CITY OF POCATELLO, IDAHO

CONTRACT DOCUMENTS FOR CONSTRUCTION OF

Whitman and Hayes Lift Stations Project

City of Pocatello
911 North 7th Avenue
Pocatello, ID 83201

September, 2021

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ADVERTISEMENT FOR BIDS

CITY OF POCATELLO
WHITMAN AND HAYES LIFT STATIONS PROJECT

The City of Pocatello (Owner) is requesting Bids for the construction of the following Project:

Whitman and Hayes Lift Stations Project / EGC-130

Bids for the construction of the Project will be received at the **City of Pocatello Clerk's Office** located at **City Hall, 911 North 7th Avenue, Pocatello, ID 83201, until 2:00 p.m. local time on Wednesday, November 10th, 2021.** At that time the Bids received will be publically opened and read.

The Project includes the following Work:

Rehabilitating the existing Whitman lift station and constructing the new Hayes lift station. Work includes installing: (1) 72" diameter concrete wetwell, (1) 48" concrete manhole, (4) submersible pumps, controls and accessories, (365-ft) total of 4", 6" and 8" ductile iron and PVC discharge piping, (88-ft) total of 8" & 15" gravity sewer line, (105-ft) of 4" sewer service, connecting to existing sewer system, (2) valve vaults, 4" and 6" isolation and check valves, (2) pre-cast buildings, utility power poll, site power connections, wiring equipment, testing equipment, by-pass pumping, concrete work, and surface restorations. Work will also include removal of existing lift station equipment and demolition and abandoning of existing structures.

Obtaining the Bidding Documents

Information and Bidding Documents for the Project can be found at the following designated website:

https://www.pocatello.us/Bids.aspx

Bidding Documents may be downloaded from the designated website. Prospective Bidders are urged to register with the designated website as a plan holder. All official notifications, addenda, and other Bidding Documents will be offered only through the designated website. Neither Owner nor Engineer will be responsible for Bidding Documents, including addenda, if any, obtained from sources other than the designated website.

The PROJECT MANUAL, DRAWINGS and EXHIBITS may be examined at the following location(s): Engineering Dept, Pocatello City Hall, 911 North 7th Avenue, Pocatello, ID 83201. Copies of these documents may be obtained by contacting the City of Pocatello Engineering Department at (208) 234-6225.

Pre-bid Conference

A pre-bid conference for the Project will be held on **Wednesday, 11/3/2021** at **2:00** at the **City of Pocatello City Hall, 911 North 7th Avenue, Pocatello, ID 83201.** Attendance at the pre-bid conference is encouraged but not required.

Instructions to Bidders

In determining the lowest responsive bid, the Owner will consider all acceptable bids on a basis consistent with the bid package. The Owner will also consider whether the bidder is a responsible bidder.

Before a contract will be awarded for work contemplated herein, the Owner will conduct such investigation as is necessary to determine the performance record and ability of the apparent low bidder to perform the size and type of work specified under this Contract. Upon request, the Bidder shall submit such information as deemed necessary by the Owner to evaluate the Bidder's qualifications.

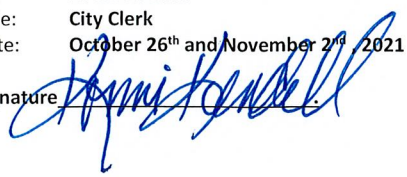
All bids must be signed and accompanied by evidence of authority to sign.

Bids must be accompanied by Bid Security in the form of a bid bond, certified check, cashier's check or cash in the amount of 5% of the amount of the bid proposal. Said bid security shall be forfeited to the City of Pocatello as liquidated damages should the successful bidder fail to enter into contract in accordance with their proposal as specified in the Instruction to Bidders.

The City of Pocatello reserves the right to reject any or all proposals, waive any nonmaterial irregularities in the bids received, and to accept the proposal in the best interest of City of Pocatello.

This Advertisement is issued by:

Owner: **City of Pocatello**
By: **Konni Kendell**
Title: **City Clerk**
Date: **October 26th and November 2nd, 2021**

Signature: 

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ISPWC - BIDDER'S CHECK LIST

The Bidder's Check List is offered to assist the prospective bidder in checking their Bid. This checklist does not relieve the bidder from properly completing their Bid.

Check off when completed:

1. ___ Are all blank spaces filled out on Bid Form?

2. ___ Have questions arising from the bidding, contract, specifications or plans been submitted to the proper authority and resolved in the proper manner?

3. ___ Are Bid amounts shown correctly as well as extensions and totals? Recheck for errors or omissions. Both lump sum and unit prices must be shown in words and figures.

4. ___ Are authorized signatures properly affixed to the Bid form, giving also title, and Idaho Public Works Contractor license number, evidence of authority to sign, etc.?

5. ___ Have all plumbing, heating, air conditioning and electrical subcontractors to whom work will be awarded been listed, as well as their Idaho Public Works Contractor license number?

6. ___ Have all other subcontractors, suppliers, individuals or entities as required in the Instructions to Bidders been listed, and in the case of subcontractors, their Idaho Public Works Contractor license number?

7. ___ Have all Addenda been received and acknowledged with the proper signature on the Bid Form?

8. ___ In order for a Bid to be considered, the Bid form, Bid Security, naming of subcontractors form, and other required attachments must be placed in a properly addressed sealed envelope and delivered to the specified authority prior to the time designated for the bid opening.

9. ___ Has Bid Security been enclosed?

10. ___ Has Bidder performed examinations in accordance with the Instructions to Bidders?

11. ___ Has Bidder included additional information required in Article 14 of the Instructions to Bidders?

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INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION CONTRACT

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ARTICLE 1—DEFINED TERMS

1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:

A. *Issuing Office*—The office from which the Bidding Documents are to be issued, and which registers plan holders.

ARTICLE 2—BIDDING DOCUMENTS

2.01 Bidder shall obtain a complete set of Bidding Requirements and proposed Contract Documents (together, the Bidding Documents). See the Agreement for a list of the Contract Documents. It is Bidder's responsibility to determine that it is using a complete set of documents in the preparation of a Bid. Bidder assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete documents, by Bidder itself or by its prospective Subcontractors and Suppliers.

2.02 Bidding Documents are made available for the sole purpose of obtaining Bids for completion of the Project and permission to download or distribution of the Bidding Documents does not confer a license or grant permission or authorization for any other use. Authorization to download documents, or other distribution, includes the right for plan holders to print documents solely for their use, and the use of their prospective Subcontractors and Suppliers, provided the plan holder pays all costs associated with printing or reproduction. Printed documents may not be re-sold under any circumstances.

2.03 Owner has established a Bidding Documents Website as indicated in the Advertisement or invitation to bid. Owner recommends that Bidder register as a plan holder with the Issuing Office at such website, and obtain a complete set of the Bidding Documents from such website. Bidders may rely that sets of Bidding Documents obtained from the Bidding Documents Website are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner.

2.04 Bidder may register as a plan holder and obtain complete sets of Bidding Documents, in the number and format stated in the Advertisement or invitation to bid, from the Issuing Office. Bidders may rely that sets of Bidding Documents obtained from the Issuing Office are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner.

2.05 Plan rooms (including construction information subscription services, and electronic and virtual plan rooms) may distribute the Bidding Documents, or make them available for examination. Those prospective bidders that obtain an electronic (digital) copy of the Bidding Documents from a plan room are encouraged to register as plan holders from the Bidding Documents Website or Issuing Office. Owner is not responsible for omissions in Bidding Documents or other documents obtained from plan rooms, or for a Bidder's failure to obtain Addenda from a plan room.

2.06 *Electronic Documents*

A. When the Bidding Requirements indicate that electronic (digital) copies of the Bidding Documents are available, such documents will be made available to the Bidders as Electronic Documents in the manner specified.

1. Bidding Documents will be provided in Adobe PDF (Portable Document Format) (.pdf) that is readable by Adobe Acrobat Reader. It is the intent of the Engineer and Owner that such Electronic Documents are to be exactly representative of the paper copies of the documents. However, because the Owner and Engineer cannot totally control the transmission and receipt of Electronic Documents nor the Contractor's means of reproduction of such documents, the Owner and Engineer cannot and do not guarantee that Electronic Documents and reproductions prepared from those versions are identical in every manner to the paper copies.

B. Unless otherwise stated in the Bidding Documents, the Bidder may use and rely upon complete sets of Electronic Documents of the Bidding Documents, described in Paragraph 2.06.A above. However, Bidder assumes all risks associated with differences arising from transmission/receipt of Electronic Documents versions of Bidding Documents and reproductions prepared from those versions and, further, assumes all risks, costs, and responsibility associated with use of the Electronic Documents versions to derive information that is not explicitly contained in printed paper versions of the documents, and for Bidder's reliance upon such derived information.

ARTICLE 3—QUALIFICATIONS OF BIDDERS

3.01 To demonstrate Bidder's qualifications to perform the Work, after submitting its Bid and within **5** days of Owner's request, Bidder must submit the following information:

~~A. Written evidence establishing its qualifications such as financial data, previous experience, and present commitments.~~

B. ~~A written statement that Bidder is authorized to do business in the state where the Project is located, or a written certification that Bidder will obtain such authority prior to the Effective Date of the Contract.~~

C. Bidder's state or other contractor license number, if applicable.

D. Subcontractor qualification information. Refer to Idaho Code Title 67, Chapter 23 regarding listing of subcontractors.

E. Other required information regarding qualifications.

3.02 Bidder is to submit the following information with its Bid to demonstrate Bidder's qualifications to perform the Work:

~~A. Written evidence establishing its qualifications such as financial data, previous experience, and present commitments.~~

~~B. A written statement that Bidder is authorized to do business in the state where the Project is located, or a written certification that Bidder will obtain such authority prior to the Effective Date of the Contract.~~

C. Bidder's State of Idaho Public Works contractor license number,.

D. Subcontractor qualification information.

~~E. Other required information regarding qualifications.~~

3.03 ~~A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.~~ Contractor must have an Idaho Public

Works Contractors License prior to signing the Contract pursuant to Idaho Code Title 54, Chapter 19.

ARTICLE 4—PRE-BID CONFERENCE

4.01 A non-mandatory pre-bid conference will be held at the time and location indicated in the Advertisement or invitation to bid. Representatives of Owner and Engineer will be present to discuss the Project. Bidders are encouraged to attend and participate in the conference; however, attendance at this conference is not required to submit a Bid.

4.02 Information presented at the pre-Bid conference does not alter the Contract Documents. Owner will issue Addenda to make any changes to the Contract Documents that result from discussions at the pre-Bid conference. Information presented, and statements made at the pre-bid conference will not be binding or legally effective unless incorporated in an Addendum.

ARTICLE 5—SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

5.01 *Site and Other Areas*

A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

5.02 *Existing Site Conditions*

A. *Subsurface and Physical Conditions; Hazardous Environmental Conditions*

1. The Supplementary Conditions identify the following regarding existing conditions at or adjacent to the Site:

a. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data.

b. Those drawings known to Owner of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data.

c. Reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.

d. Technical Data contained in such reports and drawings.

2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.

4. *Geotechnical Baseline Report/Geotechnical Data Report:* The Bidding Documents contain a Geotechnical Baseline Report (GBR).

    a. As set forth in the Supplementary Conditions, the GBR describes certain select subsurface conditions that are anticipated to be encountered by Contractor during construction in specified locations ("Baseline Conditions"). The GBR is a Contract Document.

    b. The Baseline Conditions in the GBR are intended to reduce uncertainty and the degree of contingency in submitted Bids. However, Bidders cannot rely solely on the Baseline Conditions. Bids should be based on a comprehensive approach that includes an independent review and analysis of the GBR, all other Contract Documents, Technical Data, other available information, and observable surface conditions. Not all potential subsurface conditions are baselined.

    c. Nothing in the GBR is intended to relieve Bidders of the responsibility to make their own determinations regarding construction costs, bidding strategies, and Bid prices, nor of the responsibility to select and be responsible for the means, methods, techniques, sequences, and procedures of construction, and for safety precautions and programs incident thereto.

B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05 of the General Conditions, and not in the drawings referred to in Paragraph 5.02.A of these Instructions to Bidders. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data. In accordance with Paragraph 5.05 of the General Conditions, the Contractor is responsible for verifying the actual location of all Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work.

5.03 *Other Site-related Documents*

A. No other Site-related documents are available.

5.04 *Site Visit and Testing by Bidders*

A. It is the responsibility of the Bidder to ~~Bidder is required~~ to visit the Site and conduct a thorough visual examination of the Site and adjacent areas. During the visit the Bidder must not disturb any ongoing operations at the Site.

B. Bidders visiting the Site are required to arrange their own transportation to the Site.

C. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.

D. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder general access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site. Bidder is responsible for establishing access needed to reach specific selected test sites.

E. Bidder must comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.

F. Bidder must fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

5.05 *Owner's Safety Program*

A. Site visits and work at the Site may be governed by an Owner safety program. If an Owner safety program exists, it will be noted in the Supplementary Conditions.

5.06 *Other Work at the Site*

A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Express Representations and Certifications in Bid Form, Agreement*

A. The Bid Form that each Bidder will submit contains express representations regarding the Bidder's examination of Project documentation, Site visit, and preparation of the Bid, and certifications regarding lack of collusion or fraud in connection with the Bid. Bidder should review these representations and certifications, and assure that Bidder can make the representations and certifications in good faith, before executing and submitting its Bid.

B. If Bidder is awarded the Contract, Bidder (as Contractor) will make similar express representations and certifications when it executes the Agreement.

ARTICLE 7—INTERPRETATIONS AND ADDENDA

7.01 Owner on its own initiative may issue Addenda to clarify, correct, supplement, or change the Bidding Documents.

7.02 Bidder shall submit all questions about the meaning or intent of the Bidding Documents to Engineer in writing. Contact information and submittal procedures for such questions are as follows:

A. **Submit Questions to Engineer at: asuing@pocatello.us**

7.03 Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all registered plan holders. Questions received less than 5 days prior to the date for opening of Bids may not be answered.

7.04 Only responses set forth in an Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect. Responses to questions are not part of the Contract

Documents unless set forth in an Addendum that expressly modifies or supplements the Contract Documents.

ARTICLE 8—BID SECURITY

8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of **5** percent of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a Bid bond issued by a surety meeting the requirements of Paragraph 6.01 of the General Conditions. Such Bid bond will be issued in the form included in the Bidding Documents.

8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract, furnished the required Contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract and furnish the required Contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited, in whole in the case of a penal sum bid bond, and to the extent of Owner's damages in the case of a damages-form bond. Such forfeiture will be Owner's exclusive remedy if Bidder defaults.

8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of 7 days after the Effective Date of the Contract or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.

8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within 7 days after the Bid opening.

ARTICLE 9—CONTRACT TIMES

9.01 The number of days within which, or the dates by which, the Work is to be (a) substantially completed and (b) ready for final payment, and (c) Milestones (if any) are to be achieved, are set forth in the Agreement.

9.02 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 10—SUBSTITUTE AND "OR EQUAL" ITEMS

10.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, and those "or-equal" or substitute or materials and equipment subsequently approved by Engineer prior to the submittal of Bids and identified by Addendum. No item of material or equipment will be considered by Engineer as an "or-equal" or substitute unless written request for approval has been submitted by Bidder and has been received by Engineer within 10 days of the issuance of the Advertisement for Bids or invitation to Bidders. Each such request must comply with the requirements of Paragraphs 7.05 and 7.06 of the General Conditions, and the review of the request will be governed by the principles in those paragraphs. The burden of proof of the merit of the proposed item is upon Bidder. Engineer's decision of approval or disapproval of a proposed item will be final. If Engineer

approves any such proposed item, such approval will be set forth in an Addendum issued to all registered Bidders. Bidders cannot rely upon approvals made in any other manner.

10.02 All prices that Bidder sets forth in its Bid will be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of "or-equal" or substitution requests are made at Bidder's sole risk.

ARTICLE 11—SUBCONTRACTORS, SUPPLIERS, AND OTHERS

11.01 A Bidder must be prepared to retain specific Subcontractors and Suppliers for the performance of the Work if required to do so by the Bidding Documents or in the Specifications. If a prospective Bidder objects to retaining any such Subcontractor or Supplier and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.

11.02 Per Idaho Code, 67-2310, Bidder shall include in his or her Bid the names and address, and Idaho Public Works Contractor License Number of the Subcontractors who shall, in the event the Bidder secures the Contract, subcontract the plumbing, heating and air-conditioning work, and electrical work under the general Contract. Failure to name Subcontractors as required shall render any Bid submitted by the Bidder unresponsive and void. Use form ISPWC 00440.

11.03 The apparent Successful Bidder, and any other Bidder so requested, must submit to Owner a list of the Subcontractors or Suppliers proposed for the following portions of the Work within five days after Bid opening:

A. Engineering Services for Shoring Design.

B. Construction Material Testing Services.

11.04 If requested by Owner, such list must be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor or Supplier. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor or Supplier, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder will submit a substitute, Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.

11.05 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors and Suppliers. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor or Supplier, so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.07 of the General Conditions.

11.06 Per Idaho Code 67-2310, Bidder shall include in their bid the name(s), address(es), and Idaho Public Works Contractors License number(s) of the Subcontractors who will, in the event the Bidder secures the Contract, subcontract the plumbing, heating and air conditioning work, and the electrical work under the general Contract. Failure to name Subcontractors as required by

this section shall render any Bid unresponsive and void. Use *Naming of Subcontractors Form 00440*.

ARTICLE 12—PREPARATION OF BID

12.01 The Bid Form is included with the Bidding Documents.

A. All blanks on the Bid Form must be completed in ink and the Bid Form signed in ink. Erasures or alterations must be initialed in ink by the person signing the Bid Form. A Bid price must be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.

B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words "No Bid" or "Not Applicable."

12.02 If Bidder has obtained the Bidding Documents as Electronic Documents, then Bidder shall prepare its Bid on a paper copy of the Bid Form printed from the Electronic Documents version of the Bidding Documents. The printed copy of the Bid Form must be clearly legible, printed on 8½ inch by 11-inch paper and as closely identical in appearance to the Electronic Document version of the Bid Form as may be practical. The Owner reserves the right to accept Bid Forms which nominally vary in appearance from the original paper version of the Bid Form, providing that all required information and submittals are included with the Bid.

12.03 A Bid by a corporation must be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation must be shown.

12.04 A Bid by a partnership must be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership must be shown.

12.05 A Bid by a limited liability company must be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown.

12.06 A Bid by an individual must show the Bidder's name and official address.

12.07 A Bid by a joint venture must be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture must have been formally established prior to submittal of a Bid, and the official address of the joint venture must be shown.

12.08 All names must be printed in ink below the signatures.

12.09 The Bid must contain an acknowledgment of receipt of all Addenda, the numbers of which must be filled in on the Bid Form.

12.10 Postal and e-mail addresses and telephone number for communications regarding the Bid must be shown.

12.11 The Bid must contain evidence of Bidder's authority to do business in the state where the Project is located, or Bidder must certify in writing that it will obtain such authority within the time for acceptance of Bids and attach such certification to the Bid.

12.12 If Bidder is required to be licensed to submit a Bid or perform the Work in the state where the Project is located, the Bid must contain evidence of Bidder's licensure, or Bidder must certify in writing that it will obtain such licensure within the time for acceptance of Bids and attach such certification to the Bid. Bidder's state contractor license number, if any, must also be shown on the Bid Form.

