ISSUES / REVISIONS

No. DATE DESCRIPTION

ENGINEERING APPROVALS

NA RB RB RB RB

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35% NOME BATHHOUSE SECTIONS LAYOUT

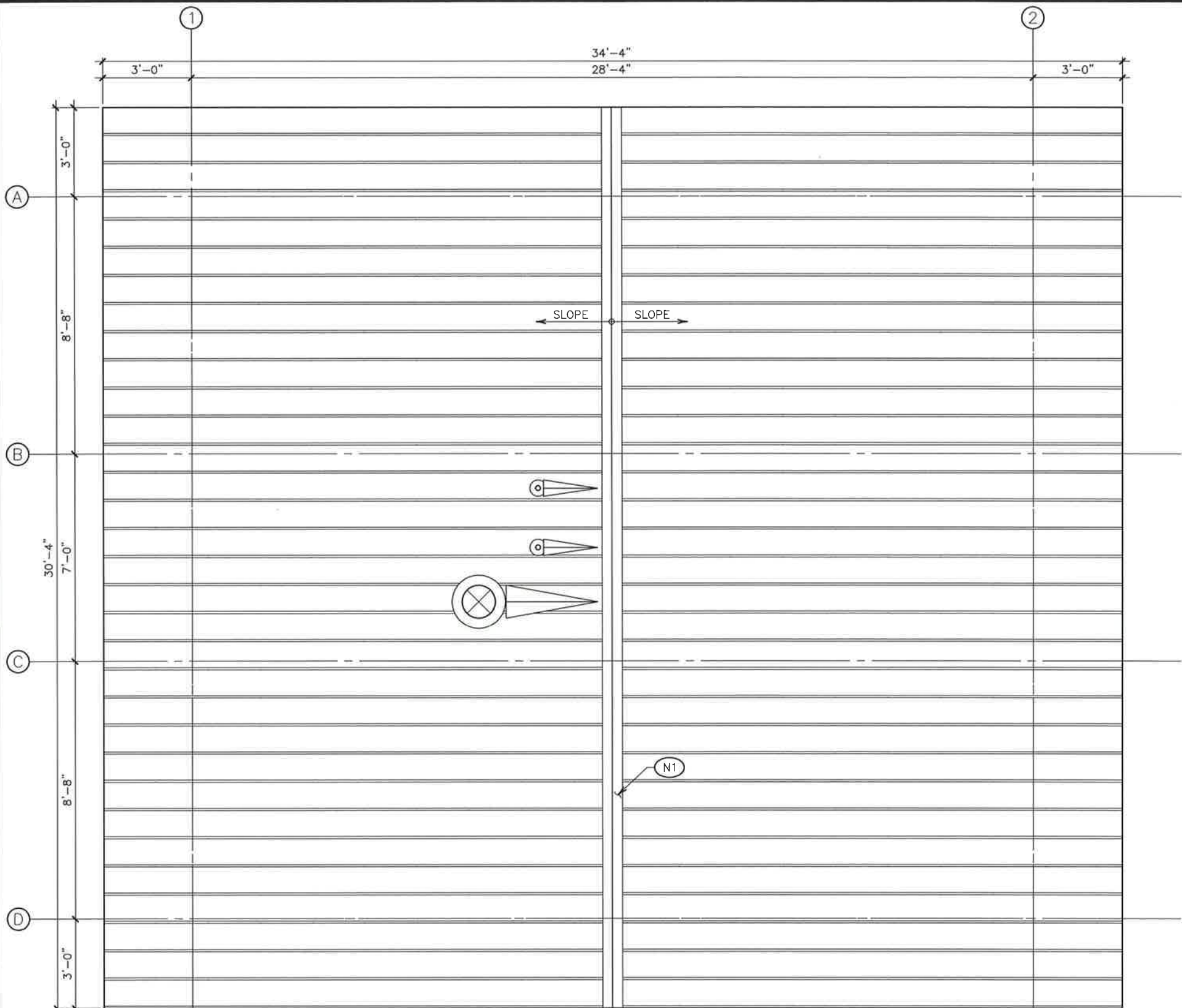
DATE 06-13-17 SCALE AS NOTED

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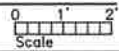
REVISION A

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File Name: F:\ACAD\2017\217021_Name_Bathroom\Name_Bathroom\sheet\4.0 ROOF PLAN.dwg
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LAST SAVED BY: NABUAN - 15 June 2017 - Plotted: 6/15/2017 1:32 PM - User: Nathaniel Y. Absun



2.1 ROOF PLAN
S(24) G(A) P(H) D(EEIS)



WORK IN PROGRESS

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A			06-13-17			CLIENT REVIEW			NA			RB			RB		
No.			DATE			DESCRIPTION			DWN.			CHK'D			D. ENG		

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2.4 NOT USED
S(1) G(A) P(H) D(EEIS)