ARTICLE 13—BASIS OF BID

13.01 *Unit Price*

A. Bidders must submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.

B. The "Bid Price" (sometimes referred to as the extended price) for each unit price Bid item will be the product of the "Estimated Quantity", which Owner or its representative has set forth in the Bid Form, for the item and the corresponding "Bid Unit Price" offered by the Bidder. The total of all unit price Bid items will be the sum of these "Bid Prices"; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.

C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

13.02 *Allowances*

A. For cash allowances the Bid price must include such amounts as the Bidder deems proper for Contractor's overhead, costs, profit, and other expenses on account of cash allowances, if any, named in the Contract Documents, in accordance with Paragraph 13.02.B of the General Conditions.

ARTICLE 14—SUBMITTAL OF BID

14.01 The Bidding Documents include one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 2 of the Bid Form.

14.02 A Bid must be received no later than the date and time prescribed and at the place indicated in the Advertisement or invitation to bid and must be enclosed in a plainly marked package with the Project title, and, if applicable, the designated portion of the Project for which the Bid is submitted, the name and address of Bidder, and must be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid must be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid must be addressed to the location designated in the Advertisement.

14.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

ARTICLE 15—MODIFICATION AND WITHDRAWAL OF BID

15.01 An unopened Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.

15.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 15.01 and submit a new Bid prior to the date and time for the opening of Bids.

15.03 Relief from Bids. (a) If an awarding authority for the public entity determines that a Bidder is entitled to relief from a Bid because of mistake, the authority shall prepare a report in writing to document the facts establishing the existence of each element required in Section 54-1904C, Idaho Code. The report shall be available for inspection as a public record and shall be filed with the public entity soliciting bids. (b) A Bidder claiming a mistake satisfying all the conditions of Section 54-1904C, Idaho Code, shall be entitled to relief from the Bid and have any Bid Security returned by the public entity. Bidders not satisfying the conditions found in Section 54-1904C, Idaho Code, shall forfeit any Bid Security. Bidders failing to execute a Contract and not satisfying the conditions of a mistake shall also forfeit any Bid Security.

ARTICLE 16—OPENING OF BIDS

16.01 Bids will be opened at the time and place indicated in the advertisement or invitation to bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 17—BIDS TO REMAIN SUBJECT TO ACCEPTANCE

17.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 18—EVALUATION OF BIDS AND AWARD OF CONTRACT

18.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner also reserves the right to waive all minor Bid informalities not involving price, time, or changes in the Work.

18.02 Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible.

18.03 If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes

of the Bid, whether in the Bid itself or in a separate communication to Owner or Engineer, then Owner will reject the Bid as nonresponsive.

18.04 If Owner awards the contract for the Work, such award will be to the responsible Bidder submitting the lowest responsive Bid.

18.05 *Evaluation of Bids*

A. In evaluating Bids, Owner will consider whether the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.

B. In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form. To determine the Bid prices for purposes of comparison, Owner will announce to all bidders a "Base Bid plus alternates" budget after receiving all Bids, but prior to opening them. For comparison purposes alternates will be accepted, following the order of priority established in the Bid Form, until doing so would cause the budget to be exceeded. After determination of the Successful Bidder based on this comparative process and on the responsiveness, responsibility, and other factors set forth in these Instructions, the award may be made to said Successful Bidder on its base Bid and any combination of its additive alternate Bids for which Owner determines funds will be available at the time of award.

C. For determination of the apparent low Bidder(s) when sectional bids are submitted, Bids will be compared on the basis of the aggregate of the Bids for separate sections and the Bids for combined sections that result in the lowest total amount for all of the Work.

D. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.

18.06 The purchase of construction services shall be made pursuant Idaho Statute Title 67, Chapter 28. The acquisition of construction services must be subject to a competitive bidding process made from a qualified public works contractor submitting the lowest bid price complying the bidding procedures and meeting prequalification criteria, if any are provided in accordance with I.C. 67-2805, that are established in the bidding documents. For a Category A bid process, the political subdivision may only consider the amount bid, bidder compliance with the administrative requirements of the bidding process, and whether the bidder holds the requisite State of Idaho Public Works Contractors License, and shall award the bid to the responsible bidder submitting the lowest responsive bid.

ARTICLE 19—BONDS AND INSURANCE

19.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds, other required bonds (if any), and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it

must be accompanied by required bonds and insurance documentation. The date upon which the bonds are binding shall be the effective date of the Agreement.

19.02 Article 8, Bid Security, of these Instructions, addresses any requirements for providing bid bonds as part of the bidding process.

ARTICLE 20—SIGNING OF AGREEMENT

20.01 When Owner issues a Notice of Award to the Successful Bidder, it will be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder must execute and deliver the required number of counterparts of the Agreement and any bonds and insurance documentation required to be delivered by the Contract Documents to Owner. Within 10 days thereafter, Owner will deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

ARTICLE 21—SALES AND USE TAXES

21.01 Review Paragraph 7.10 of the General Conditions

ARTICLE 22—STATE OF IDAHO STATUTORY PROVISIONS

22.01 Additional State of Idaho Statutory provisions to be aware of:

A. Title 54, Chapter 19, *Public Works Contractors.*

1. Idaho Code Section 54-1920(2) regarding a public officer who lets a contract to an unlicensed firm may be held personally liable.

2. Idaho Code Section 54-1926 regarding the requirement for payment and performance bonds on all public works projects over $50,000.

3. Idaho Code Section 54-1928 regarding agencies and officials may be held liable for failure to obtain bonds.

B. Idaho Code Title 46, Chapter 10, *State Disaster Preparedness Act*, regarding emergency exceptions,

C. Idaho Code Section 67-2348, *Preference for Idaho Domiciled Contractors on Public Works,*

D. Idaho Code Section 67-2349, *Preference for Idaho Suppliers and Recycled Paper Products for Purchases.*

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BID FORM FOR CONSTRUCTION CONTRACT

The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 1—OWNER AND BIDDER

1.01 This Bid is submitted to:

City of Pocatello
Office of the City Clerk
911 N. 7th Avenue
Pocatello, ID 83201

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2—ATTACHMENTS TO THIS BID

2.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security;

B. List of Subcontractors, use form ISPWC-00440

C. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such authority within the time for acceptance of Bids;

D. State of Idaho Public Works Contractor's License No._____ or a covenant by Bidder to obtain said license within the time for acceptance of Bids; and

E. Affidavit of Payment or Securement of all Taxes, use form ISPWC-00951

ARTICLE 3—BASIS OF BID—LUMP SUM BID AND UNIT PRICES

3.01 *Unit Price Bids*

A. Bidder will perform the following Work at the indicated unit prices:

SPEC. PAY REF.	BID ITEM DESCRIPTION	UNIT	ESTD QNTY	BID UNIT PRICE	BID PRICE
DIVISION 200- EARTHWORK					
201.4.1.D.1	Asphalt Removal	square yard (SY)	785		
201.4.1.D.1	Concrete Sidewalk Removal	square yard (SY)	35		
201.4.1.E.1	Curb and Gutter Removal	linear foot (LF)	150		
DIVISION 300- TRENCHING					
302.4.1.A.1	Rock Excavation	cubic yards (CY)	20		
307.4.1.D.1	Type C Surface Restoration	square yard (SY)	265		
307.4.1.G.1	Type P Surface Restoration	square yard (SY)	520		
DIVISION 500 - SEWER					
501.4.1.B.1	Gravity Sewer Pipe 15" PVC	linear foot (LF)	67		
501.4.1.B.1	Gravity Sewer Pipe 8" PVC	linear foot (LF)	21		
502.4.1.A.1	Sanitary Sewer - 72" WetWell	each (EA)	1		
502.4.1.A.1	Sanitary Sewer - 48" Manhole	each (EA)	1		
502.4.1.F.1	Connect to Existing Manhole	each (EA)	3		
504.4.1.C.1	Sewer Service Connection to Manhole	each (EA)	1		
503.4.1.A.3	Service Line Cleanout	each (EA)	1		
504.4.1.A.1	Sewer Service Line 4" PVC	linear foot (LF)	105		
505.4.1.B.1	Pressure Sewer Pipe 8" PVC C900	linear foot (LF)	65		
505.4.1.B.1	Pressure Sewer Pipe 6" PVC C900	linear foot (LF)	230		
512.4.1.A.1	By-Pass Pumping	lump sum (LS)	2		
DIVISION 700 - CONCRETE					
704.4.1.D.1	Concrete Vault Lid with Access Hatch- 72" WetWell	each (EA)	2		
704.4.1.D.1	Concrete Lid with Access Hatch- Valve Vault	each (EA)	2		
704.4.1.C.1	11 -ft x 7-ft Valve Vault	each (EA)	2		
706.4.1.A.5	Curb and Gutter	linear foot (LF)	90		
706.4.1.B.1	Modified 3-ft Valley Gutter	linear foot (LF)	95		
706.4.1.E.1	Concrete Sidewalk	square yard (SY)	35		
706.4.1.F.1	Concrete Driveway Approach	square yard (SY)	15		
DIVISION 1100 - TRAFFIC					
1102.4.1.B.1	Relocate Street Light	each (EA)	1		
1103.4.1.A.1	Construction Traffic Control	lump sum(LS)	1		
DIVISION 2010 - MISCELLANEOUS					
2010.4.1.A.1	Mobilization	lump sum(LS)	1		
SPECIAL PROVISIONS					
SP-1	Pump Station- Wet Well Equipment	each (EA)	2		
SP-3	Valve Vault Equipment	each (EA)	2		
SP-4	Electrical Equipment, Wiring, and Raceways	each (EA)	2		
SP-5	Demolition & Abandoning of Existing Structures	lump sum(LS)	1		
SP-6	Engineered Shoring System	lump sum(LS)	1		
SP-7	Concrete Scupper	each (EA)	2		
SP-8	Precast Electrical Building	each (EA)	2		
SP-9	Manhole and Wetwell Base Modifications	each (EA)	3		
SP-10	New Power Service	Each (EA)	2		
	Total of All Unit Bid Items:				

B. Bidder acknowledges that:

1. each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and

2. estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents.

3.02 *Total Bid Price:*

Total Bid Price (Total of all Lump Sum and Unit Price Bids)	$

ARTICLE 4—TIME OF COMPLETION

4.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

4.02 Bidder agrees that the Work will be substantially complete within **[120]** calendar days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within **[150]** calendar days after the date when the Contract Times commence to run.

4.03 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 5—BIDDER'S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

5.01 *Bid Acceptance Period*

A. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

5.02 *Instructions to Bidders*

A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

5.03 *Receipt of Addenda*

A. Bidder hereby acknowledges receipt of the following Addenda: Add rows as needed. Bidder is to complete table.

Addendum Number	Addendum Date

ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Bidder's Representations*

A. In submitting this Bid, Bidder represents the following:

1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder's (Contractor's) safety precautions and programs.
7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

6.02 *Bidder's Certifications*

A. The Bidder certifies the following:

1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.

2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.

3. Bidder has not solicited or induced any individual or entity to refrain from bidding.

4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:

   a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.

   b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.

   c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.

   d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

BIDDER hereby submits this Bid as set forth above:

Bidder:

_____

(typed or printed name of organization)

By: _____

(individual's signature)

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Date: _____

(typed or printed)

If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.

Attest: _____

(individual's signature)

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Date: _____

(typed or printed)

Address for giving notices:

_____

_____

Bidder's Contact:

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Phone: _____

Email: _____

Address:

_____

_____

_____

Bidder's Contractor License No.: (if applicable) _____

BID BOND (PENAL SUM FORM)

Bidder Name: Address *(principal place of business)*:	**Surety** Name: Address *(principal place of business)*:
Owner Name: **City of Pocatello** Address *(principal place of business)*: **P.O. Box 4169** **Pocatello, Idaho 83205-4169**	**Bid** Project *(name and location)*: **Whitman and Hayes Lift Stations Project, City of Pocatello** Bid Due Date:
Bond Penal Sum: Date of Bond:	
Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.	
Bidder	Surety
_____ *(Full formal name of Bidder)*	_____ *(Full formal name of Surety) (corporate seal)*
By: _____ *(Signature)*	By: _____ *(Signature) (Attach Power of Attorney)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____
Attest: _____ *(Signature)*	Attest: _____ *(Signature)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title:	Title:
Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.	

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond will be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder occurs upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation will be null and void if:
    3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
    3.2. All Bids are rejected by Owner, or
    3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions does not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action will be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety, and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond will be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder must be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond will be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

Naming of Subcontractors Form

Per Idaho Code, 67-2310, Bidder shall include in his or her Bid the names and address, and Idaho Public Works Contractor License Number of the Subcontractors who shall, in the event the Bidder secures the Contract, subcontract the plumbing, heating and air-conditioning work, and electrical work under the general Contract. Failure to name Subcontractors as required shall render any Bid submitted by the Bidder unresponsive and void.

Subcontractor Name and Address	**Classification**	**License Number**

NOTES TO USER

1. This form must be included for all bids.

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NOTICE OF AWARD

Date of Issuance:

Owner:	City of Pocatello	Owner's Project No.:	EGC-130
Engineer:	Austin Suing	Engineer's Project No.:	EGC-130

Project: Whitman and Hayes Lift-Stations Project

Contract Name:

Bidder:

Bidder's Address:

You are notified that Owner has accepted your Bid dated _____ for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

Rehabilitating the existing Whitman lift station and constructing the new Hayes lift station. Work includes installing: (1) 72" diameter concrete wetwell, (1) 48" concrete manhole, (4) submersible pumps, controls and accessories, (365-ft) total of 4", 6" and 8" ductile iron and PVC discharge piping, (88-ft) total of 8" & 15" gravity sewer line, (105-ft) of 4" sewer service, connecting to existing sewer system, (2) valve vaults, 4" and 6" isolation and check valves, (2) pre-cast buildings, utility power poll, site power connections, wiring equipment, testing equipment, by-pass pumping, concrete work, and surface restorations. Work will also include removal of existing lift station equipment and demolition and abandoning of existing structures.

The Contract Price of the awarded Contract is $_____. Contract Price is subject to adjustment based on the provisions of the Contract, including but not limited to those governing changes, Unit Price Work, and Work performed on a cost-plus-fee basis, as applicable.

Two unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically.

☒ Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner one counterpart of the Agreement, signed by Bidder (as Contractor).
2. Deliver with the signed Agreement(s) the Contract security (such as required performance and payment bonds) and insurance documentation, as specified in the Instructions to Bidders and in the General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any):
    a. Proof of City of Pocatello license and permit bond per SC-6.01, of the Supplementary Conditions.
    b. Approximate start date.

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within 10 days after you comply with the above conditions, Owner will return to you one fully signed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner: City of Pocatello

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

Copy: Engineer

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AFFIDAVIT OF PAYMENT OR SECUREMENT OF ALL TAXES

STATE OF IDAHO }

} SS

COUNTY OF _____}

_____, being first duly sworn, on oath deposes and says that they are in conformance with Idaho Code 63-1502; that they have paid or secured to the satisfaction of the respective taxing units all taxes for which they or their property is liable, now due or delinquent, including assessment, excises and license fees levied by the State of Idaho or any taxing unit within the State of Idaho.

Signed: _____

Titled: _____

Subscribed and sworn to before me this _____ day of _____, 20____

My commission expires: _____

_____Notary Public

(SEAL)

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2020 ISPWC

Project Manual Guide

Owner-Contractor Agreement Form

- ISPWC 00520 - Standard Form of Agreement

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AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

This Agreement is by and between City of Pocatello ("Owner") and **[name of contracting entity]** ("Contractor").

Terms used in this Agreement have the meanings stated in the General Conditions and the Supplementary Conditions.

Owner and Contractor hereby agree as follows:

ARTICLE 1—WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: **Rehabilitating the existing Whitman lift station and constructing the new Hayes lift station. Work includes installing: (1) 72" diameter concrete wetwell, (1) 48" concrete manhole, (4) submersible pumps, controls and accessories, (365-ft) total of 4", 6" and 8" ductile iron and PVC discharge piping, (88-ft) total of 8" & 15" gravity sewer line, (105-ft) of 4" sewer service, connecting to existing sewer system, (2) valve vaults, 4" and 6" isolation and check valves, (2) pre-cast buildings, utility power poll, site power connections, wiring equipment, testing equipment, by-pass pumping, concrete work, and surface restorations. Work will also include removal of existing lift station equipment and demolition and abandoning of existing structures.**

ARTICLE 2—THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: **Whitman and Hayes Lift-Stations Project.**

ARTICLE 3—ENGINEER

3.01 The Owner has retained City of Pocatello **Engineering Department** ("Engineer") to act as Owner's representative, assume all duties and responsibilities of Engineer, and have the rights and authority assigned to Engineer in the Contract.

3.02 The part of the Project that pertains to the Work has been designed by **the Engineer.**

ARTICLE 4—CONTRACT TIMES

4.01 *Time is of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.03 *Contract Times: Days*

A. The Work will be substantially complete within **120** days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within **150** days after the date when the Contract Times commence to run.

4.05 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the Contract Times, as duly modified. The parties also recognize the delays, expense, and difficulties involved in proving, in a legal or arbitration proceeding, the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. *Substantial Completion:* Contractor shall pay Owner $250 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.

2. *Completion of Remaining Work:* After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner $250 for each day that expires after such time until the Work is completed and ready for final payment.

4. Liquidated damages for failing to timely attain Milestones, Substantial Completion, and final completion are not additive, and will not be imposed concurrently.

B. If Owner recovers liquidated damages for a delay in completion by Contractor, then such liquidated damages are Owner's sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages (if any) specified in this Agreement.

ARTICLE 5—CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents, the amounts that follow, subject to adjustment under the Contract:

A. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

ARTICLE 6—PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment by the 20th day of the month in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

A. Owner shall make progress payments on the basis of Contractor's Applications for Payment on or about the 7th day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.

    a. **95** percent of the value of the Work completed (with the balance being retainage).

B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to **95** percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less **200** percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price in accordance with Paragraph 15.06 of the General Conditions.

6.04 *Consent of Surety*

A. Owner will not make final payment, or return or release retainage at Substantial Completion or any other time, unless Contractor submits written consent of the surety to such payment, return, or release.

6.05 *Interest*

A. All amounts not paid when due will bear interest at the rate of **4** percent per annum.

ARTICLE 7—CONTRACT DOCUMENTS

7.01 *Contents*

A. The Contract Documents consist of all of the following:

1. This Agreement.
2. Bonds:
    a. Performance bond (together with power of attorney).
    b. Payment bond (together with power of attorney).
3. General Conditions – ISPWC Division 100 (not attached but incorporated by reference)
4. Supplementary Conditions.
5. Specifications:

    - 2020 Idaho Standards for Public Works Construction (not attached but incorporated by reference)

    - Supplementary Technical Specifications (02000)

    - Special Provisions (ISPWC-00820)
6. Drawings (not attached but incorporated by reference) consisting of **15** sheets with each sheet bearing the following general title: **[Whitman and Hayes Lift Stations Project]**.
8. Addenda (numbers **[number]** to **[number]**, inclusive).

9. Exhibits to this Agreement (enumerated as follows):
    a. Geotechnical Baseline Report Titled: "Geotechnical Investigation Proposed Lift Station"
    b. Contractor's Bid (00410)
    c. Attachment A: Motor Control Panel Detail
10. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
    a. Notice to Proceed.
    b. Work Change Directives.
    c. Change Orders.
    d. Field Orders.
    e. Warranty Bond, if any.