NOTES (FOR THIS SHEET)
N1 RIDGE VENT W/ FILTER FABRIC OVER VENT SPACES

35%

TITLE
NOME BATHHOUSE
ROOF PLAN
LAYOUT

DATE
06-13-17

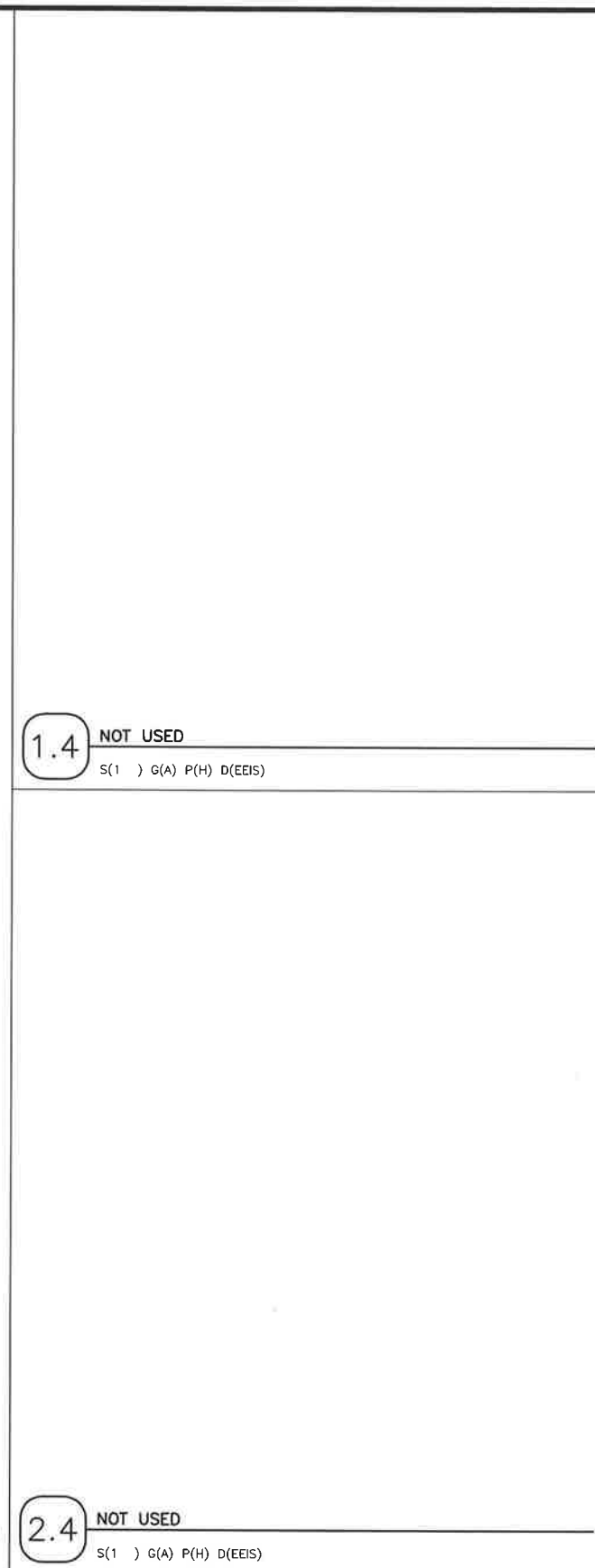