B. The Contract Documents listed in Paragraph 7.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 7.

D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

ARTICLE 8—REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS

8.01 *Contractor's Representations*

A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:

1. Contractor has examined and carefully studied the Contract Documents, including Addenda.
2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
5. Contractor has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.

6. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor's safety precautions and programs.

7. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

8. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

9. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

10. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

11. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

12. The Contractor is an appropriately licensed public works contractor per Idaho Cod Section 54-1902.

13. Contractor shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring the Contractor's compliance with any Laws or Regulations.

8.02 *Contractor's Certifications*

A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 8.02:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

8.03 *Standard General Conditions*

A. Owner stipulates that if the General Conditions that are made a part of this Contract are ISPWC Division 100 ~~EJCDC® C-700~~, Standard General Conditions for the Construction Contract ~~(2018)~~, published by the Engineers Joint Contract Documents Committee, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on _____(which is the Effective Date of the Contract).

Owner:	Contractor:
_____ *(typed or printed name of organization)*	_____ *(typed or printed name of organization)*
By: _____ *(individual's signature)*	By: _____ *(individual's signature)*
Date: _____ *(date signed)*	Date: _____ *(date signed)*
Name: _____ *(typed or printed)*	Name: _____ *(typed or printed)*
Title: _____ *(typed or printed)*	Title: _____ *(typed or printed)* *(If **[Type of Entity]** is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)*
Attest: _____ *(individual's signature)*	Attest: _____ *(individual's signature)*
Title: _____ *(typed or printed)*	Title: _____ *(typed or printed)*
Address for giving notices:	Address for giving notices:
_____	_____
_____	_____
_____	_____
Designated Representative:	Designated Representative:
Name: _____ *(typed or printed)*	Name: _____ *(typed or printed)*
Title: _____ *(typed or printed)*	Title: _____ *(typed or printed)*
Address:	Address:
_____	_____
_____	_____
_____	_____
Phone: _____	Phone: _____
Email: _____ *(If **[Type of Entity]** is a corporation, attach evidence of authority to sign. If **[Type of Entity]** is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)*	Email: _____ License No.: _____ *(where applicable)* State: _____

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2020 ISPWC

Project Manual Guide

Contract Commencement Forms

- ISPWC 00550 - Notice To Proceed
- ISPWC 00610 - Performance Bond
- ISPWC 00615 - Payment Bond

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NOTICE TO PROCEED

Owner:	City of Pocatello	Owner's Project No.:	EGC-130
Engineer:	Engineering Department	Engineer's Project No.:	EGC-130
Contractor:		Contractor's Project No.:	
Project:	Whitman and Hayes Lift-Stations Project		
Contract Name:			
Effective Date of Contract:			

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on _____ pursuant to Paragraph 4.01 of the General Conditions.

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work will be done at the Site prior to such date.

In accordance with the Agreement:

The number of days to achieve Substantial Completion is **120 days** from the date stated above for the commencement of the Contract Times, resulting in a date for Substantial Completion of_____; and the number of days to achieve readiness for final payment is **150 days** from the commencement date of the Contract Times, resulting in a date for readiness for final payment of _____.

Owner: _____

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

Date Issued: _____

Copy: Engineer

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PERFORMANCE BOND

Contractor	**Surety**
Name:	Name:
Address *(principal place of business)*:	Address *(principal place of business)*:
Owner	**Contract**
Name: **City of Pocatello**	Description *(name and location)*:
Mailing address *(principal place of business)*: **P.O. Box 4169** **Pocatello, Idaho 83205-4169**	**Whitman and Hayes Lift Stations Project, City of Pocatello** Contract Price: Effective Date of Contract:

Bond

Bond Amount:

Date of Bond:

(~~Date of Bond cannot be earlier than~~ Effective Date of Contract)

Modifications to this Bond form:

☐ None ☐ See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

Contractor as Principal	Surety
_____ *(Full formal name of Contractor)*	_____ *(Full formal name of Surety) (corporate seal)*
By: _____ *(Signature)*	By: _____ *(Signature)(Attach Power of Attorney)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____
Attest: _____ *(Signature)*	Attest: _____ *(Signature)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:

    3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;

    3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

    3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

    5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

    5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

    5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

    5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

   7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

   7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

   7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.

12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such

statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

14. Definitions

    14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

    14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

    14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

    14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

    14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

16. Modifications to this Bond are as follows: **[Describe modification or enter "None"]**

PAYMENT BOND

Contractor	**Surety**
Name:	Name:
Address *(principal place of business)*:	Address *(principal place of business)*:
Owner	**Contract**
Name: **City of Pocatello** Mailing address *(principal place of business)*: **P.O. Box 4169** **Pocatello, Idaho 83205-4169**	Description *(name and location)*: Whitman and Hayes Lift Stations Project, City of Pocatello Contract Price: Effective Date of Contract:

Bond

Bond Amount:

Date of Bond:

(~~Date of Bond cannot be earlier than~~ Effective Date of Contract)

Modifications to this Bond form:

☐ None ☐ See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

Contractor as Principal	Surety
_____	_____
(Full formal name of Contractor)	*(Full formal name of Surety) (corporate seal)*
By: _____	By: _____
(Signature)	*(Signature)(Attach Power of Attorney)*
Name: _____	Name: _____
(Printed or typed)	*(Printed or typed)*
Title: _____	Title: _____
Attest: _____	Attest: _____
(Signature)	*(Signature)*
Name: _____	Name: _____
(Printed or typed)	*(Printed or typed)*
Title: _____	Title: _____

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.

2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.

4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.

5. The Surety's obligations to a Claimant under this Bond will arise after the following:

    5.1. Claimants who do not have a direct contract with the Contractor

        5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and

        5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).

    5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).

6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.

7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

    7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

    7.2. Pay or arrange for payment of any undisputed amounts.

    7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.

9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.

11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.

14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. Definitions

    16.1. *Claim*—A written statement by the Claimant including at a minimum:

        16.1.1. The name of the Claimant;

        16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;

        16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;

        16.1.4. A brief description of the labor, materials, or equipment furnished;

16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;

16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;

16.1.7. The total amount of previous payments received by the Claimant; and

16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2. *Claimant*—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

18. Modifications to this Bond are as follows: **[Describe modification or enter "None"]**

2020 ISPWC

Project Manual Guide

Contract Terms and Conditions

- ISPWC 00800 - Guide to the Preparation of Supplementary Conditions

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SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

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SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

These Supplementary Conditions amend or supplement ISPWC Division 100 ~~EJCDC® C-700~~, Standard General Conditions of the Construction Contract ~~(2018)~~. The General Conditions remain in full force and effect except as amended.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added—for example, “Paragraph SC-4.05.”

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Definitions*

SC-1.01 Add to the list of definitions in Paragraph 1.01.A by inserting the following as numbered items in their proper alphabetical positions:

1. *Geotechnical Baseline Report (GBR)*—The interpretive report prepared by or for Owner regarding subsurface conditions at the Site, and containing specific baseline geotechnical conditions that may be anticipated or relied upon for bidding and contract administration purposes, subject to the controlling provisions of the Contract, including the GBR’s own terms. The GBR is a Contract Document.

ARTICLE 2—PRELIMINARY MATTERS

2.02 *Copies of Documents*

SC-2.02 Amend the first sentence of Paragraph 2.02.A. to read as follows:

Owner shall furnish to Contractor **2** printed copies of the Contract Documents (including one fully signed counterpart of the Agreement), and **one copy** in electronic portable document format (PDF).

2.03 Add Paragraph 2.03.B:

A. Within ten (10) days after the effective date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to the Owner (or Engineer) the following:

1. WH-5 Public Works Contract Report in conformance with Idaho Code Sections 54-1904A and 63-3624(g), and

2. Affidavit of Payment of Securement of all taxes in conformance with Title 63, Chapter 15 Idaho Code.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.03 *Reference Points*

SC-4.03.A Add the following to the end of the paragraph:

At the discretion of the Owner, any stakes or benchmarks that are carelessly or willfully destroyed or disturbed by the Contractor or the Contractor's subcontractor will be replaced by the Owner the cost thereof charged to the Contractor.

Use this paragraph to define the engineering surveys to be provided by the Owner.

SC-4.03 Add the following new paragraph immediately after Paragraph 4.05.A:

B. The Owner will provide engineer survey to establish the following reference points for construction control:

A: As indicated in the Construction Drawings.

ARTICLE 5—SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS

5.03 *Subsurface and Physical Conditions*

SC-5.03 Delete Paragraph 5.03 in its entirety and replace with the following:

5.03 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions hereby identify:

1. those reports of explorations and tests of subsurface conditions at or adjacent to the Site (other than any Geotechnical Data Report or Geotechnical Baseline Report) that contain Technical Data. Such reports are as follows: No Known reports of explorations and tests of subsurface conditions at the Site are known to Owner

   a. *Report Title:* NA

   b. *Date of Report:* NA

   c. *Technical Data in report upon which Contractor may rely*: NA

2. those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data. Such drawings are as follows:

   a. *Drawings Title:* **SEWAGE PUMP STATION WHITMAN STREET**

   b. *Date of Drawings:* **1969**

   c. *Technical Data in drawings upon which Contractor may rely:* **General location of underground facilities and construction.**

3. Contractor may examine copies of reports and drawings identified immediately above that were not included with the Bidding Documents at **City of Pocatello City Hall** during regular business hours, or may request copies from Engineer, at the cost of reproduction.

B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph SC-5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

C. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

D. *Limitations of Other Data and Documents:* Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or

4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

E. *Geotechnical Baseline Report*

1. This Contract contains a Geotechnical Baseline Report ("GBR"), identified as follows: "*Geotechnical Investigation for Proposed Lift Station, dated May 19, 2021, prepared by Atlas Technical Consultants, LLC, Pocatello Idaho".* This Contract does not contain a Geotechnical Data Report (GDR).

2. The GBR and GDR are incorporated as Contract Documents. The GBR and GDR are to be used in conjunction with other Contract Documents, including the Drawings and Specifications. If there is a conflict between the terms of the GBR and the GDR, the GBR's terms prevail.

3. The GBR describes certain select subsurface conditions that are anticipated to be encountered by Contractor during construction in specified locations (referred to here in the Supplementary Conditions as "Baseline Conditions"). These may include ground, geological, groundwater, and other subsurface geotechnical conditions, and baselines of anticipated Underground Facilities or subsurface structures.

4. The Baseline Conditions will be used to assist in the administration of the Contract's differing site conditions clause at locations where subsurface conditions have been baselined. If a condition is baselined in the GBR, then only the pertinent Baseline Conditions will be used to determine whether there is a differing site condition; and no other indication of that condition in the Contract Documents or Technical Data, or of a

condition that describes, quantifies, or measures a similar characteristic of the subsurface, will be used for the differing site condition determination.

5. The Baseline Conditions will not be used to make differing site conditions determinations at locations that have not been baselined in the GBR, or at any location with respect to subsurface conditions that the Baseline Conditions do not address. If Underground Facilities or Hazardous Environmental Conditions are expressly addressed in the Baseline Conditions, then comparison to such Baseline Conditions will be the primary means of determining (a) whether an Underground Facility was shown or indicated with reasonable accuracy, as provided in Paragraph 5.05 of the General Conditions, or (b) whether a Hazardous Environmental Condition was shown or indicated in the Contract Documents as indicated in Paragraph 5.06.H of the General Conditions. As indicated in Paragraph SC-5.04 below, the GDR will be the primary resource for differing site conditions determinations in cases in which the GBR is inapplicable.

6. The descriptions of subsurface conditions provided in the GBR are based on geotechnical investigations, laboratory tests, interpretation, interpolation, extrapolation, and analyses. Neither Owner, Engineer, nor any geotechnical or other consultant warrants or guarantees that actual subsurface conditions will be as described in the GBR, nor is the GBR intended to warrant or guarantee the use of specific means or methods of construction.

7. The behavior of the ground during construction depends substantially upon the Contractor's selected means, methods, techniques, sequences, and procedures of construction. If ground behavior conditions are baselined in the GBR, they are based on stated assumptions regarding construction means and methods.

8. The GBR will not reduce or relieve Contractor of its responsibility for the planning, selection, and implementation of safety precautions and programs incident to Contractor's means, methods, techniques, sequences, and procedures of construction, or to the Work.

5.04 *Differing Subsurface or Physical Conditions*

SC-5.04 Delete Paragraph 5.04 in its entirety and replace with the following:

5.04 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface condition that is uncovered or revealed at the Site:

1. differs materially from conditions shown or indicated in the GBR; or

2. differs materially from conditions shown or indicated in the GDR, to the extent the GBR is inapplicable; or

3. differs materially from conditions shown or indicated in Contract Documents other than the GBR or GDR, to the extent the GBR and GDR are inapplicable; or

4. to the extent the GBR and GDR are inapplicable, is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate; or

5. to the extent the GBR and GDR are inapplicable, is of such a nature as to require a change in the Drawings or Specifications; or

6. to the extent the GBR and GDR are inapplicable, is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine the necessity of Owner's obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph SC-5.04.A above; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption or continuation of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.

C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption or continuation of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.

D. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

E. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

    a. such condition must fall within any one or more of the categories described in Paragraph SC-5.04.A;

    b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03 of the General Conditions; and

c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:

a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise; or

b. the existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or

c. Contractor failed to give the written notice as required by Paragraph SC-5.04.A.

3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment must be set forth in a Change Order.

4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

F. *Underground Facilities; Hazardous Environmental Conditions:* Paragraph 5.05 of the General Conditions governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 of the General Conditions governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs SC-5.03 and SC-5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.06 *Hazardous Environmental Conditions*

SC-5.06 Add the following new paragraphs immediately after Paragraph 5.06.A.3:

4. The following table lists the reports known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and the Technical Data (if any) upon which Contractor may rely: **No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.**

5. The following table lists the drawings known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and Technical Data (if any)

contained in such Drawings upon which Contractor may rely: **No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.**

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

SC-6.01 Add the following paragraphs immediately after Paragraph 6.01.A:

1. *Required Performance Bond Form:* The performance bond that Contractor furnishes will be in the form of ISPWC 00610 ~~EJCDC® C-610, Performance Bond (2010, 2013, or 2018 edition~~).

2. *Required Payment Bond Form:* The payment bond that Contractor furnishes will be in the form of ISPWC 00615 ~~EJCDC® C-615, Payment Bond (2010, 2013, or 2018 edition)~~.

SC-6.01 Add the following paragraphs immediately after Paragraph 6.01.H:

I. Contractor shall furnish additional license and permit bond for work on City of Pocatello right-of-way in the amount of $10,000 and $50 fee as required by the City of Pocatello permit. The bond(s) shall be made payable to the City of Pocatello designated on the Drawings and shall be in force for a period of one (1) year from the date of acceptance of the Work to cover all guarantees against defective workmanship and materials and other requirements for Work within the City of Pocatello right-of-way as specified. The surety furnishing this Bond shall have a sound financial standing and a record of service satisfactory to the Owner and the City of Pocatello. Contractor shall pay all costs for this (these) Bond(s).

6.03 *Contractor's Insurance*

SC-6.03 Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.C:

E. *Workers' Compensation and Employer's Liability:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance, including, as applicable, United States Longshoreman and Harbor Workers' Compensation Act, Jones Act, stop-gap employer's liability coverage for monopolistic states, and foreign voluntary workers' compensation (from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions).

Workers' Compensation and Related Policies	**Policy limits of not less than:**
Workers' Compensation	
State	Statutory
Applicable Federal (e.g., Longshoreman's)	Statutory
Foreign voluntary workers' compensation (employer's responsibility coverage), if applicable	Statutory
Employer's Liability	
Employers Liability	$1,000,000

F. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against claims for:

1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees,
2. damages insured by reasonably available personal injury liability coverage, and
3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.

G. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial general liability form (occurrence form) and include the following coverages and endorsements:

1. Products and completed operations coverage.
    a. Such insurance must be maintained for three years after final payment.
    b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
2. Blanket contractual liability coverage, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
3. Severability of interests and no insured-versus-insured or cross-liability exclusions.
4. Underground, explosion, and collapse coverage.
5. Personal injury coverage.
6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.
7. For design professional additional insureds, ISO Endorsement CG 20 32 07 04 "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.

H. *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:

1. Any modification of the standard definition of "insured contract" (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).
2. Any exclusion for water intrusion or water damage.
3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.
4. Any exclusion of coverage relating to earth subsidence or movement.
5. Any exclusion for the insured's vicarious liability, strict liability, or statutory liability (other than worker's compensation).

6. Any limitation or exclusion based on the nature of Contractor's work.

7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.

I. *Commercial General Liability—Minimum Policy Limits*

Commercial General Liability	Policy limits of not less than:
General Aggregate	$1,000,000
Products—Completed Operations Aggregate	$2,000,000
Personal and Advertising Injury	$1,000,000
Bodily Injury and Property Damage—Each Occurrence	$1,000,000

J. *Automobile Liability:* Contractor shall purchase and maintain automobile liability insurance for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy must be written on an occurrence basis.

Automobile Liability	Policy limits of not less than:
Combined Single Limit	
Combined Single Limit (Bodily Injury and Property Damage)	$1,000,000

K. *Umbrella or Excess Liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the Paragraphs above. The coverage afforded must be at least as broad as that of each and every one of the underlying policies.

Excess or Umbrella Liability	Policy limits of not less than:
Each Occurrence	$1,000,000
General Aggregate	$2,000,000

6.04 *Builder's Risk and Other Property Insurance*

SC-6.04

Modify the following paragraph 6.04.B

B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Contractor is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.

Add the following paragraph following Paragraph 6.04.E:

E. The property insurance shall contain no partial occupancy restriction for utilization of the Project by the Owner for the purpose intended.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.03 *Labor; Working Hours*

SC-7.03 Add the following new subparagraphs immediately after Paragraph 7.03.C:

1. Regular working hours will be 7:00 A.M and 6:00 PM, excluding Sundays and holidays per the City of Pocatello Municipal Code 9.16.100 except where determined by ENGINEER that additional working hours will be permitted. CONTRACTOR is encouraged to perform CONTRACTOR's operations during regular working hours. Alternative working hours may be required in commercial areas due to restaurants or bars, for example, on a case-by-case basis as requested by the CONTRACTOR and determined and approved by the ENGINEER.

7.09 *Permits*

SC-7.09 Add the following new paragraphs immediately after Paragraph 7.09.A:

B. CONTRACTOR and subcontractors shall have a valid City of Pocatello business license and permit bond before performing work on this project. License and permit bond information including required fee is included in the Contract Documents. CONTRACTOR shall apply for and receive a City of Pocatello right-of-way excavation permit before the start of construction.

CONTRACTOR may obtain a permit from the City Water Department in order to obtain clean water for CONTRACTOR's operations from designated fire hydrant(s) located close to the project site. Cost of water shall be included in the prices paid for Bid Items.

CONTRACTOR and subcontractors shall have the appropriate valid Public Works Contractor's License per Idaho Code 54-1902 and shall register as a contractor in the State of Idaho.