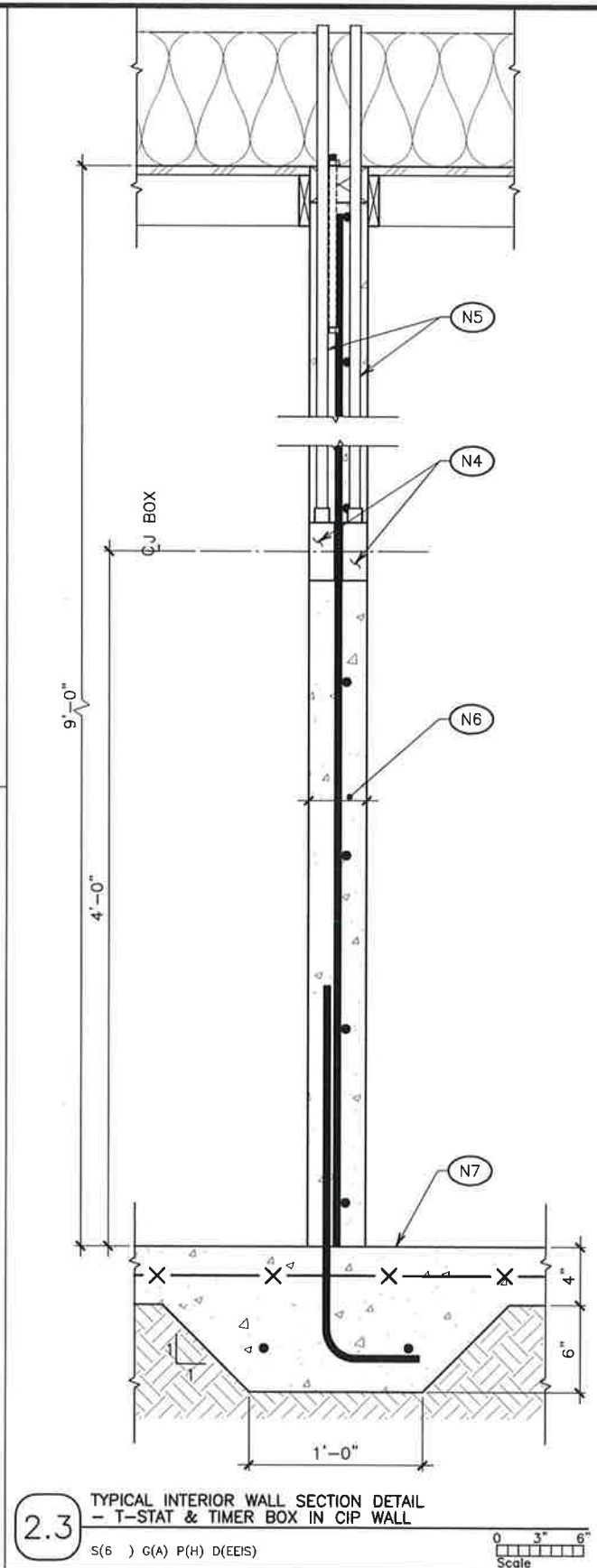
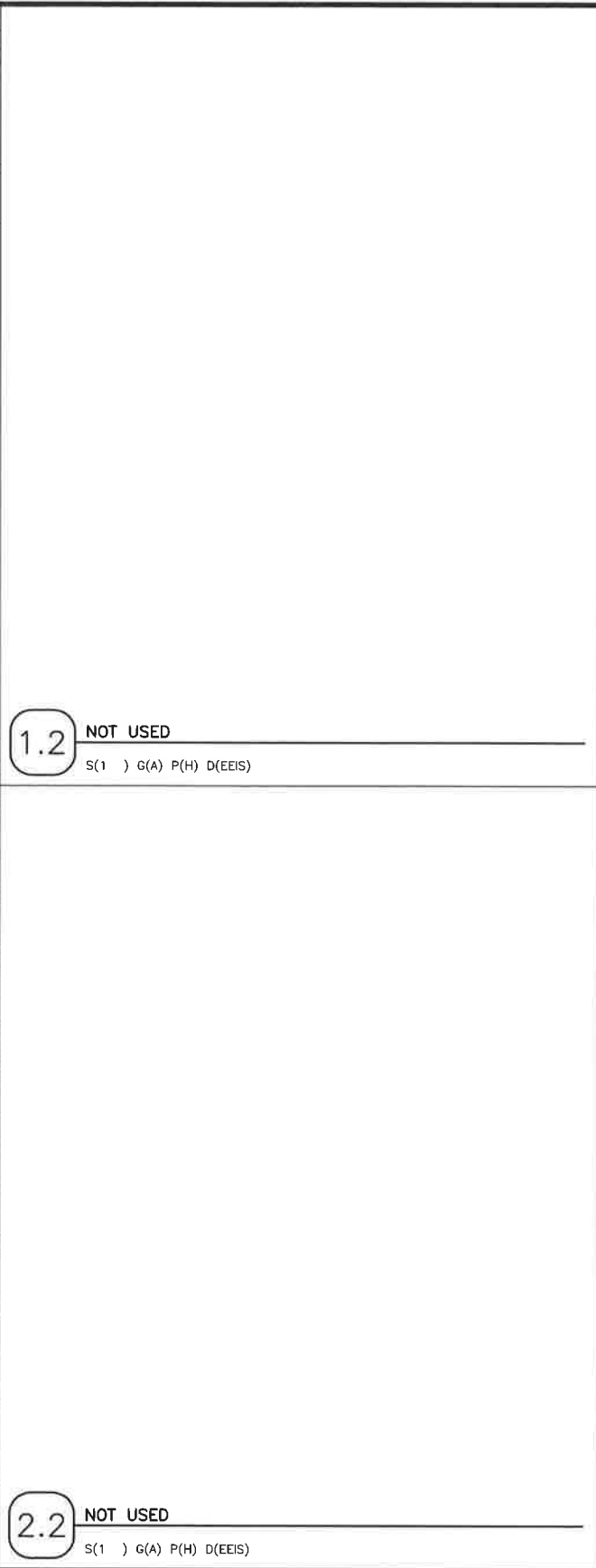
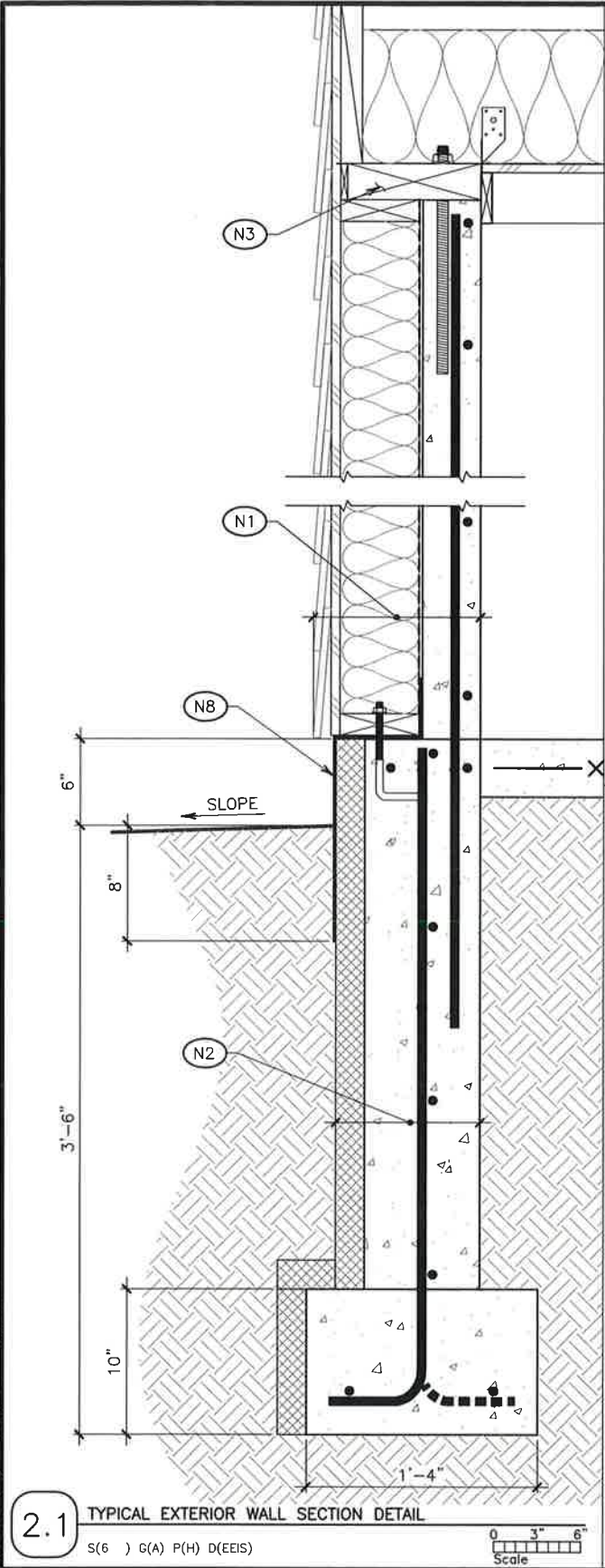
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EEIS DWG. NO.
EEIS DWG. NO.

REVISION
A

L4.0

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- NOTES (FOR THIS SHEET)
- N1 EXTERIOR WALL
 - D-4 ROYAL ALUMIPRO ALUMINUM SIDING W/ TRIMS FROM ROYAL BUILDING PRODUCTS - WWW.ROYALBUILDINGPRODUCTS.COM / 1-800-232-5690
 - FROG SKIN DRAFT/ VAPOR STOP
 - 5/8" CDX PLYWOOD
 - 2X6 @ 16" O.C.
 - R-19 FIBERGLASS INSULATION
 - 6 MIL POLYETHYLENE VAPOR RETARDER
 - 4" REINFORCED CONCRETE WALL W/ #4 VERTICAL BAR @ 20" O.C. AND #4 HORIZONTAL BAR 12" O.C.
 - N2 R-12 RIGID INSULATION
 - N3 8" REINFORCED CONCRETE W/ #4 VERTICAL BAR @ 20" O.C. AND #4 HORIZONTAL BAR 12" O.C.
 - N4 PT 3X10 WALL CAP
 - N5 4x4 METAL BOX FOR T-STAT OR TIMER SET IN CONCRETE WALL
 - N6 3/4" Ø CONDUIT - EXTENDED ABOVE INSULATION
 - N7 4" REINFORCED CONCRETE INTERIOR WALL W/ #4 VERTICAL BAR @ 20" O.C. AND #4 HORIZONTAL BAR 12" O.C.
 - N8 4" CONCRETE SLAB W/ 6X6 W1.4XW1.4 STEEL REINFORCEMENT MATT. THICKEN FOOTINGS UNDER INTERIOR WALLS AS SHOWN. REINFORCED THICKENED FOOTING W/ (2) #5 REINFORCING BARS
 - N9 22 GAGE PROTECTIVE COVER FOR INSULATION

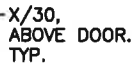
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No.		DATE		DESCRIPTION		DWN.		CHK'D		P. ENG	



35% NOME BATHHOUSE WALL DETAILS STRUCTURAL		DATE 06-13-17 SCALE AS NOTED		E.E.I.S. DWG. NO. E.E.I.S. DWG. NO.		REVISION A	
TITLE		DATE		E.E.I.S. DWG. NO.		REVISION	
		06-13-17				A	
		AS NOTED					

(N1) CONNECT EF1 TO TURN ON WITH LIGHTS.