7.13 *Safety and Protection*

SC-7.13 Insert the following after the second sentence of Paragraph 7.13.G:

The following safety programs are applicable to the Work: CONTRACTOR shall adhere to all OSHA regulations including but not limited to trench safety and confined space entry requirements.

ARTICLE 8—OTHER WORK AT THE SITE

No suggested Supplementary Conditions in this Article.

ARTICLE 9—OWNER'S RESPONSIBILITIES

No suggested Supplementary Conditions in this Article.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.03 *Resident Project Representative*

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.B:

C. The Resident Project Representative (RPR) will be Engineer's representative at the Site. RPR's dealings in matters pertaining to the Work in general will be with Engineer and Contractor. RPR's dealings with Subcontractors will only be through or with the full knowledge or approval of Contractor. The RPR will:

1. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings (but not including Contractor's safety meetings), and as appropriate prepare and circulate copies of minutes thereof.

2. *Safety Compliance:* Comply with Site safety programs, as they apply to RPR, and if required to do so by such safety programs, receive safety training specifically related to RPR's own personal safety while at the Site.

3. *Liaison*

   a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.

   b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.

   c. Assist in obtaining from Owner additional details or information, when required for Contractor's proper execution of the Work.

4. *Review of Work; Defective Work*

   a. Conduct on-Site observations of the Work to assist Engineer in determining, to the extent set forth in Paragraph 10.02, if the Work is in general proceeding in accordance with the Contract Documents.

   b. Observe whether any Work in place appears to be defective.

   c. Observe whether any Work in place should be uncovered for observation, or requires special testing, inspection or approval.

5. *Inspections and Tests*

   a. Observe Contractor-arranged inspections required by Laws and Regulations, including but not limited to those performed by public or other agencies having jurisdiction over the Work.

   b. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work.

6. *Payment Requests:* Review Applications for Payment with Contractor.

7. *Completion*

   a. Participate in Engineer's visits regarding Substantial Completion.

   b. Assist in the preparation of a punch list of items to be completed or corrected.

c. Participate in Engineer's visit to the Site in the company of Owner and Contractor regarding completion of the Work, and prepare a final punch list of items to be completed or corrected by Contractor.

d. Observe whether items on the final punch list have been completed or corrected.

D. The RPR will not:

1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).

2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.

3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.

4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction.

5 Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.

6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.

7. Authorize Owner to occupy the Project in whole or in part.

ARTICLE 11—CHANGES TO THE CONTRACT

No suggested Supplementary Conditions in this Article.

ARTICLE 12—CLAIMS

No suggested Supplementary Conditions in this Article.

ARTICLE 13—COST OF WORK; ALLOWANCES, UNIT PRICE WORK

SC-13.03 Delete Paragraph 13.03.E in its entirety and insert the following in its place:

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:

a. the extended price of a particular item of Unit Price Work amounts to **5** percent or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than **20** percent from the estimated quantity of such item indicated in the Agreement; and

b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.

2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.

3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCCEPTANCE OF DEFECTIVE WORK

No suggested Supplementary Conditions in this Article.

ARTICLE 15—PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD

No suggested Supplementary Conditions in this Article.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

No suggested Supplementary Conditions in this Article.

ARTICLE 17—FINAL RESOLUTIONS OF DISPUTES

17.02 *Arbitration*

SC-17.02 Add the following new paragraph immediately after Paragraph 17.01.

17.02 *Arbitration*

A. All matters subject to final resolution under this Article will be settled by arbitration administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules (subject to the conditions and limitations of this Paragraph SC-17.02). Any controversy or claim in the amount of $100,000 or less will be settled in accordance with the American Arbitration Association's supplemental rules for Fixed Time and Cost Construction Arbitration. This agreement to arbitrate will be specifically enforceable under the prevailing law of any court having jurisdiction.

B. The demand for arbitration will be filed in writing with the other party to the Contract and with the selected arbitration administrator, and a copy will be sent to Engineer for information. The demand for arbitration will be made within the specific time required in Article 17, or if no specified time is applicable within a reasonable time after the matter in question has arisen, and in no event will any such demand be made after the date when institution of legal or equitable proceedings based on such matter in question would be barred by the applicable statute of limitations.

C. The arbitrator(s) must be licensed engineers, contractors, attorneys, or construction managers. Hearings will take place pursuant to the standard procedures of the Construction Arbitration Rules that contemplate in-person hearings. The arbitrators will have no authority to award punitive or other damages not measured by the prevailing party's actual damages, except as may be required by statute or the Contract. Any award in an arbitration initiated

under this clause will be limited to monetary damages and include no injunction or direction to any party other than the direction to pay a monetary amount.

D. The Arbitrators will have the authority to allocate the costs of the arbitration process among the parties, but will only have the authority to allocate attorneys' fees if a specific Law or Regulation or this Contract permits them to do so.

E. The award of the arbitrators must be accompanied by a reasoned written opinion and a concise breakdown of the award. The written opinion will cite the Contract provisions deemed applicable and relied on in making the award.

F. The parties agree that failure or refusal of a party to pay its required share of the deposits for arbitrator compensation or administrative charges will constitute a waiver by that party to present evidence or cross-examine witness. In such event, the other party shall be required to present evidence and legal argument as the arbitrator(s) may require for the making of an award. Such waiver will not allow for a default judgment against the non-paying party in the absence of evidence presented as provided for above.

G. No arbitration arising out of or relating to the Contract will include by consolidation, joinder, or in any other manner any other individual or entity (including Engineer, and Engineer's consultants and the officers, directors, partners, agents, employees or consultants of any of them) who is not a party to this Contract unless:

1. the inclusion of such other individual or entity will allow complete relief to be afforded among those who are already parties to the arbitration;

2. such other individual or entity is substantially involved in a question of law or fact which is common to those who are already parties to the arbitration, and which will arise in such proceedings;

3. such other individual or entity is subject to arbitration under a contract with either Owner or Contractor, or consents to being joined in the arbitration; and

4. the consolidation or joinder is in compliance with the arbitration administrator's procedural rules.

H. The award will be final. Judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal, subject to provisions of the Laws and Regulations relating to vacating or modifying an arbitral award.

I. Except as may be required by Laws or Regulations, neither party nor an arbitrator may disclose the existence, content, or results of any arbitration hereunder without the prior written consent of both parties, with the exception of any disclosure required by Laws and Regulations or the Contract. To the extent any disclosure is allowed pursuant to the exception, the disclosure must be strictly and narrowly limited to maintain confidentiality to the extent possible.

ARTICLE 18—MISCELLANEOUS

No suggested Supplementary Conditions in this Article.

ARTICLE 19—FUNDING AGENCY REQUIREMENTS

No suggested Supplementary Conditions in this Article.

2020 ISPWC

Project Manual Guide

Special Provisions (Reserved)

- ISPWC 00820 - Reserved for Owner’s Special Technical Provisions

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SP-1 PUMP STATION – WET WELL EQUIPMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This work shall consist of removing existing, and installing new submersible pumps, guide rails, inside drop bowl, discharge piping, floats, sensors, cable holder, and electrical conduit necessary to complete the work described in the contract documents.

1.2 RELATED DIVISIONS AND SECTIONS

Sections from ISPWC 2020 Edition

A. Section 505– Pressure Sewers

B. Section 704 – Precast Concrete

C. Division 1000 – Construction Stormwater Best Management Practices (BMPs).

1.3 SUBMITTALS

A. Submit shop drawings for materials to be installed or furnished under this section.

B. Submit manufactures installation instructions and maintain copy at the jobsite.

C. Submit manufacture's certification that pipe meets or exceed specified requirements including all requested test results and material identifications.

1.4 ACCEPTANCE TESTING

A. After installation, a pump station start-up shall be performed by the installing contractor under the supervision of the manufacture's authorized representative. 8 hours of field service shall be provided by an authorized, factory trained representative of the pump manufacturer. Services shall include, but not be limited to, inspection of the completed pump station installation to ensure that it has been performed in accordance with the manufacturer's instructions and recommendations, supervision of all field-testing and activation of the Pump Manufacturer's Warranty. The test shall demonstrate to the satisfaction of the Owner that the equipment meets all specified performance criteria, is properly installed and anchored, and operates smoothly without exceeding the full load amperage rating of the motor. The Contractor shall be responsible for coordinating the required field services with the Pump Manufacturer.

B. Prior to submergence, the pump shall be run dry to establish correct rotation and mechanical integrity.

C. Clean water shall be supplied by the Contractor for acceptance testing.

D. The pump shall be tested at start-up. Voltage, current, and other significant parameters shall be recorded. The Manufacturer shall provide a formal test procedure and forms for recording data.

1.5 All systems shall be tested including, pump alternation, primary ultrasonic level monitoring controls, backup float level controls, HOA-switch operation, and emergency alarm and auto dialer.

PART 2 MATERIALS

2.1 DUCTILE IRON AND PIPE FITTINGS

A. Per Section 505 - Pressure Sewers

2.2 PVC AND PIPE FITTINGS

A. Per Section 505 - Pressure Sewers

2.3 DROP BOWL SYSTEM

A. Manufacture: Reliner Duran Inc.

B. Size: According manufactures recommendations.

C. Pipe Support Straps: Stainless Steel

D. Fasteners: Stainless Steel

2.4 PIPE PENETRATION SEAL

A. All through pipe penetrations shall be sealed

B. Manufacture: GPT, Link Seal® or approved equal

C. Seal system shall be designed for typical wastewater environment.

D. Bolts and Nuts: shall consist of 316 Stainless Steel

2.5 STAND-BY FLOAT SYSTEM

A. Manufacture: CONERY MFG inc or approved equal

B. Install (4) floats for stand-by pump controls including Low Level, Lead, Lag and High Level.

C. Operation: Single Pole, Double Throw, can be wired at installation for either normally open or normally closed.

D. Switch shall be narrow angle mercury type, activated as the float rises 1.00” or 5 degrees above horizontal.

E. Bulb shall be made of Polypropylene and standard size 3.5”x 5".

F. Floats shall hang near top of wet well out of waste water flow until deployed.

G. Floats levels shall be supplied with cable lengths to be connected to controller and calibrated according to levels described in the construction drawings.

H. Floats shall be rated for typical municipal waste water environment.

2.6 ULTRA SONIC LEVEL TRANSDUCER

A. Manufacture/Model: Siemens Echomax XPS-10

B. Range: 1 to 33 ft

2.7 DISCHARGE ELBOW AND GUIDERAIL SYSTEM

A. For each pump the contractor shall supply and install a discharge connection made of cast iron ASTM A-48, Class 35B.

B. The outlet flange of the discharge connection shall drilled according ANSI B16.1-89; tab.5.

1. Whitman Lift Station outlet flange shall be 4-inches in diameter.

2. Hayes Lift Station outlet flange shall be 4-inches in diameter.

C. The sealing of the pumping unit to the discharge connection shall be accomplished by a machined metal to metal contact. Sealing of the discharge interface with a diaphragm, O-ring or profile gasket will not be accepted. The entire weight of the pump/motor unit shall be borne by the pump discharge elbow. No portion of the pump/motor unit shall bear on the sump floor directly or on a sump floor mounted stand.

D. The pump(s) shall be automatically and firmly connected to the discharge connection, guided by no less than two parallel guide bars extending from the top of the station to the wet well mounted discharge connection. The material of the guide bars shall stainless steel AISI 316.

E. The length of the guide bars shall be field fit and they shall be fasten at the top of the station with a guide bar holder made of stainless steel AISI 316.

1. Guide bar holders shall be attached either to the concrete lid or a stainless steel AISI 316 bracket attached to the wetwell barrel section, to allow free and clear removal of the pumps through the access hatch

F. For each pump the contractor shall supply and install a cable holder made with 4 hooks of stainless steel AISI 316.

G. All mounting hardware shall be stainless steel AISI 316, or approved equal.

2.8 SUBMERSIBLE PUMPS

A. Per Section SP-2 – Submersible Pumps

2.9 RACEWAY – PVC COATED RIGID METAL

A. Per Section SP-4 - Electrical Equipment, Wiring, And Raceway

PART 3 WORKMANSHIP

3.1 EXAMINATIONS

A. Per Section 505 – Pressure Sewers

3.2 INSTALLATION OF PRESSURE SEWERS

A. Per Section 505 – Pressure Sewers

3.3 FLUSHING AND TESTING

A. Per Section 505 – Pressure Sewers

3.4 INSTALLATION OF EQUIPMENT

A. Installation of equipment shall be according to the manufacturer's instructions.

PART 4 MEASUREMENT AND PAYMENT

4.1 Use the following bid item as designated in the Bid Schedule. Includes all labor, material, and equipment required to perform the work.

A. Wet Well Equipment: For Each Lift Station. Includes full compensation for all piping, labor and equipment necessary for completing the work described in the bid documents and all appurtenances not itemized on the Bid Schedule.

1. Bid Schedule Payment References: SP-1.
2. Bid Schedule Description: Wet Well Equipment …Each (EA).

SP-2 LIFT STATION PUMPS - SUBMERSIBLE PUMPS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This section describes the performance of submersible pumps required for both the Hayes and Whitman Lift Stations. Cost of pumps and installation should be included in SP- 1.

1.2 PUMP MANUFACTURE

A. Acceptable pump manufacturer is Xylem Flygt, alternates not equivalent.

1.3 GENERAL

A. The pumps shall be suitable for pumping raw sewage and shall be designed and fully guaranteed for this use. The fluid temperature range shall be from 40°F to 115°F.

1.4 SUBMITTALS

A. Submittal data shall be provided to show compliance with these specifications, plans or other specifications that will influence the proper operation of the pump(s).

B. Standard submittal data for approval must consist of:

1. Pump Performance Curves.
2. Pump Outline Drawing.
3. Station Drawing for Accessories.
4. Electrical Motor Data.
5. Typical Installation Guides.
6. Technical Manuals and Parts List.
8. Printed Warranty.
9. Management system certificate ISO 9001.
10. Manufacturer's Equipment Storage Recommendations.
11. Manufacturer's Standard Recommended Start-Up Report Form.

C. Lack of the above requested submittal data is cause for rejection.

1.5 OPERATIONAL REQUIREMENTS AND WARRANTY

A. The contractor shall supply and install 2 submersible sewage pumps with discharge connections, discharge pipes, guide bars, cable holder lifting chains at each lift station.

B. The submersible pumps shall have a semi open multi vane self-cleaning impeller designed to

transport wastewater with fibrous materials like wet wipes.

C. The impeller shall be wear resistant and made of high chromium cast iron with at least 24% chrome against sand and grit which is expected to enter the pump station with the sewage or the storm water. Impellers that have surface hardening (by thermal, coating, etc.) will not be allowed.

D. The pumps shall be provided with prorated 60 months (5 years) warranty against defects in materials and or workmanship. Unless otherwise specified, all other equipment shall be warrantied for 12 months (1 year). The warranty shall be in printed form and previously published as the manufacturer's standard warranty for all similar units manufactured, latest revision. Upon warranty occurrence, the manufacturer's authorized service center shall remove the pump, repair, reinstall and provide start up on the repaired pump. A detailed failure analysis shall be submitted to the Owner for their records summarizing corrective action taken.

PART 2 PUMP SELECTION AND PERFORMANCE

2.1 WHITMAN LIFT STATION SUBMERSIBLE PUMP

A. The Whitman Lift Station shall be installed with (2) Flygt submersible pumps, Model NP 3102 MT 3 with 4” discharge.

1. Required Duty Point: 443 gpm at a total dynamic head of 27.2 feet.

B. Each pump shall be equipped with a 5 HP submersible electric motor, capable to operate on a 240 volt, 3 phases, 60 hertz voltage supply.

2.2 HAYES LIFT STATION SUBMERSIBEL PUMP

A. The Hayes Lift Station shall be installed with (2) Flygt submersible pumps, Model NP 3085 MT 3 with 4” discharge.

1. Required Duty Point: 225 gpm at a total dynamic head of 24.8 feet.

B. Each pump shall be equipped with a 3 HP submersible electric motor, capable to operate on a 240 volt, 3 phases, 60 hertz voltage supply.

2.3 GENERAL PUMP REQUIREMENTS

A. The hydraulic of the pump shall be capable of handling raw domestic wastewater with fibrous materials like wet wipes.

B. N-Impeller: The impeller blades shall be self-cleaning upon each rotation as they pass across a sharp relief groove in the Insert ring and shall keep the impeller blades clear of debris. The pump inlet shall have a guide pin which moves fibers from the center of the impeller to the leading edges of the impeller. The impeller shall move axially upwards to allow larger debris to pass through and immediately return to normal operating position. The clearance between the insert ring and the impeller leading edges shall be adjustable.

C. The pump shall be capable to operate without any limitation between 50% and 125% of the Best efficiency point (B.E.P) of the performance curve.

D. The motor speed shall be max.: 1800 rpm. A performance chart shall be provided upon request showing curves for torque, current, power factor, input/output HP and efficiency. This chart shall also include data on starting and no-load characteristics

E. The impeller shall be mounted on the motor shaft. Couplings shall not be accepted.

F. The pump motor shall be induction type with a squirrel cage rotor, shell type design, housed in an air filled, watertight chamber. It shall be permanently submersible according standard IEC 60034 and protection class IP 68.

G. The motor shall be capable of no less than 15 evenly spaced starts per hour and be able to operate throughout the entire pump performance curve from shut-off through run-out even when the motor is not submerged. The stator windings shall be insulated with moisture resistant Class H insulation rated for 356°F.

H. Sealing of the pumping unit to the discharge connection shall be accomplished by a machined metal to metal watertight contact. Sealing of the discharge interface with a diaphragm, O-ring or profile gasket will not be acceptable.

I. The pump shall be equipped with a guiding claw to lift and lower the pump on parallel guide bars and connect it to wet well mounted discharge connection. There shall be no need for personal to enter the wet well when removing or reinstalling the pumps.

J. The junction chamber containing the terminal board shall be hermetically sealed from the motor by an elastomeric compression seal. Connection between the cable conductors and stator leads shall be made with threaded compression type binding posts permanently affixed to a terminal board. The motor and the pump shall be produced by the same manufacturer.

K. The motor shall be protected by 3 thermal switches embedded in the stator set to open at 260°F and one leakage sensor floating type located in the stator chamber. The sensor and the switches shall be connected to the control panel which shall stop the motor and send an alarm when the sensors are activated.

L. The pump shall be Explosion approved according FM CLASS 1. DIV 1 "C" & "D"

M. The cable entry shall consist of dual cylindrical elastomer sleeves, flanked by washers, all having a close tolerance fit against the cable and the cable entry. Epoxies, silicones, or other secondary sealing systems shall not be considered acceptable.

N. The pump shaft shall rotate on two bearings. Motor bearings shall be permanently grease lubricated and have a nominal L10 lifetime of 50.000 hours. The upper bearing shall be a single deep groove ball bearing. The lower bearing shall be a two row angular contact bearing to compensate for axial thrust and radial forces. Single row lower bearings are not acceptable.

O. The shaft shall be sealed by a tandem mechanical shaft seal system consisting of two seals, each having an independent spring system. The seals shall require neither maintenance nor adjustment and shall be capable of operating in either clockwise or counter clockwise direction of rotation without damage or loss of seal function.

P. Each pump shall be provided with a lubricant chamber for the shaft sealing system. The lubricant chamber shall be designed to prevent overfilling and to provide lubricant expansion

capacity. The drain and inspection plug, with positive anti-leak seal shall be easily accessible from the outside. The seal system shall not rely upon the pumped media for lubrication. Seal lubricant shall be non-hazardous.