— USB
RECEPTACLE

CONTACTOR
PANEL

1
C/30

UH-1-

 $x/3$

X/30,
ABOVE DOOR.
TYP

2.1

DWG.No.	TITLE
REFERENCE DRAWINGS	

SNS	EWC	EWC	EWC	EWC	
OWN.	CHK'D	D. ENG	P. ENG	P. MGR	CLIENT
ENGINEERING APPROVALS					

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NOME BATHHOUSE
ELECTRICAL FLOOR PLAN
OPTION - A
ELECTRICAL

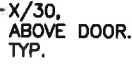
DATE	06-02-17
SCALE	AS NOTED

EEIS DWG. NO.	EEIS DWG. NO.
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F2.0

A

(N1) CONNECT EF1 TO TURN ON WITH LIGHTS.



3.1

WORK IN PROGRESS

[illegible]

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TITLE	NOME BATHHOUSE ELECTRICAL FLOOR PLAN OPTION - B ELECTRICAL

DATE 06-02-17		EEIS DWG. NO.		REVISION
SCALE AS NOTED		EEIS DWG. NO.	E3.0	A

E3.0 A

LEGEND & ABBREVIATIONS		
ABBR.	EXPLANATION	SYMBOL
A	AIR - COMPRESSED	
	AIR FLOW MEASURING DEVICE	
	AIR FOIL TURNING VANES	
AAV	AUTOMATIC AIR VENT	
AFF	ABOVE FINISHED FLOOR	
BDD	BACKDRAFT DAMPER	
BD	BALANCING DAMPER	
	BALANCING/ISOLATION VALVE	
	BALL VALVE	
CC	COOLING COIL	
CFM	CUBIC FEET/MINUTE	
CO	CLEANOUT	
CV	CHECK VALVE	
CW	COLD WATER	
DD	DUCT DETECTOR	
	DUCT IDENTIFICATION SYMBOL	
(E)	EXISTING	
E/A	EXHAUST AIR	
	EXPANSION COMPENSATOR	
FCO	FLOOR CLEANOUT	
FD	FIRE DAMPER	
FD	FLOOR DRAIN	
	FLEXIBLE CONNECTION	
	FLEXIBLE DUCT	
	FLOW CONTROL VALVE	
FOS	FUEL OIL SUPPLY	
FOR	FUEL OIL RETURN	
HB	HOSE BIBB	
HC	HEATING COIL	
HW	HOT WATER	
	HOT WATER CIRCULATION	
MOD	MOTOR OPERATED DAMPER	
MOV	2-WAY MOTOR OPERATED VALVE	
MOV	3-WAY MOTOR OPERATED VALVE	
NIC	NOT IN CONTRACT	
O/A	OUTSIDE AIR	
	PIPE ANCHOR	
	PIPE GUIDE	
POC	POINT OF CONNECTION	
	PRESSURE GAGE	
PRV	PRESSURE RELIEF VALVE	
PW	PUMPED WASTE	
R/A	RETURN AIR	
RV	RELIEF VALVE	
	RETURN AIR SLOT	
	RETURN/EXHAUST AIR REG. OR GRILLE	
S	SANITARY SOIL	
S/A	SUPPLY AIR	
SS	STAINLESS STEEL	
	STRAINER WITH DRAIN VALVE	
SL	ACOUSTICALLY LINED DUCT	
	STATIC PRESSURE SENSOR	
	SUPPLY AIR SLOT W/FLEX DUCT	
	SUPPLY AIR REG. GRILLE, OR DIFFUSER	
TW	TEMPERED WATER	
	THERMALLY INSULATED DUCT OR PIPE	
	THERMOMETER	
T'STAT	THERMOSTAT	
T'STAT	RETURN AIR THERMOSTAT	
	UNION	
V	VENT	
VTR	VENT THRU ROOF	
WCO	WALL CLEANOUT	
W	WASTE	

WORK IN PROGRESS

SYMBOL	FIXTURE	SOIL	WASTE	VENT	H.W.	C.W.	DESIGN BASIS PRODUCT (AS SPECIFIED, OR EQUAL)
P-1	WATER CLOSET	4"		2"		1"	ACORN PENAL-WARE 1680 ELONGATED BOWL, WALL HUNG, CONCEALED LEVER FLUSH VALVE - ACORN FLV, SS FINISH
P-2	LAVATORY		1-1/2"	1-1/2"	1/2"	1/2"	ACORN PENAL-WARE 1652LRB, WALL HUNG, BARRIER-FREE MOUNTING HEIGHT, 14"x12"x4.5" BOWL W/ OVERFLOW, SPOUT, DUAL TEMP METERING PNEUMATIC VALVE - ACORN 04-M, ASSE 1070 THERMOSTATIC MIXING VALVE - ACORN ST70 1/2" NPT, WALL SLEEVE - SW
P-3	SHOWER	2"	FD-2	2"	1/2"	1/2"	ACORN LOGAN SHOWER HEAD WITH MOUNTING FLANGE, TAMPER-RESISTANT SCREWS, TEMPERATURE-PRESSURE BALANCING ASSE 1016 TRI-LEVER HANDLE - ACORN TYPE 8 MIXING VALVE
P-4	WASHER BOX		2"		1/2"	1/2"	WATER TITE MODEL 85708 CENTER DRAIN OUTLET BOX W/ WATER HAMMER ARRESTORS
FD-1	FLOOR DRAIN		2"	2"			SMITH 2010, ROUND TOP SEDIMENT BUCKET, BRONZE BODY & STRAINER, PRIMER FITTING
FD-2	FLOOR DRAIN		2"	2"			SMITH 2010, ROUND TOP SEDIMENT BUCKET, BRONZE BODY & STRAINER
HB-1	HOSE BIBB					3/4"	NON-FREEZE INT. VACUUM BRKR, BRONZE NICKEL PLATED, 1/4 TURN HANDLE KEY LOCK, CONCEALED CHROME PLATED SS BOX, 3/4" HOSE, SMITH 5509-QT.

WATER HEATER SCHEDULE									
SYMBOL	TYPE	FLUID (%)	STORAGE (GAL)	FUEL	INPUT (GPH) (MBH)	RECOVERY (GPH) AT 100°F RISE	CONTROLLER / MOTOR		DESIGN BASIS PRODUCT
							AMPS	VOLTS/PH	
WH-1	FIRE TUBE	---	125	#2 FUEL	14 199	200	2	120/1	PVI MODEL MAXIM 201-125A-MXO DUPLEX SS TANK, FIBERGLASS INSULATION, SPARK IGNITION, ELEC CONTROL, POWER BURNER
WH-2							0.5HP	120/1	

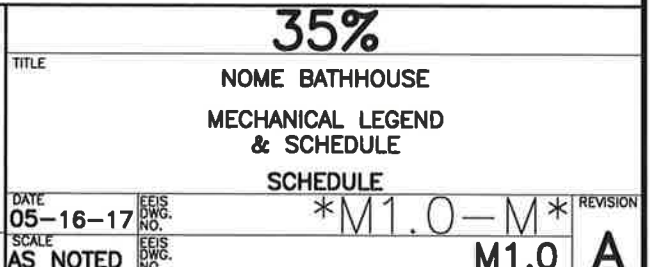
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HEATING UNIT SCHEDULE										
SYMBOL	TYPE	FLUID	FLUID		KW	GPM	CFM	RPM	MOTOR HP/VOLTS/PH	DESIGN BASIS PRODUCT
			IN	OUT						
CUH-1	CABINET UNIT HEATER	ELEC	---	---	5.0	---	300	---	--- /240/1	QMARK MODEL CDF-552, SURFACE CEILING MOUNTED, GRILLES, THERMOSTAT, RELAY
RP-1	RADIANT PANEL UNIT HEATER	ELEC	---	---	0.75	---	---	---	--- /240/1	BERKO MODEL CP7502, 24X48, SS PANELS, SILICONE SEALED, RELAY, 1" INSULATION
UH-1		ELEC	---	---	5.0	---	350	1,600	1/100 /240/1	QMARK MODEL MUH05-21, HORIZONTAL DISCHARGE UNIT HEATER, 24V CONTROL