Q. The Materials of construction shall be as follows:

R. Pump housing: ASTM A-48, Class 35B

S. Impeller and Insert ring: A 532 ALLOY III A (25% Chrome)

T. Stator housing: ASTM A-48, Class 35B

U. Shaft: ASTM A479 S43100-T.

V. Shaft seal: Pump side: - Corrosion resistant Tungsten carbide WCCR

W. Shaft seal Motor side: - Carbon (Csb) -Aluminum oxide (AL2O3)

X. All castings must be blasted before coating. All wet surfaces are to be coated with two-pack oxyrane ester Duasolid 50. The total layer thickness should be at least 120 microns. Zinc dust primer shall not be used.

Y. The motor shall be equipped with enough cable to reach the motor control panel and suitable for submersible pump applications. The power cable shall be sized according to NEC and ICEA standards. The outer jacket of the cable shall be oil resistant chlorinated polyethylene rubber. The cable shall be capable of continuous submergence underwater without loss of watertight integrity to a depth of 65 feet.

Z. Each completed and assembled pump/motor unit shall undergo the following factory tests at the manufacturer's plant prior to shipment. The Manufacturer shall provide on demand a copy of his quality control plan for these tests and an ISO 9001 factory certificate:

1. Hydraulic performance test
2. No-Leak seal integrity test
3. Electrical integrity test

SP-3 VALVE VAULT EQUIPMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This work shall consist of installing new check and gate valves, pipeing, fittings, access ladder, sump pump in the valve vault.

B. Installation of sump pump system including concrete removal, installing sump basin, pump, piping, fittings, and electrical components indicated in the drawings.

1.2 RELATED DIVISIONS AND SECTIONS

- Sections from ISPWC 2017 Edition

A. Section 201 – Clearing and Grubbing.

B. Section 505 – Pressure Sewers

C. Section 703 – Cast-In-Place Concrete

PART 2 MATERIALS

2.1 RESILIENT SEATED GATE VALVES

A. Manufacture: Smith – Cooper International, or approved equal.

B. Valve to resist corrosion from contact with a sanitary sewerage environment.

1. Body Type: Flanged
2. Stem: Non-rising, stainless steel
3. Actuator: Hand operated wheel
4. Stem Seal: O-ring
5. Interior and Exterior Coating: Required

2.2 SWING CHECK VALVE

A. Manufacture: Kennedy Valve Co., alternates not equivalent

B. Valve to resist corrosion from contact with a sanitary sewerage environment.

1. Body Type: Flanged
2. Hinge Pin: Stainless Steel
3. Weighted Lever

4. Working parts accessed through the top of the valve.
5. Disc Type: Bronze or Cast Iron

2.3 ECCENTRIC PLUG VALVES

A. Manufacture: ValMatic, or approved equal.

B. Valve design shall be suitable for wastewater environment, valves shall be quarter turn, 100% port eccentric, with resilient encapsulated plug.

1. Body Type: Flanged 100% Port, “SEAT END” shall be cast on the exterior of the body seat end.
2. Actuator:
    a. 4-inch Valves Hand operated quarter (1/4) turn lever on a 2-inch square nut.
    b. 6-inch Valve Worm Gear Actuator with position indicator
3. Plug: Ductile Iron with Buna-N coating
4. Radial Shaft Bearings: Self lubricating Type 316 stainless steel
5. Thrust Bearing: PTFE
6. Hard wear: Stainless Steel 316 or approved equal

2.4 DUCTILE IRON AND PIPE FITTINGS

A. Per Section 505 – Pressure Sewers, section 2.4

2.5 PIPE PENETRATION SEAL

A. Manufacture: GPT, Link Seal® or approved equal

B. Seal system shall be designed for sanitary sewerage environment.

C. Bolts and Nuts: shall consist of 316 Stainless Steel

2.6 SUMP PUMP

A. Manufacturer Zoeller Pumps, or approved equal.

B. Pump shall be submersible, designed to operate while completely underwater.

C. Pump design shall include integrated float for on and off operation

D. Discharge piping shall include ball isolation valve, check valve and union.

E. Motor: 3/10 HP

2.7 ACCESS LADDER

1. Access ladder shall mount to the hatch opening and extend to the vault floor.
2. Ladder Rungs: 2" wide with slip resistant tread
3. Finish: Powder coated or approved equal.

2.8 ELECTRICAL RACEWAY AND WIRING

1. Per Section SP-4 - Electrical Equipment, Wiring, And Raceway.

PART 3 WORKMANSHIP

3.1 EXAMINATIONS

A. Per Section 505 – Pressure Sewers

3.2 INSTALLATION OF PRESSURE SEWERS

A. Per Section 505 – Pressure Sewers

3.3 FLUSHING AND TESTING

A. Per Section 505 – Pressure Sewers

3.4 ELECTRICAL WORK

A. Per Section SP-4 - Electrical Equipment, Wiring, And Raceway.

PART 4 MEASUREMENT AND PAYMENT

4.1 Use the following bid item as designated in the Bid Schedule. Includes all labor, material, and equipment required to perform the work described in the construction documents.

A. Valve Vault Equipment for each valve vault. Includes full compensation for all materials, labor, and equipment necessary for completing the work and all appurtenances not itemized on the bid schedule. Including valves, fittings, sump pump installation labor and material, access ladder, and associated electrical work.

1. Bid Schedule Payment References: SP-3.
2. Bid Schedule Description: Valve Vault Equipment …Each (EA).

SP-4 ELECTRICAL EQUIPMENT, WIRING, AND RACEWAY

PART 1 GENERAL

1.1 SECTION INCLUDES

A. The work included in this section consist of installing site electrical raceways and wiring, junction boxes, electrical panels and electrical equipment in the electrical building, including power from the meter.

B. CONTRACTOR shall supply all equipment not specifically identified in this section but required to complete a functioning electrical building as described in the contract documents, equipment shall be in accordance with applicable reference standards.

1.2 REFERENCE STANDARDS

A. NEC (NFPA 70) National Electrical Code

B. NEMA 250 Enclosure for Electrical Equip. (1000 Volts Max.)

C. NFPA 820 Standard for Fire Protection in Wastewater Treatment and Collection Facilities

D. All electrical equipment shall be listed by and shall bear the label of Underwriters' Laboratories, Inc. (UL) or an independent testing laboratory acceptable to the local code enforcement agency having jurisdiction.

E. Installation of electrical equipment and materials shall comply with OSHA Safety and Health Standards, State building standards, and applicable local codes and regulations.

F. Where the requirements of the specifications conflict with UL, NEMA, NFPA, or other applicable standards, the more stringent requirements shall govern.

1.3 PUBLIC UTILITIES

A. The CONTRACTOR shall contact the IDAHO POWER and verify compliance with requirements before construction. The CONTRACTOR shall coordinate schedules for work by all utilities.

B. Electrical service shall be as indicated and be as required by IDAHO POWER.

C. The CONTRACTOR shall verify and provide all service conduits, fittings, weather heads, service poles, grounding devices, and all service wires not provided by IDAHO POWER.

1.4 SUBMITTALS

A. Shop Drawings: Shop drawings shall include the following:

1. Complete material lists stating manufacturer and brand name of each item or class of

material.

2. Shop drawings for all grounding work not specifically indicated.
3. Connection diagrams, terminal numbers, internal wiring diagrams, conductor size, and cable numbers.
4. Types of materials and finish.
5. Nameplates.
6. Voltage requirement, phase, and current, as applicable.
7. Front and rear access requirements.
8. Grounding requirements
9. Catalog cuts or photocopies of applicable pages of bulletins or brochures for mass produced, non-custom manufactured material. Catalog data sheets shall be stamped to indicate the project name, applicable Section and paragraph, model number, and options.

B. Shop drawings shall be custom prepared. Drawings or data indicating "optional" or "as required" equipment are not acceptable. Options not proposed shall be crossed out or deleted from shop drawings.

C. Materials and Equipment Schedules: The CONTRACTOR shall deliver to the ENGINEER prior to the start of construction, a complete list of all materials, equipment, apparatus, and fixtures proposed for use. The list shall include type, sizes, names of manufacturers, catalog numbers, and such other information required to identify the items.

PART 2 MATERIALS

2.1 GENERAL:

A. All equipment and materials shall be new, shall be listed by UL, and shall bear the UL label where UL requirements apply. All equipment and materials shall be the products of experienced and reputable manufacturers in the industry. Similar items in the WORK shall be products of the same manufacturer. All equipment and materials shall be of industrial grade standard of construction.

2.2 MOUNTING HARDWARE

A. Miscellaneous Hardware

1. All nuts, bolts, and washers shall be stainless steel.
2. Threaded rods for trapeze supports shall be continuous threaded, galvanized steel, 3/8" diameter minimum.
3. Strut for mounting of conduits and equipment shall be galvanized steel. Where contact with concrete or dissimilar metals may cause galvanic corrosion, suitable non-metallic insulators shall be utilized to prevent such corrosion. Strut shall be as manufactured by Unistrut, B-Line, or equal.

4. Anchors for attaching equipment to concrete walls, floors and ceilings shall be stainless steel expansion anchors, such as "Rawl-Bolt," "Rawl-Stud" or "Lok-Bolt" as manufactured by Rawl; similar by Star, or equal. Wood plugs shall not be permitted.

2.3 ELECTRICAL IDENTIFICATION

A. Nameplates: Nameplates shall be fabricated from white-letter, black-face laminated plastic engraving stock, Formica type ES-1, or equal. Each shall be fastened securely, using fasteners of brass, cadmium plated steel, or stainless steel, screwed into inserts or tapped holes, as required. Engraved characters shall be block style with no characters smaller than 1/8-inch high.

B. Conductor and Equipment Identification: Conductor and equipment identification devices shall be either imprinted plastic-coated cloth marking devices such as manufactured by Brady, Thomas & Betts, or equal, or shall be heat-shrink plastic tubing, imprinted split-sleeve markers cemented in place, or equal.

2.4 EXTERIOR RACEWAY – PVC COATED RIGID METAL

A. All underground and exterior conduit shall be as described in this section.

B. Manufacture: Plasti-Bond, Perma-Cote, or approved equal.

C. Conduit shall be PVC-coated, Galvanized Rigid Conduit (GRC) and fittings, must be UL Listed.

1. UL 6 Standard for Safety, Rigid Metal Conduit, UL514B Standard for Safety, Fittings for Conduit and Outlet Boxes.

D. The conduit shall be hot dip galvanized inside and out with hot galvanized threads.

E. A PVC sleeve extending one pipe diameter or two inches, whichever is less, shall be formed at every female fitting opening except unions. The inside sleeve diameter shall be matched to the outside diameter of the conduit.

F. The PVC coating on the outside of conduit couplings shall have a series of longitudinal ribs 40 mils in thickness to protect the coating from tool damage during installation

G. PVC Coated Fittings for Hazardous Locations must be UL 1203 Listed. Sealing Fittings must be properly installed.

H. A urethane coating shall be uniformly and consistently applied to the interior of all conduit and fittings. This internal coating shall be a nominal 2 mil thickness. Conduit or fittings having areas with thin or no coating shall be unacceptable.

I. A “PVC Coated Sealing Locknut” shall be used on all exposed male threads transitioning into female NPT threads which do not have sealing sleeves, including transitions from PVC couplings/female adapters to PVC coated GRC elbows in direct burial applications. “PVC Coated Sealing Locknuts” are not to be used in place of a conduit hub.

J. All female threads on fittings or conduit couplings shall be protected by application of a urethane coating.

K. Independent certified test results shall be available to confirm coating adhesion under the following conditions

1. Conduit and condulet exposure to 150°F (65°C) and 95% relative humidity with a minimum mean time to failure of 30 days. (ASTM D1151)
2. The interior coating bond shall be confirmed using the Standard Method of Adhesion by Tape Test (ASTM D3359).
3. No trace of the internal coating shall be visible on a white cloth following six wipes over the coating which has been wetted with acetone (ASTM D1308).
4. The exterior coating bond shall be confirmed using the methods described in Section 3.8, NEMA RN1. After these tests the physical properties of the exterior coating shall exceed the minimum requirements specified in Table 3.1, NEMA RN1.

2.5 INTERIOR RACEWAY – RIGID METAL CONDUIT

A. All Electrical Building interior conduit shall be as described in this section.

B. Galvanized Metal Conduit: ANSI C80.1 and UL 6 approved

C. Rigid steel conduit shall be mild steel, hot-dip galvanized inside and out.

2.6 ELECTRICAL ENCLOSURES

A. Pump control panel and exterior junction boxes.

1. Type: NEMA 4x
2. Material: Stainless Steel Type 304 or 316
3. Stainless steel shall be minimum 14-gauge thickness, with a brushed finish.
4. Doors shall have full length stainless steel piano hinges. Non-hinged boxes are not acceptable.

2.7 WIRES AND CABLES

A. General: All conductors, include grounding conductors, shall be copper. Aluminum conductor wire and cable will not be permitted. Insulation shall bear UL label, the manufacturer's trademark, and identify the type, voltage, and conductor size. All conductors except flexible cords and cables, fixture wires, and conductors that form an integral part of equipment such as motors and controllers shall conform to the requirements of Article 310 of the National Electric Code, latest edition, for current carrying capacity. Flexible cords and cables shall conform to Article 400 and fixture wires shall conform to Article 402. All wiring shall have wire markers at each end.

B. Power and Lighting Wire

1. All wire rated for 600 volts in duct or conduit for all power and lighting circuits shall be

Class B Type XHHW cross-linked polyethylene conforming to UL-44-UL Standard for Safety Rubber Insulated Wires and Cables.

C. Control Wire

1. Control wire in duct or conduit shall be 600 volts in duct or conduit for all power and lighting circuits shall be Class B Type XHHW cross-linked polyethylene conforming to UL-44-UL Standard for Safety Rubber Insulated Wires and Cables.
2. Control wires at panels and cabinets shall be machine tool grade type MTW, UL approved, rated for 90 degrees C at dry locations, and be as manufactured by American, Carol Cable, or equal.

D. Instrumentation Cable

1. Instrumentation cable shall be rated at 600 volts.
2. Individual conductors shall stranded, tinned copper. Insulation shall be color coded polyethylene: black-red for two-conductor cable.
3. Instrumentation cables shall be composed of the individual conductors, an aluminum polyester foil shield, a stranded tinned copper drain wire, and a PVC outer jacket with a thickness of 0.048 inches.
4. Single pair, twisted, shielded cable shall be Belden Part No. 9342, or equal.

2.8 CABLE TERMINATIONS

A. Compression connectors shall be Burndy "Hi Lug", Thomas & Betts "Sta-Kon,", or equal. Threaded connectors shall be split bolt type of high strength copper alloy. Pressure type, twist-on connectors will not be acceptable.

B. Pre-insulated fork tongue lugs shall be Thomas & Betts, Burndy, or equal.

C. General purpose insulating tape shall be Scotch No. 33, Plymouth "Slip-knot", or equal. High temperature tape shall be polyvinyl as manufactured by Plymouth, 3M, or equal.

D. Labels for coding all 600 volt wiring shall be computer printable or pre-printed, self-laminating, self-sticking, as manufactured by W.H. Brady, 3M, or equal.

2.9 MANUAL TRANSFER SWITCH

A. UL listed and Rated for Exterior Location

B. Double Throw Safety Switch type

C. Emergency Generator Receptacles

1. Manufacture: Emerson – Appleton Model ADR1044.
2. Receptacle type: 100 Amp 4 wire/ 4 pole.
3. OWNER will provide plug and cable.

2.10 PANEL BOARDS AND GENERAL PURPOSE DRY-TYPE TRANSFORMERS

A. Panel Boards

1. Panel boards shall be dead front factory assembled. Panel boards shall comply with NEMA PB-1-Panel boards, as well as the provisions of UL 50 - Safety Enclosures for Electrical Equipment and UL 67 - Safety Panel boards. Panel boards used for service equipment shall be UL labeled for such use. Lighting panel boards shall be rated for 120/240-volt, 3-phase operation or 120/240-volt for single phase operation as indicated. Power panel boards shall be rated for 240 volts, 3-phase, 4-wire operation.

2. The manufacturer of the panel board shall be the manufacturer of the major components within the assembly, including circuit breakers.

3. Ratings:

   a. Panel boards rated 240 VAC or less shall have short circuit ratings not less than 10,000 amperes RMS symmetrical or as indicated, whichever is greater.

   b. Panel boards rated 480 VAC shall have short circuit ratings not less than 25,000 amperes RMS symmetrical or as indicated, whichever is greater.

   c. Panel boards shall be labeled with a UL short circuit rating. Series ratings are not acceptable.

4. Construction

   a. All lighting and power distribution panels shall have copper busbars.

   b. Breakers shall be one, two, or three pole as indicated, with ampere trip ratings as required by the equipment. Breakers shall be quick-make and quick-break, inverse time trip characteristics, to trip free on overload or short circuit, and to indicate trip condition by the handle position.

   c. The panels shall have hinged doors with combination catch and latch. The front panels shall be so arranged that when the plates are removed, the gutters, terminals and wiring will be exposed and accessible. The doors shall be inner doors within the plates to have only the breaker operating mechanism exposed when they are opened. Live conductors and terminals shall be concealed behind the plates.

   d. All panel boards shall be rated for the intended voltage.

   e. All circuit breakers shall be interchangeable and capable of being operated in any position as well as being removable from the front of the panel board without disturbing adjacent units. No plug-in circuit breakers will be acceptable.

   f. Lighting and power distribution panels which are not part of a motor control center shall be mounted in painted steel cabinets. Panels shall have the necessary barriers, supports, and liberal wiring gutters. Trim screws shall be stainless steel. All panel board parts of metal other than copper, aluminum, or stainless steel shall be cadmium plated. Panel boards shall be as manufactured by General Electric, Cutler-Hammer,

Square D, or equal.

g. Panel boards shall be UL listed except for special enclosures which are not available with UL listing.

h. Panel boards shall be suitable for use as service entrance as indicated or as otherwise required by the N.E.C.

B. Transformers

1. The transformers shall be dry-type, designed, manufactured, and tested in accordance with the latest applicable standards of ANSI and NEMA.

2. Manufactures:

a. Transformers shall be floor or wall-mounted type by General Electric, Cutler¬-Hammer Square D, or equal.

3. All transformers shall be UL-listed and bear the UL label.

4. Ratings:

a. KVA and voltage ratings shall be as indicated.

b. Transformers shall be designed for continuous operation at rated kVA, for 24 hours a day, 365 days a year operation, with normal life expectancy as defined in ANSI C57.96 - Guide for Loading Dry Type Distribution and Power Transformers.

c. Transformer sound levels shall not exceed the following ANSI and NEMA levels for self-cooled ratings:

(i) Up to 9 kVA; 40 db

(ii) 10 to 50 kVA; 45 db

(iii)51 to 150 kVA; 50 db

5. Construction:

a. Insulation Systems

(i) Transformers shall be insulated as follows:

(1) 2 kVA and below: 150ºC insulation system based upon 80ºC rise.

(2) 3 to 15 kV A: 185ºC insulation system based upon 115ºC rise.

(3) 15 kVA and above: 220ºC insulation system based upon 150ºC rise.

b. Required performance shall be obtained without exceeding the above indicated temperature rise in a 40ºC maximum ambient.

c. All insulation materials shall be flame-retardant and shall not support combustion as defined in ASTM D 635 - Test Method for Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastics in a Horizontal Position.