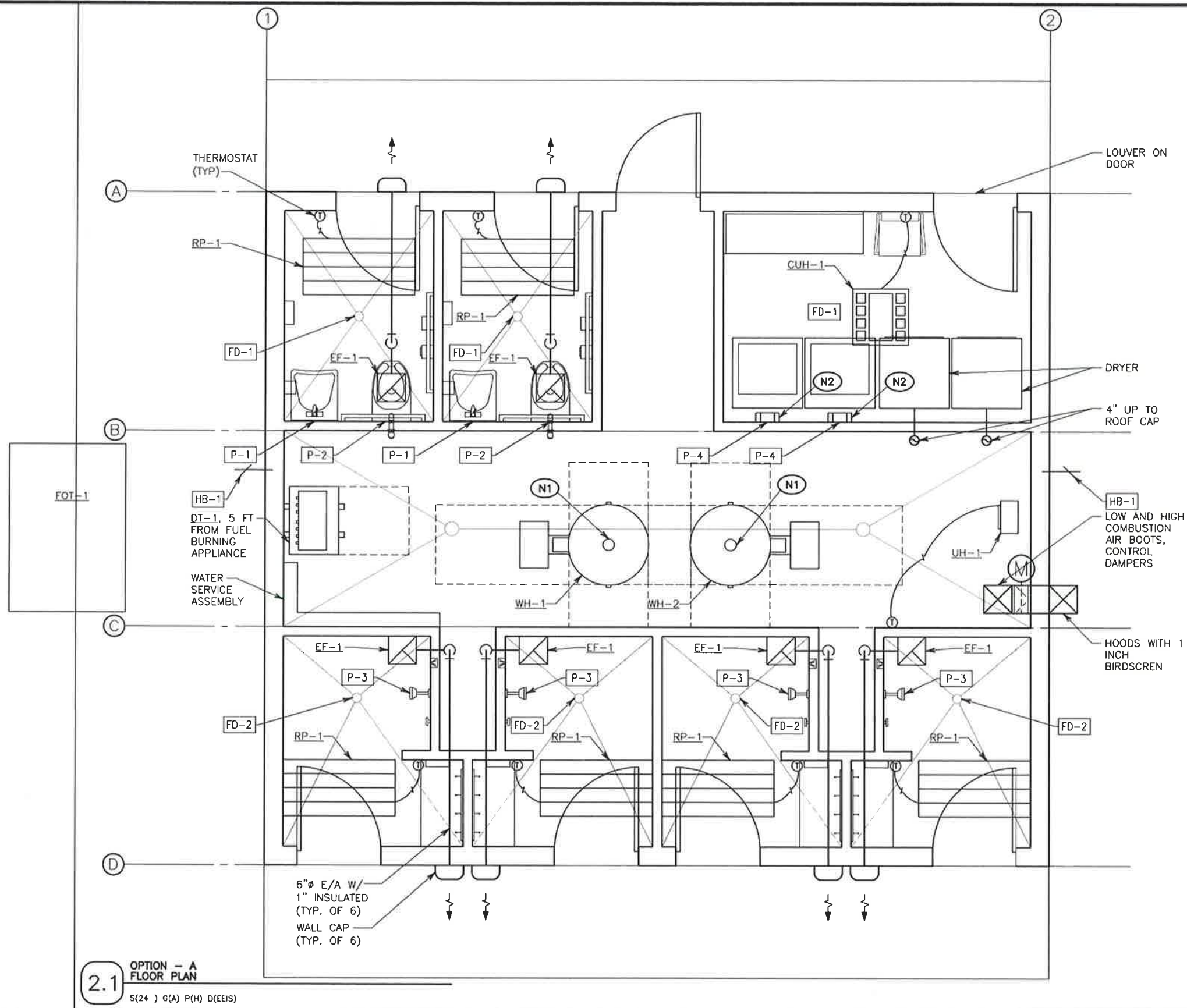
TANK SCHEDULE						
SYMBOL	FUNCTION	MEDIUM	TOTAL VOLUME GALLONS	MATERIALS	LABEL	DESIGN BASIS PRODUCT
DT-1	DAYTANK	FUEL OIL	150	STEEL	UL	SIMPLEX MODEL SST 25, WITH 2 GPM DUPLEX PUMPS (1/3 HP, 120 V, 1Ø) HAND PUMP, RUPTURE BASIN
ET-1	DOMESTIC HW EXPANSION	WATER	14	STEEL/BUTYL	IAPMO	ANTIROL MODEL ST-30V-C ASME TANK ACCEPTANCE VOLUME = 10.5
FOT-1	FUEL OIL STORAGE	FUEL OIL	500	STEEL	UL	ANCHORAGE TANK MODEL AT5CULAG DOUBLE WALL ABOVEGROUND TANK

[illegible]

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No.	DATE	DESCRIPTION	DWN.	CHK'D	D. ENG	P. ENG	P. MGR	CLIENT		
ISSUES / REVISIONS			ENGINEERING APPROVALS							



- NOTES (FOR THIS SHEET)
- N1 5" SCHED. P2 STACK UP THROUGH ROOF. TERMINATE 3 FT ABOVE ANY PORTION OF THE ROOF WITHIN 10 FT.
- N2 PROVIDE 20 GAUGE METAL ENCLOSURE AROUND P-4 WASHER BOX.
3. PROVIDE LOW POINT DRAINS ON ALL PLUMBING LINES FOR SEASONAL DRAIN DOWN. PROVIDE AIR LINE QUICK CONNECTS WITH ISOLATION AND CHECK VALVES TO BLOW OUT PIPE.
4. PROVIDE METAL LOCKING GUARD ON THERMOSTATS.



WORK IN PROGRESS

DWG.No.	TITLE	REFERENCE DRAWINGS	ISSUES / REVISIONS	ENGINEERING APPROVALS	CLIENT
A	06-02-17	TEAM COORDINATION	MSM SCH MSM MSM SCH	DWN. CHK'D D. ENG P. ENG P. MGR	