2.11 PUMP STATION CONTROL PANEL

A. General:

1. The CONTRACTOR shall provide a control panel to satisfy the functional requirements specified in the relevant mechanical equipment, and as detailed in the Control Panel Drawings. Each station shall be fabricated with UL labeled components. Stations not specifically specified as being provided in other Sections of the Specification shall be furnished and installed under this Section.

2. Control panel drawings are located in Appendix A, attached at the end of the Special Provisions.

3. The controls shall be 120 volt maximum. Where the electrical power supply is 240 volt single phase, or 240 volt, 3-phase, as shown on the electrical drawings, the station shall be provided with a fused control power transformer.

4. Each station shall be provided with identified terminal strips for the connection of all external conductors. The CONTRACTOR shall provide sufficient terminal blocks to connect 25 percent additional conductors for future use. Termination points shall be identified in accordance with accepted shop drawings. The stations shall be the source of power for all 120 VAC solenoid valves interconnected with the stations. All equipment associated with the stations shall be ready for service after connection of conductors to equipment, controls, and stations.

5. All internal wiring shall be factory-installed and shall be contained in plastic raceways or troughs having removable covers. Wiring to door-mounted devices shall be extra flexible and anchored to doors using wire anchors cemented in place. Exposed terminals of door-mounted devices shall be guarded to prevent accidental personnel contact with energized terminals.

B. Enclosures:

1. Enclosure as specified in ELECTRICAL ENCLOSURES section.

C. The main feeder disconnect shall have a door-mounted handle unless otherwise specified or shown.

D. Identification of panel-mounted devices, conductors, and electrical components shall meet the requirements specified in ELECTRICAL IDENTIFICATION section.

E. All panel-mounted devices shall be mounted a minimum of 3 feet above finished floor elevation.

F. Control Panel Components

1. Push buttons, selector switches, and pilot lights shall be of the heavy-duty, oil-tight type sized to 30 mm. Miniature style devices are not acceptable. Devices shall be as manufactured by G.E., Cutler-Hammer, or equal.

a. Lens colors shall be green for "run," "open," or "on"; red for "stopped," "closed," or "off;" amber for alarm.
b. Pilot lights shall be full voltage LED cluster style.
c. Provide hazardous location type pilot devices in classified locations.

2. Relays shall be 3 PDT with 10 amp contacts, plug-in type utilizing rectangular blades and provided with sockets for screw-type termination and hold-down clips. Relays shall be as manufactured by Square D, Potter Brumfield, or equal.
3. Elapsed time meters shall be non-resetable type, read to a maximum of 99999.9 hours and shall be as manufactured by G.E., Cutler-Hammer, or equal.
4. Magnetic starters shall meet the following requirements:
   a. NEMA rated: IEC or dual NEMA/IEC rated type are not acceptable.
   b. FVNR type unless specified otherwise.
   c. Combination starters with magnetic only instantaneous trip circuit breakers such a Cutler-Hammer "MCP," G.E., "Mag-Break," or equal.
   d. Control transformers shall be provided, with primary and secondary fuses, 120 VAC maximum control voltage.
5. Terminal strips shall be provided for all panels and shall be of the flanged fork or ring lug type suitable for No. 12 A.W.G. stranded wire minimum. Provide 25 percent spare terminals in each panel.
6. Time delay relays shall be combination on delay and off delay (selectable) with adjustable timing ranges. Time delay relays shall be Square D JCK70. Provide socket with screw terminal connections and retaining strap. Similar shall be by ATC, or equal

2.12 LIGHTING

A. Interior Lighting
   1. Interior LED fixtures without diffusers shall be furnished with end plates. Where diffusers are required, they shall be of high molecular strength acrylic. Minimum thickness of the acrylic shall be 0.125 inches for all diffusers, except that those on 4-foot square fixtures shall be 0.187 inches thick.
   2. LED lamps shall be cool/white unless otherwise indicated.
   3. Operation: 20 amp motion sensor switch with manual override.

B. Exterior Wall Pack
   1. Full Cutoff LED lighting with Acrylic lens.
   2. Operation: Photocell sensor for Dusk to Dawn operation.
   3. Color Temperature: 5000K minimum
   4. Wattage Equivalent: 100 Watt
   5. Lumens: 2800
   6. IP-65 Rated, for Exterior wet locations.

2.13 ELECTRICAL BUILDING UNIT HEATER

A. Manufacture: Qmark
   1. Volts: 240 AC/ 3-Phase
   2. KW: 5.0

3. 10,000 BTU/Hr minimum

2.14 WETWELL LEVEL MEASUREMENT CONTROLLER

A. Manufacture: Siemens

B. Model: HydroRanger 200 HMI

1. Mounting: Wall Standard enclosure
2. Input Voltage: 120 AC
3. Measurement Point: Single Point model, 6 relays
4. Communication: Without module

PART 3 WORKMANSHIP

3.1 GENERAL

A. Incidental: The CONTRACTOR shall provide all materials and incidentals required for a complete and operable system, even if not required explicitly by the Specifications or the Drawings. Typical incidentals are terminal lugs not furnished with vendor supplied equipment, compression connectors for cables, splices, junction and terminal boxes, and control wiring required by vendor furnished equipment to connect with other equipment indicated in the Contract Documents.

B. The Drawings diagrammatically indicate the desired location and arrangement of outlets, conduit runs, equipment, and other items. Exact locations shall be determined by the CONTRACTOR in the field based on the physical size and arrangement of equipment, finished elevations, and other obstructions. Locations shown on the Drawings, however, shall be followed as closely as possible.

1. Where conduit development drawings or "home runs" are shown, the CONTRACTOR shall route the conduits in accordance with the indicated installation requirements. Routings shall be exposed or encased as indicated. Conduits encased in a slab shall be sized for conduit OD to not exceed one-third of the slab thickness and be laid out and spaced to not impede concrete flow.

2. All conduit and equipment shall be installed in such a manner as to avoid all obstructions and to preserve head room and keep openings and passageways clear. Lighting fixtures, switches, convenience outlets, and similar items shall be located within finished rooms as indicated. Where the Drawings do not indicate exact locations, such locations shall be determined by the ENGINEER. If equipment is installed without instruction and must be moved, it shall be moved without additional cost to the OWNER. Lighting fixture locations shall be adjusted slightly to avoid obstructions and to minimize shadows.

C. All materials and equipment shall be installed in strict accordance with printed recommendations of the manufacturer. Installation shall be accomplished by workers skilled in the work. Installation shall be coordinated in the field with other trades to avoid interferences.

D. EQUIPMENT IDENTIFICATION

1. A. General: Equipment and devices shall be identified as follows:

a. Nameplates shall be provided for all panel boards, control and instrumentation panels, starters, switches, and pushbutton stations. In addition to name plates, control devices shall be equipped with standard collar-type legend plates.

b. Control devices within enclosures shall be identified as indicated. Identification shall be similar to the subparagraph above.

c. Toggle switches which control loads out of sight of switch and all multi-switch locations of more than 2 switches shall have suitable inscribed finish plates.

d. Empty conduits shall 'be tagged at both ends to indicate the destination at the far end. Where it is not possible to tag the conduit, destination shall be identified by marking an adjacent surface.

e. Equipment names and tag numbers, where indicated on the Drawings, shall be utilized on all nameplates.

f. The CONTRACTOR shall furnish typewritten circuit directories for panel boards; circuit directory shall accurately reflect the outlets connected to each circuit.

3.2 RACEWAY INSTALLATION

A. Raceways shall be installed between equipment as indicated. Raceway systems shall be electrically and mechanically complete before conductors are installed. Bends and offsets shall be smooth and symmetrical, and shall be accomplished with tools designed for this purpose. Factory elbows shall be utilized wherever possible.

B. Where raceways are indicated but routing is not shown, such as home runs or on conduit developments and schedules, raceway routings shall be the CONTRACTOR'S choice and in strict accordance with the NEC, customary installation practice. Raceway shall be encased, exposed, concealed, or under floor as indicated.

C. Routings shall be adjusted to avoid obstructions. Coordinate with all other trades prior to installation of raceways. Lack of such coordination shall not be justification for extra compensation, and removal and re-installation to resolve conflicts shall be at no extra cost to the OWNER.

D. Install expansion fittings with bonding jumpers wherever raceways cross building expansion joints.

E. All exposed raceways shall be installed at least 1/2-inch from walls or ceilings except that at locations above finished grade where damp conditions do not prevail, exposed raceways shall be installed 1/4-inch minimum from the face of walls or ceilings by the use of clamp backs or struts.

F. Wherever contact with concrete or dissimilar metals can produce galvanic corrosion of equipment, suitable insulating means shall be provided to prevent such corrosion.

G. Exposed conduit shall be 3/4-inch minimum trade size. Encased conduit shall one-inch minimum trade size. Supports shall be installed at distances required by the NEC.

H. All threads shall be coated with a conductive lubricant before assembly.

I. Joints shall be tight, thoroughly grounded, secure, and free of obstructions in the pipe. All

conduit shall be adequately reamed to prevent damage to the wires and cables inside. Strap wrenches and vises shall be used to install conduit to prevent wrench marks on conduit. Conduit with wrench marks shall be replaced at no additional cost to the OWNER.

J. Conduit passing through walls or floors shall have plastic sleeves.

K. Provide conduit seal fittings at the following locations:

1. In hazardous classified locations, in strict accordance with the NEC.

a. Junction box at Electrical Building.

3.3 WIRES AND CABLES

A. General: The CONTRACTOR shall provide and terminate all power, control, and instrumentation conductors except where indicated.

B. Installation:

1. Instrumentation wire shall not be run in the same raceway with power and control wiring except where specifically indicated.

2. Wire in panels, cabinets, and wire ways shall be neatly grouped using nylon tie straps, and shall be fanned out to terminals.

C. Splices and Termination:

1. General

a. there shall be no cable splices in underground manholes or pull-boxes. If splices are necessary, the cables shall be brought aboveground and terminated in a NEMA 4X, stainless steel terminal or splice cabinet on a concrete pad. Splices in underground manholes and pull-boxes may be made only with the approval of the ENGINEER.

b. Stranded conductors shall be terminated directly on equipment box lugs making sure that all conductor strands are confined within lug. Use forked-tongue lugs where equipment box lugs have not been provided.

c. Excess control and instrumentation wire shall be properly taped and terminated as spares.

2. Power Wire and Cable

a. All 120/240-volt, and 480/277 -volt branch circuit conductors may be spliced in suitable fittings at locations determined by the CONTRACTOR.

b. Pump Motor cable shall be one continuous conductor from pump to control panel, no splices allowed.

3. Instrumentation Wire and Cable

a. Shielded instrumentation cables shall be grounded at one end only, preferably the receiving end on a 4-20 mA system.

b. Two-conductor shielded cables installed in conduit runs which exceed available standard cable lengths may be spliced in pull boxes. Such cable runs shall have only

one splice per conductor.

4. Control Wire and Cable

   a. Control conductors shall be spliced or terminated only at the locations indicated and only on terminal strips or terminal lugs of vendor furnished equipment.

   b. In junction boxes, motor control centers, and control panels, all control wire and spare wire shall be terminated to terminal strips.

D. Cable Identification

1. Identification Numbers: The CONTRACTOR shall assign to each control and instrumentation wire and cable a unique identification number. Numbers shall be assigned to all conductors having common terminals and shall be shown on all "as built" drawings. Identification numbers shall appear within 3 inches of conductor terminals. "Control" shall be defined as any conductor used for alarm, annunciator, or signal purposes.

2. Multiconductor cable shall be assigned a number which shall be attached to the cable at intermediate pull boxes and at stub-up locations beneath free-standing equipment. It is expected that the cable number shall form a part of the individual wire number. All individual control conductors and instrumentation cable shall be identified at pull points as described above. The instrumentation cable numbers shall incorporate the loop numbers assigned in the Contract Documents.

3. The 120/240-volt system conductors shall be color coded as follows: Line 1-Black, Line 2-Red, and Neutral-White. The 240-volt 3 phase system conductors shall be color coded as follows: Phase A-Brown, Phase B-Orange, Phase C-Yellow, and Neutral ¬Gray. Color coding tape shall be used where colored insulation is not available. Branch circuit switch shall be yellow. Insulated ground wire shall be green, and neutral shall be gray. Color coding and phasing shall be consistent throughout the Site, but bars at panel boards, switchboards, and motor control centers shall be connected Phase A-B-C, top to bottom, or left to right, facing connecting lugs.

4. General purpose AC control cables shall be red. General purpose DC control cables shall be blue.

5. All spare cable shall be terminated on terminal screws and shall be identified with a unique number as well as with destination.

6. Terminal strips shall be identified by computer printable, cloth, self-sticking marker strips attached under the terminal strip.

3.4 MANUAL TRANSFER SWITCH

A. Installed according to NEC Article 702, Optional Standby Systems.

PART 4 MEASUREMENT AND PAYMENT

4.1 Use the following bid item as designated in the Bid Schedule. Includes all labor, material, and equipment required to perform the work described in the construction documents.

A. Electrical Equipment, Wiring, and Conduit for each lift station. Includes full compensation for all materials, labor, and equipment necessary for completing the work and all appurtenances not itemized on the bid schedule. Including raceways, raceway accessories, wiring, wiring accessories, pump control panel, water level controller, heater, breaker panels, breakers and junction boxes.

1. Bid Schedule Payment References: SP-4.
2. Bid Schedule Description: Electrical Equipment, Wiring, And Conduit …Each (EA).

SP-5 DEMOLITION & ABANDONING OF EXISTING STRUCTURES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Abandoning in place existing sanitary sewers, manholes, and force mains.

1.2 RELATED DIVISIONS AND SECTIONS

Sections from ISPWC 2020 Edition

A. Section 201– Clearing and Grubbing and Removal of Obstructions

B. Section 202– Excavation and Embankment

C. Section 306– Trench Back Fill

D. Section 801 – Uncrushed Aggregate

1.3 SUBMITTALS

A. Samples: Submit one sample of each specified backfill material to testing laboratory.

B. Flowable Fill Mix Design Report:

1. Flowable fill type and production method.
2. Aggregate gradation of fill. The aggregate gradation of the mix shall be used as a pilot curve for quality control during production.
3. Fill mix constituents and proportions including materials by weight and volume, and air content but excluding ballast. Give types and amounts of admixtures including air entrainment or air generating compounds.
4. Fill densities and viscosities, including wet density at the point of placement.
5. Initial time of set.
6. Bleeding and shrinkage.
7. Compressive strength.

C. Technical information for equipment and operational procedures including projected slurry injection rate, grout pressure, method of controlling grout pressure, bulkhead and vent design, and number of stages of grout application.

D. Experience record for the proposed crew, showing a minimum of 5 similar projects using the proposed or similar equipment and methods.

E. At least 7 days prior to commencing any abandonment activities, submit a plan for abandonment, describing the proposed grouting sequence, bypass pumping requirements and plugging, if any, and other information pertinent to completion of the work.

PART 2 MATERIALS

2.1 PLUGS

A. Grout Plugs: Cement-based dry-pack grout conforming to ASTM C1107, Grade B or C.

B. Manufactured Plug: Commercially available plug or cap specifically designed and manufactured to be used with the pipe being abandoned.

2.2 FLOWABLE FILL FOR ABANDONING UTILITIES.

A. Unconfined compressive strength: minimum 75 psi and maximum 150 psi at 56 days as determined based on an average of three tests for the same placement. Present at least three acceptable strength tests for the proposed mix design in the mix design report.

B. Placement characteristics: self-leveling.

C. Shrinkage characteristics: non-shrink.

D. Water bleeding for fill to be placed by grouting method in sewers: not to exceed 2 percent according to ASTM C940.

E. Minimum wet density: 90 pounds per cubic foot.

2.3 STRUCTURAL FILL

A. As described in Section 801 – Uncrushed Aggregates

1. Nominal Max Size 3 inches.

PART 3 WORKMANSHIP

3.1 EQUIPMENT

A. Mix flowable fill in an automated batch plant and deliver it to the site in ready-mix trucks. Performance additives may be added at the placement site if required by mix design.

B. Use concrete or grout pumps capable of continuous delivery at the planned placement rate.

3.2 DEMOLITION OF SEWER MANHOLES, PIPELINE STRUCTURES, AND FORCE MAINS PRIOR TO ABANDONMENT.

A. Demolish and remove precast concrete adjustment rings and corbel section, or brick and mortar corbel and chimney, or other pipeline structures, to minimum depth of 4 feet below

finished grade. Structure may be removed to greater depth, but not deeper than 18 inches above crown of abandoned sewer.

B. Drain manholes and poke holes in manhole floors and walls prior to filling.

C. When adjacent sewer lines are not to be filled, place temporary plugs in each line connecting to manhole, in preparation for filling manhole.

D. Excavate overburden from force mains to be abandoned at locations indicated on Drawings, conforming to the specification section for Excavation and Backfill for Utilities. Cut existing force main, when necessary, to provide an end surface perpendicular to axis of pipe and suitable for plug to be installed. Remove force main piping material remaining outside of segment to be abandoned.

3.3 DRY-WELL EQUIPMENT

A. Remove all mechanical equipment from the existing dry well. Coordinate with Owner on storage location of equipment.

3.4 CUTTING AND CAPPING OF MAINS

A. Do not begin cut, plug, and abandonment operations until replacement sewer or force main, has been constructed and tested, all service connections have been installed, and main has been approved for use.

B. Main to be abandoned shall not be valved off and shall not be cut or plugged other than as shown on Drawings.

3.5 FLOWABLE FILL INSTALLATION

A. Abandon sewer lines by completely filling the sewer line with flowable fill. Abandon manholes and other structures by filling with flowable fill, or structural back fill as applicable, within the depth of structures left in place.

B. Place flowable fill to fill the volume between the manholes as completely as practicable. Continuously place flowable fill from manhole to manhole with no intermediate pour points, but not exceeding 500 feet in length.

C. Have the filling operation performed by experienced crews with equipment to monitor density of the flowable fill and to control pressure.

D. Temporarily plug sewer lines which are to remain in operation during pouring/pumping to keep the lines free of flowable fill.

E. Pump flowable fill through bulkheads constructed for placement of two 2-inch PVC pipes or use other suitable construction methods to contain the flowable fill in the lines to be abandoned. These pipes will act as injection points or vents for placement of flowable fill.

F. Place flowable fill under pressure flow conditions into a properly vented open system until flowable fill emerges from the vent pipes. Pump flowable fill with sufficient pressure to overcome friction and to fill the sewer from the downstream end, to discharge at the upstream end.

G. Remediate placement of flowable fill which does not fill voids in a sewer, in manhole or other structures, or where voids develop due to excessive shrinkage or bleeding of the fill by using pressure grouting either from inside the sewer or from the surface.

H. Plug each end of force mains being abandoned.

I. Force main abandonment

1. Clean the inside surface of force mains at least 12 inches from the ends, as necessary, to achieve a firm bond and seal the grout plug or manufactured plug to the pipe surface. Similarly, clean and prepare the exterior pipe surface if a manufactured cap is to be used.

2. When using a grout plug, place a temporary plug or bulkhead approximately 12 inches inside the pipe. Fill the pipe end completely with dry-pack grout mixture.

3. When using a manufactured plug or cap, install the fitting, as recommended by the manufacturer's instructions, to form a watertight seal.

J. Backfill to the surface, above the pipe or structures left in place, with flowable fill in restricted areas, compacted bank run sand in unrestricted areas to be paved or select fill in unrestricted areas outside of pavement. Place and compact backfill, other than flowable fill, in compliance with these specifications.

K. Collect and dispose of excess flowable fill material and other debris in accordance with all sections of these specifications.

3.6 FIELD QUALITY CONTROL

A. Provide batch plant tickets for each truck delivery of flowable fill. Note on the tickets addition of admixtures at the site.

B. Check flow characteristics and workability of the fill as the placement proceeds.

C. Record the volume of ballast together with the flowable fill placement for the same space to demonstrate that voids have been filled.

PART 4 MEASUREMENT AND PAYMENT

4.1 Use the following bid item as designated in the Bid Schedule. Includes all labor, material, and equipment required to perform the work.

A. Demolition & Abandoning of Existing Structures: By lump sum. Includes full compensation for all material, labor, removing debris, and equipment necessary for completing the work described in the bid documents and all appurtenances not itemized on the Bid Schedule.

1. Bid Schedule Payment References: SP-5.

2. Bid Schedule Description: Demolition & Abandoning of Existing Structures …lump sum (LS).

SP-6 ENGINEERED SHORING SYSTEM

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Design and Installation of engineered shoring system for required excavations in compliance with OSHA and this specification.

1.2 RELATED DIVISIONS AND SECTIONS

Sections from ISPWC 2020 Edition

A. Section 202– Excavation and Embankment

B. Section 306– Trench Back Fill

1.3 SUBMITTALS

A. CONTRACTOR to provide the design documents of an engineered shoring system completed and stamped by a State of Idaho Licensed Engineer.

1.4 DOCUMENTS

A. OWNER shall provide a Geotechnical Investigation conducted at the project location, attached to contract documents.

PART 2 WORKMANSHIP

2.1 REQUIREMENTS

A. Verify that trench conditions and shoring, sheeting, and bracing protect workers and meet the requirement of OSHA and other State and Federal Requirements.

B. Design of shoring system should limit the size of the excavation to protect adjacent utilities and structures. CONTRACTOR is responsible to coordinate with utility owners to protect or support exposed utilities.

PART 3 MEASUREMENT AND PAYMENT

3.1 Use the following bid item as designated in the Bid Schedule. Includes all labor, material, equipment, and professional services required to perform the work.

A. Engineered Shoring System: By lump sum. Includes full compensation for all material, labor, professional services, and equipment necessary for completing the work described in the bid documents and all appurtenances not itemized on the Bid Schedule.

1. Bid Schedule Payment References: SP-6.

2. Bid Schedule Description: Engineered Shoring System…lump sum (LS).

SP-7 CONCRETE SCUPPER

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This work shall consist of installing a Concrete Scupper as detailed in drawing PSD-626 in the City of Pocatello Public Works Design Principles and Standards.

1.2 RELATED DIVISIONS AND SECTIONS

Sections from ISPWC 2020 Edition

A. Section 701– Concrete Formwork

B. Section 702– Concrete Reinforcement

C. Section 703 – Cast-in-Place Concrete

D. Section 706 – Other Concrete Construction

City of Pocatello Public Works Design Principles and Standards

A. Drawing PSD-626 – Concrete Scupper

PART 2 MATERIALS

2.1 CONCRETE FORMS

A. As described in Section 701 – Concrete Formwork

2.2 CONCRETE REINFORCEMENT

A. As described in Section 702 – Concrete Reinforcement

2.3 CAST-IN-PLACE CONCRETE

A. As described in Section 703 – Cast-in-place Concrete

PART 3 WORKMANSHIP

3.1 EXECUTION

A. Review detail PSD-626 in the City of Pocatello Public Works Design Principles and Standards.

B. CONTRACTOR to verify any design changes required by site conditions, with ENGINEER before installation.

C. CONCRETE FORMS

1. As described in Section 701 – Concrete Formwork

D. CONCRETE REINFORCEMENT

1. As described in Section 702 – Concrete Reinforcement

E. CAST-IN-PLACE CONCRETE

1. As described in Section 703 – Cast-in-place Concrete

3.2 MODIFICATIONS

A. Slopes may need to be adjusted due to site conditions, verify with ENGINEER.

PART 4 MEASUREMENT AND PAYMENT

4.1 Use the following bid item as designated in the Bid Schedule. Includes all labor, material, equipment required to perform the work.

A. Concrete Scupper: By each. Includes full compensation for all material, labor, and equipment necessary for completing the work described in the bid documents and all appurtenances not itemized on the Bid Schedule.

1. Bid Schedule Payment References: SP-7.

2. Bid Schedule Description: A. Concrete Scupper …each (EA).

SP-8 PRECAST ELECTRICAL BUILDING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This work shall consist of installing a precast concrete building for the electrical equipment. The work shall also include grading; installation and compaction of base aggregate; concrete slab, construction and placement of precast concrete equipment shed complete and in place with doors and sleeved or core drilled openings; and other associated work as shown on the plans and included in this section. This section does not include lighting, conduits mounted to the shed walls, or other electrical equipment.

1.2 RELATED DIVISIONS AND SECTIONS

Sections from ISPWC 2020 Edition

A. Section 701– Concrete Formwork

B. Section 702– Concrete Reinforcement

C. Section 703 – Cast-in-Place Concrete

D. Section 704 – Precast Concrete

E. Section 706 – Other Concrete Construction

F. Section 802 – Crushed Aggregates

1.3 SUBMITTALS

A. Engineering calculations that are designed and sealed by a professional engineer, licensed to practice in the state where the project is located, shall be submitted for approval.

B. Manufacture drawings and installation instructions.

PART 2 MATERIALS

2.3 MANUFACTURE

A. EASI-SET Buildings or approved equal.

2.1 CONCRETE

A. Steel-reinforced, 5000 PSI minimum 28-day compressive strength, air-entrained (ASTM C260).

B. Finish:

1. Interior: Smooth form finish on all interior panel surfaces.

2. Exterior: Washed brown riverstone applied-aggregate finish on all exterior wall surfaces. Aggregate must be seeded into top of panel while in form, chemically retarded, and high-pressure washed to expose the aggregate to a depth of 1/8".

2.2 CONCRETE REINFORCEMENT

A. As described in Section 702 – Concrete Reinforcement

B. Reinforcing Steel: ASTM A615, grade 60 unless otherwise specified.

C. Welded Wire Fabric: ASTM 185, Grade 65

2.3 CAST-IN-PLACE CONCRETE

A. As described in Section 703 – Cast-in-place Concrete

2.4 BUILDING ACCESSORIES

A. Layout: As detailed in the construction drawings.

B. Ventilation: Exhaust Fan with Thermostat

PART 3 WORKMANSHIP

3.1 EXECUTION

A. Prepare site foundation and install building according to manufactures recommendations.

B. CONTRACTOR shall import and compact soil as required to raise the finished floor elevation of the equipment shed above that of the existing surrounding grade. Base aggregate shall be compacted to 95% compaction per Standard Proctor density test ASTM D-698.

C. CONTRACTOR shall core drill or block out holes in equipment shed for conduits as needed. All openings shall be waterproofed to prevent moisture from entering into the equipment shed. CONTRACTOR shall seal off interior of all conduits between equipment shed and wet well or vault.

PART 4 MEASUREMENT AND PAYMENT

4.1 Use the following bid item as designated in the Bid Schedule. Includes all labor, material, equipment required to perform the work.

A. Precast Electrical Building: By each. Includes full compensation for all material, labor, professional services, and equipment necessary for completing the work described in the bid documents and all appurtenances not itemized on the Bid Schedule.

1. Bid Schedule Payment References: SP-8.

2. Bid Schedule Description: A. Precast Electrical Building …EACH (EA).

SP-9 MANHOLE AND WETWELL BASE MODIFICATIONS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This work shall consist of modifying manhole and wetwell bases as described in the specifications and construction drawings.

1.2 RELATED DIVISIONS AND SECTIONS

Sections from ISPWC 2020 Edition

A. Section 501 – Gravity Sewers

B. Section 502 – Manholes

C. Section 703 – Cast-in-Place Concrete

D. Section 706 – Other Concrete Construction

1.3 SUBMITTALS

A. Concrete Mix: Class 3000, as described in Section 703 – Cast-in-Place Concrete

B. Flowable fill: As described in Section 703 – Cast-in-Place Concrete.

PART 2 MATERIALS

2.1 CAST-IN-PLACE CONCRETE

A. As described in Section 703 – Cast-in-place Concrete

2.2 JOINT SEAL

A. Sika Swell Stop or approved equal.

PART 3 WORKMANSHIP

3.1 EXECUTION

A. Modify Manhole bases as detailed in the construction drawings.

B. Raising manhole invert shall have new cast in place bases with a minimum thickness of 9”inches below the pipe invert, unless modified in the construction drawings.

PART 4 MEASUREMENT AND PAYMENT

4.1 Use the following bid item as designated in the Bid Schedule. Includes all labor, material, equipment required to perform the work.

A. Manhole and Wetwell Base Modifications: By each. Includes full compensation for all material, labor, and equipment necessary for completing the work described in the bid documents and all appurtenances not itemized on the Bid Schedule.

1. Bid Schedule Payment References: SP-9.

2. Bid Schedule Description: Manhole and Wetwell Base Modifications …Each (EA).

SP-10 NEW POWER SERVICE

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This work shall consist of installing a new power service, including new utility pole for the Hayes lift station, meter base with lugs, conduit, support bracket and weather head, point of attachment, conductors from meter base to drip loop, grounding electrodes, ground conductor and connections.

1.2 RELATED DIVISIONS AND SECTIONS

A. Idaho Power: Customer Requirements for Electric Service Document.

PART 2 MATERIALS

2.1 SERVICE ACCESSORIES

A. Other materials required for a complete a new power service include: meter base with lugs, conduit, support bracket and weather head, point of attachment, conductors from meter base to drip loop, grounding electrodes, ground conductor and connections shall be in accordance with Idaho Power Standards.

2.2 UTILITY POLE

A. Type: Class 6 round wood

B. Length: 35-ft

PART 3 WORKMANSHIP

3.1 EXECUTION

A. Utility pole and associated equipment installed according to Idaho Power Standards, see Idaho Power: Customer Requirements for Electric Service Document for details.

PART 4 MEASUREMENT AND PAYMENT

4.1 Use the following bid item as designated in the Bid Schedule. Includes all labor, material, equipment required to perform the work.

A. New Power Service: By lump sum. Includes full compensation for all material, labor, and equipment necessary for completing the work described in the bid documents and all appurtenances not itemized on the Bid Schedule.

1. Bid Schedule Payment References: SP-10.

2. Bid Schedule Description: New Power Service …lump sum (LS).

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Contract Administrative Forms

- ISPWC 00625 - Certificate of Substantial Completion
- ISPWC 00626 - Notice of Acceptability of Work
- ISPWC 00940 - Work Change Directive
- ISPWC 00941 - Change Order
- ISPWC 00942 - Field Order

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CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner:	City Of Pocatello	Owner's Project No.:	EGC-130
Engineer:	Engineering Department	Engineer's Project No.:	EGC-130
Contractor:		Contractor's Project No.:	
Project:	Whitman and Hayes Lift Stations Project, City of Pocatel**lo**		
Contract Name:			

This ☐ Preliminary ☐ Final Certificate of Substantial Completion applies to:

☐ All Work ☐ The following specified portions of the Work:

[Describe the portion of the work for which Certificate of Substantial Completion is issued]

Date of Substantial Completion: **[Enter date, as determined by Engineer]**

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work must be as provided in the Contract, except as amended as follows:

Amendments to Owner's Responsibilities: ☐ None ☐ As follows:

[List amendments to Owner's Responsibilities]

Amendments to Contractor's Responsibilities: ☐ None ☐ As follows:

[List amendments to Contractor's Responsibilities]

The following documents are attached to and made a part of this Certificate:

[List attachments such as punch list; other documents]

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

Engineer

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

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NOTICE OF ACCEPTABILITY OF WORK

Owner:	City of Pocatello	Owner's Project No.:	EGC-130
Engineer:	Engineering Department	Engineer's Project No.:	EGC-130
Contractor:		Contractor's Project No.:	
Project:	Whitman and Hayes Lift Stations Project, City of Pocatello		
Contract Name:			
Notice Date:		Effective Date of the Construction Contract:	

The Engineer hereby gives notice to the Owner and Contractor that Engineer recommends final payment to Contractor, and that the Work furnished and performed by Contractor under the Construction Contract is acceptable, expressly subject to the provisions of the Construction Contract's Contract Documents ("Contract Documents") and of the Agreement between Owner and Engineer for Professional Services dated **[date of professional services agreement]** ("Owner-Engineer Agreement"). This Notice of Acceptability of Work (Notice) is made expressly subject to the following terms and conditions to which all who receive and rely on said Notice agree:

1. This Notice has been prepared with the skill and care ordinarily used by members of the engineering profession practicing under similar conditions at the same time and in the same locality.
2. This Notice reflects and is an expression of the Engineer's professional opinion.
3. This Notice has been prepared to the best of Engineer's knowledge, information, and belief as of the Notice Date.
4. This Notice is based entirely on and expressly limited by the scope of services Engineer has been employed by Owner to perform or furnish during construction of the Project (including observation of the Contractor's Work) under the Owner-Engineer Agreement, and applies only to facts that are within Engineer's knowledge or could reasonably have been ascertained by Engineer as a result of carrying out the responsibilities specifically assigned to Engineer under such Owner-Engineer Agreement.
5. This Notice is not a guarantee or warranty of Contractor's performance under the Construction Contract, an acceptance of Work that is not in accordance with the Contract Documents, including but not limited to defective Work discovered after final inspection, nor an assumption of responsibility for any failure of Contractor to furnish and perform the Work thereunder in accordance with the Contract Documents, or to otherwise comply with the Contract Documents or the terms of any special guarantees specified therein.
6. This Notice does not relieve Contractor of any surviving obligations under the Construction Contract, and is subject to Owner's reservations of rights with respect to completion and final payment.

Engineer

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

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WORK CHANGE DIRECTIVE NO.: [Number of Work Change Directive]

Owner:	Owner's Project No.:
Engineer:	Engineer's Project No.:
Contractor:	Contractor's Project No.:
Project:	
Contract Name:	
Date Issued:	Effective Date of Work Change Directive:

Contractor is directed to proceed promptly with the following change(s):

Description:

[Description of the change to the Work]

Attachments:

[List documents related to the change to the Work]

Purpose for the Work Change Directive:

[Describe the purpose for the change to the Work]

Directive to proceed promptly with the Work described herein, prior to agreeing to change in Contract Price and Contract Time, is issued due to:

Notes to User—Check one or both of the following

☐ Non-agreement on pricing of proposed change. ☐ Necessity to proceed for schedule or other reasons.

Estimated Change in Contract Price and Contract Times (non-binding, preliminary):

Contract Price: $ _____ **[increase] [decrease] [not yet estimated]**.

Contract Time: _____ days **[increase] [decrease] [not yet estimated]**.

Basis of estimated change in Contract Price:

☐ Lump Sum ☐ Unit Price ☐ Cost of the Work ☐ Other

	Recommended by Engineer	Authorized by Owner
By:		
Title:		
Date:		

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CHANGE ORDER NO.: [Number of Change Order]

Owner: Owner's Project No.:
Engineer: Engineer's Project No.:
Contractor: Contractor's Project No.:
Project:
Contract Name:
Date Issued: Effective Date of Change Order:

The Contract is modified as follows upon execution of this Change Order:

Description:

[Description of the change]

Attachments:

[List documents related to the change]

Change in Contract Price	**Change in Contract Times [State Contract Times as either a specific date or a number of days]**
Original Contract Price: $ _____	Original Contract Times: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] from previously approved Change Orders No. 1 to No. **[Number of previous Change Order]**: $ _____	**[Increase] [Decrease]** from previously approved Change Orders No.1 to No. **[Number of previous Change Order]**: Substantial Completion: _____ Ready for final payment: _____
Contract Price prior to this Change Order: $ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] this Change Order: $ _____	**[Increase] [Decrease]** this Change Order: Substantial Completion: _____ Ready for final payment: _____
Contract Price incorporating this Change Order: $ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for final payment: _____

	Recommended by Engineer (if required)	Authorized by Owner
By:	_____	_____
Title:	_____	_____
Date:	_____	_____
	Authorized by Owner	Approved by Funding Agency (if applicable)
By:	_____	_____
Title:	_____	_____
Date:	_____	_____

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FIELD ORDER NO.: [Number of Field Order]

Owner:	Owner's Project No.:
Engineer:	Engineer's Project No.:
Contractor:	Contractor's Project No.:
Project:	
Contract Name:	
Date Issued:	Effective Date of Field Order:

Contractor is hereby directed to promptly perform the Work described in this Field Order, issued in accordance with Paragraph 11.04 of the General Conditions, for minor changes in the Work without changes in Contract Price or Contract Times. If Contractor considers that a change in Contract Price or Contract Times is required, submit a Change Proposal before proceeding with this Work.

Reference:

Specification Section(s):

Drawing(s) / Details (s):

Description:

[Description of the change to the Work]

Attachments:

[List documents supporting change]

Issued by Engineer

By: _____

Title: _____

Date: _____

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2020 ISPWC

Project Manual Guide

Technical Specifications

- Section 02000 – Supplementary Technical Specifications

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SUPPLEMENTARY TECHNICAL SPECIFICATIONS

These provisions shall supplement the Technical Specifications:

- Section 512 – Sewage Bypass Systems

Add paragraph 512.3.2.A.1 to Section 512 – Sewage Bypass Systems following 512.3.2.A:

1. Bypass pumping flow shall meet the following requirements:
    i. Whitman Lift Station design flow 443 gpm at 27.23 ft of TDH, using designed discharge piping.
    ii. Hayes Lift Station design flow 225 gpm at 24.75 ft of TDH, using designed discharge piping.
2. Since the majority of the project site is located in residential areas and noise is a factor, temporary generator(s) and pump(s) shall operate at noise levels less than 75 dB(A) at 25 ft.

- Section 704 – Precast Concrete

Add paragraph 704.2.8 and 704.2.9 to Section 704 – Precast Concrete following 704.2.7:

2.8 Access Hatches:

A. Manufacture: Bilco or approved equal.

B. Size: Replacement of existing lids, size as indicated in the construction drawings.

C. Cover Design: Door shall be single leaf ¼" aluminum with diamond pattern tread plate rated for AASHTO H-20 wheel loading.
    a. Manufacturer to provide structural calculations stamped by a registered professional engineer upon request.
    b. Shall provide integrated fall protection grating.
    c. Cover shall be equipped with a hold open arm that automatically locks the cover in the open position.

D. Frame Design: shall have integral drainage channel with 1-1/2" drain coupling,
    a. Valve vault drain shall be located over the new sump basin.

E. Lifting mechanism: Compression spring operators enclosed in telescopic tubes to provide controlled cover operation when opening and closing.

F. Hardware: Heavy forged Type 316 stainless steel hinges.
    a. All other hardware shall be Type 316 stainless steel
    b. Latch: shall be Type 316 stainless steel slam lock with removable exterior turn and lift handle.