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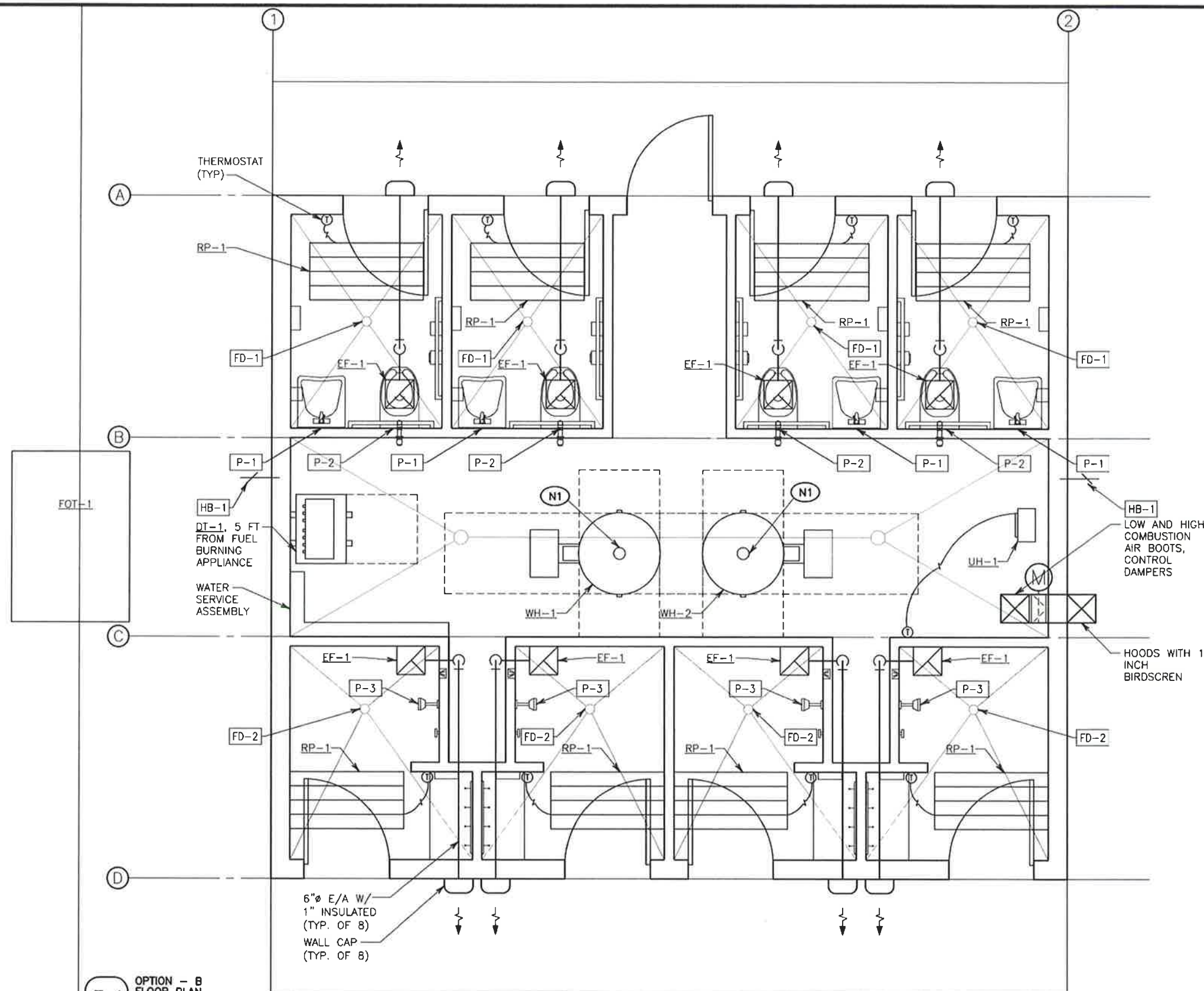
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NOME BATHHOUSE
MECHANICAL FLOOR PLAN
OPTION - A
LAYOUT

DATE 05-16-17
SCALE AS NOTED

EEIS DWG. NO. *M2.0-M*
REVISION A

- NOTES (FOR THIS SHEET)
- 5" SCHEBLER P2 STACK UP THROUGH ROOF. TERMINATE 3 FT ABOVE ANY PORTION OF THE ROOF WITHIN 10 FT.
 - PROVIDE LOW POINT DRAINS ON ALL PLUMBING LINES FOR SEASONAL DRAIN DOWN. PROVIDE AIR LINE QUICK CONNECTS WITH ISOLATION AND CHECK VALVES TO BLOW OUT PIPE.
 - PROVIDE METAL LOCKING GUARD ON THERMOSTATS.



3.1 OPTION - B
FLOOR PLAN
S(24) G(A) P(H) D(EIIS)

WORK IN PROGRESS

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EEIS JOB# 217021

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35%		TITLE	
NOME BATHHOUSE			
MECHANICAL FLOOR PLAN			
OPTION - B			
LAYOUT			
DATE	05-16-17	EEIS DWG. NO.	*M3.0-M*
SCALE	AS NOTED	EEIS DWG. NO.	M3.0
		REVISION	A

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No.	DATE	DESCRIPTION	ISSUES / REVISIONS	DWN.	CHK'D	D. ENG	P. ENG	P. MGR
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				ENGINEERING APPROVALS				

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