G. Finish: Mill Finish aluminum with a bituminous coating applied to the exterior of the frame.

END OF SUPPLEMENTARY TECHNICAL SPECIFICATIONS

2020 ISPWC

Project Manual Guide

Plans and Attachments

- Construction Plans
- Geotechnical Baseline Report
- Attachment A: Motor Control Panel Detail

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POCATELLO WPC

3 & 5 HP DUPLEX PUMP LIFT STATIONS

JULY 2021

REV.	ISSUE DATE	DESCRIPTION

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DRAWN BY AUTOMATION WERX
CHECKED BY
JOB#
SCALE
DESIGN DATE 07-2021
PLOT DATE 08-31-2021

AUTOMATION WERX, LLC
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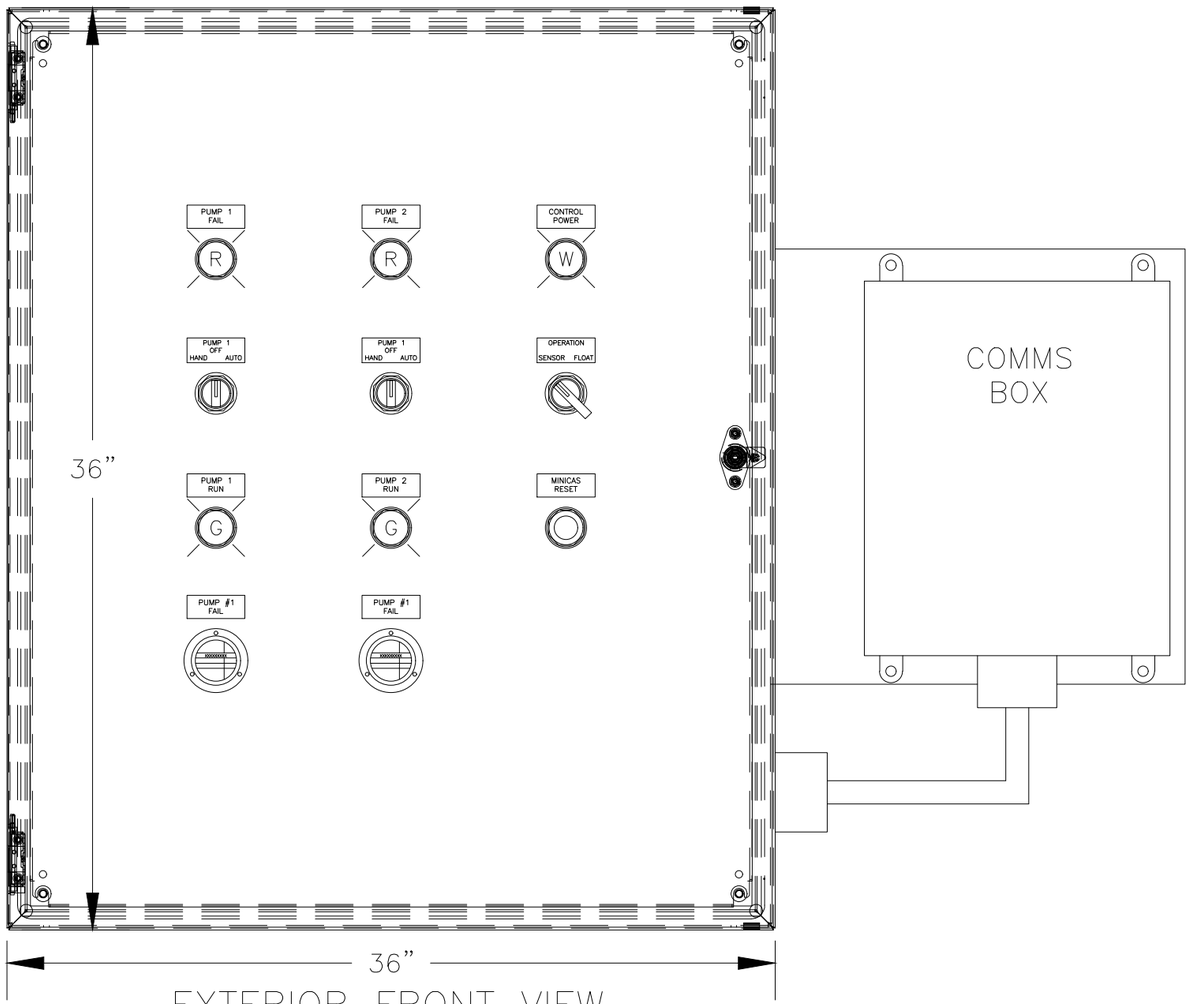
POCATELLO WPC

3 & 5 HP DUPLEX PUMP

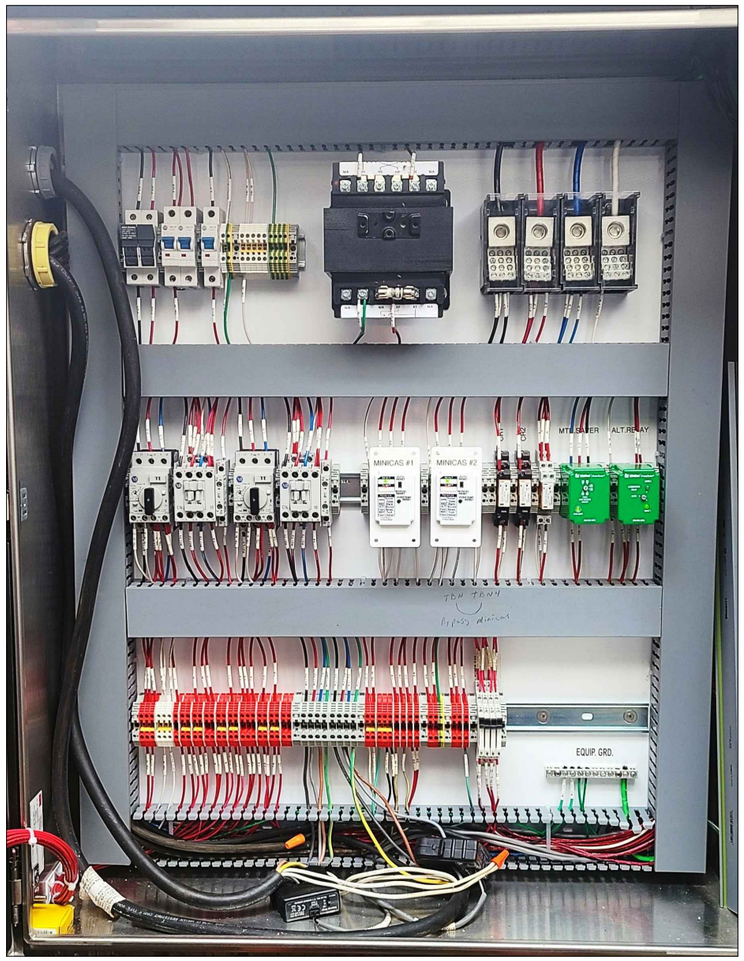
COVER SHEET

DRAWING NO.
E-1.0

SHEET NO.
1 OF 8



EXTERIOR FRONT VIEW



INTERIOR EXAMPLE IMAGE

REV.	ISSUE DATE	DESCRIPTION

DESIGNED BY
DRAWN BY AUTOMATION WERX
CHECKED BY
JOB#
SCALE
DESIGN DATE 07-2021
PLOT DATE 08-31-2021

AUTOMATION WERX, LLC
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WWW.AUTOMATIONWERX.COM

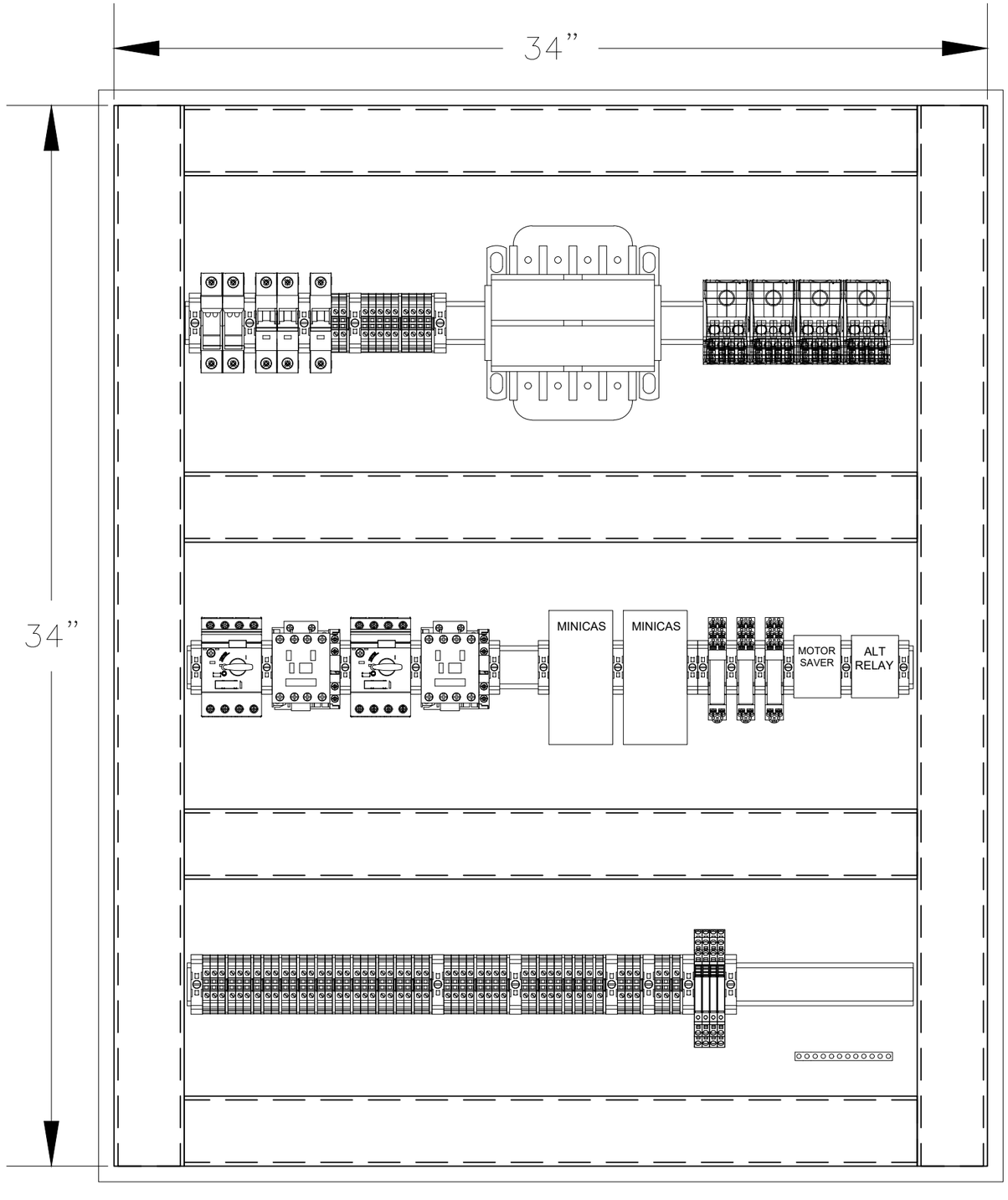
POCATELLO WPC

3 & 5 HP DUPLEX PUMP

PANEL LAYOUT

DRAWING NO.
E-1.1

SHEET NO.
2 OF 8



Item	Qty	Product	Description
1	1	CSD363010SS	Hoffman Wall Mount Enclosures, , x x , Enclosure
2	1	CP3630	34.2 x 28.2, CONCEPT Enclosure Panel
3	1	CMFKSS	Stainless Steel Mounting Bracket Kits
4	1	ECGB10	Siemens Grnd Bar Kit
5	4	AMP1H12	NSI 310A Pwr Distr Block
6	4	CM	NSI Medium Conn-Block Cover
7	1	FA500JK	Federal Pacific 500VA Transformer
8	1	1492-FB2C30-L	1492-FB Fuse Holder with 2 poles, Class CC Type Fuses, 30A and LED Blown Fuse Indicator, Pkg. Qty. 6
9	2	LP-CC-5	Low-Peak time-delay, rejection-type fuses; 12 seconds minimum operating time at 200% of 5 Amps
10	1	LP-CC-6	Low-Peak time-delay, rejection-type fuses; 12 seconds minimum operating time at 200% of 6 Amps
11	1	ALT115-X-SW	Littlefuse DPDT Relay
12	1	201A	Littlefuse Phase Monitoring Relay
13	2	700-HN125	700-H General Purpose Accessories, 8-Pin Tube Base Socket, Screw Terminals, Open Terminal Construction (Pkg. Qty. 10) , 700-HN125
14	2	711-0160	Reddington Counter
15	2	2561-TCF2F-ND	Macromatic Temp/Seal Leak Relay
16	2	700-HN126	700-H General Purpose Accessories, 11-Pin Tube Base Socket, Screw Terminals, Open Terminal Construction (Pkg. Qty. 10) , 700-HN126
17	2	700-HK36A1	700-HK General Purpose Slim Line Relay, 16 Amp Contact, SPDT, 120V 50/60Hz
18	2	700-HN121	700-H General Purpose Accessories, Mini 5-Blade Base Socket, Screw Terminals, Guarded Touch Safe Terminal Construction (Pkg. Qty. 10) , 700-HN121
19	1	700-HK32A1	700-HK General Purpose Slim Line Relay, 8 Amp Contact, DPDT, 120V 50/60Hz
20	1	700-HN122	700-H General Purpose Accessories, Mini 8-Blade Base Socket with 5A rating, Screw Terminals, Guarded Touch Safe Terminal Construction (Pkg. Qty. 10) , 700-HN122
21	2	800H-QRTH2R	30.5mm Type 4/4X/13 Pilot Light, LED, Red, 12-130V AC/DC, 1 NO-1 NC
22	2	800H-QRTH2G	30.5mm Type 4/4X/13 Pilot Light, LED, Green, 12-130V AC/DC, 1 NO-1 NC
23	1	800H-QRTH2W	30.5mm Type 4/4X/13 Pilot Light, LED, White, 12-130V AC/DC, 1 NO-1 NC
24	2	800H-JR2A	800H 3 Position Selector Switch , White, Std. Knob Maint., 3 Position, Cam and Contact Blocks, Code R for 800H , No
25	1	800H-HR2A	30.5mm Type 4/4X/13 2 Pos Sel. Switch-Non-Illum., White, Std. Knob Maint., 1 NO-1 NC
26	1	800H-AR2	30.5mm Type 4/4X/13 Mom. Contact PB, Non-Illum., Black, Flush Hd, No Contacts
27	1	800T-XD2	800T and 800H Accessories, Contact Block, Shallow Block, 1 N.C.
28	2	140M-C2E-C10	MPCB, Standard Magnetic Trip (Fixed at 13 x Ie), 6.3 - 10 A, Std. Performance, Frame Size C
29	2	140M-C-AFA11	140M Accessories - C, RC, D, and F Frames, Auxiliary Contact Block, Front Mounted, 1 N.O. 1 N.C. , Without Spring Clamp Terminals
30	2	140M-C-KN1	140M Accessories - C, RC, D, and F Frames, Lockable Twist Knob, Black
31	2	140M-C-PEC23	140M Accessories - C, RC, D, and F Frames, ECO Connecting Module, 25A, for 140M-C to 100-C09...C23
32	2	100-C16D10	100-C IEC Contactor, Screw Terminals, Line Side, 16A, 1 N.O. 0 N.C. Auxiliary Contact Configuration, Single Pack
33	2	100-SB11	MCS 100-C, 104-C, 700-CF, 700S-CF Accessories, Auxiliary Contact Block, Side Mounting, 1 N.O. 1 N.C., With Sequence Terminal Designations
34	8	800H-W100	800T and 800H Accessories, 800H Legend Plate,Standard,Blank,Gray
35	2	800H-W100J	800T and 800H Accessories, 800H Legend Plate,Jumbo,Blank,Gray
36	10	Engraving	A/R
37	3	1492-SPM1D200	IP 20A PROTR CB

REV.	ISSUE DATE	DESCRIPTION

DESIGNED BY
DESIGNED BY
DRAWN BY AUTOMATION WERX
CHECKED BY
JOB#
SCALE
DESIGN DATE 07-2021
PLOT DATE 08-31-2021

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P.O. Box 3066
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INFO@AUTOMATIONWERX.COM
WWW.AUTOMATIONWERX.COM

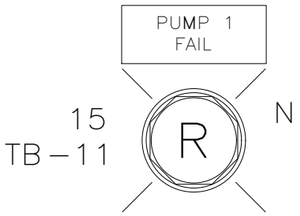
POCATELLO WPC

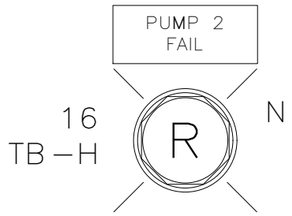
3 & 5 HP DUPLEX PUMP

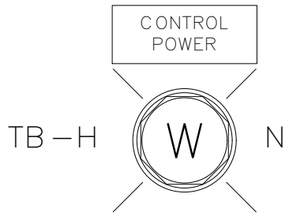
PANEL LAYOUT, CONT.

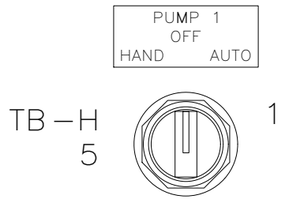
DRAWING NO.
E-1.2

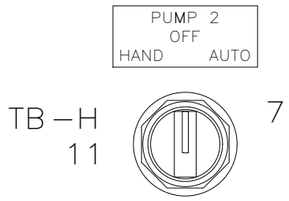
SHEET NO.
3 OF 8

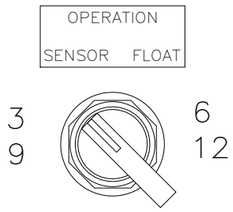


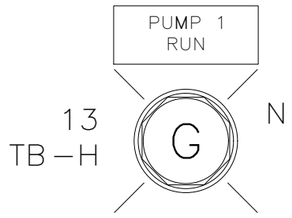


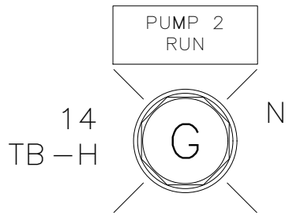


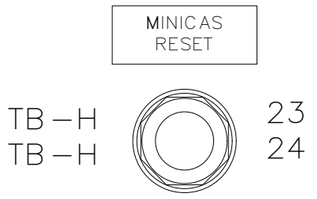


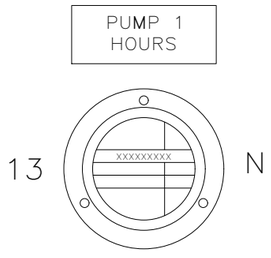


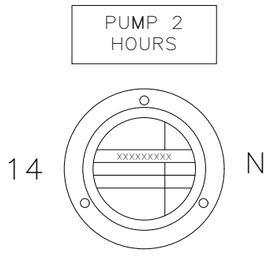












WIRES FROM PUSH BUTTONS TO TERMINAL BLOCKS IN LOWER CONTROL PANEL SECTION
H,N,3,5,6,7,9,11,12,13,14,15,16,23,24

REV.	ISSUE DATE	DESCRIPTION

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JOB#
SCALE
DESIGN DATE 07-2021
PLOT DATE 08-31-2021

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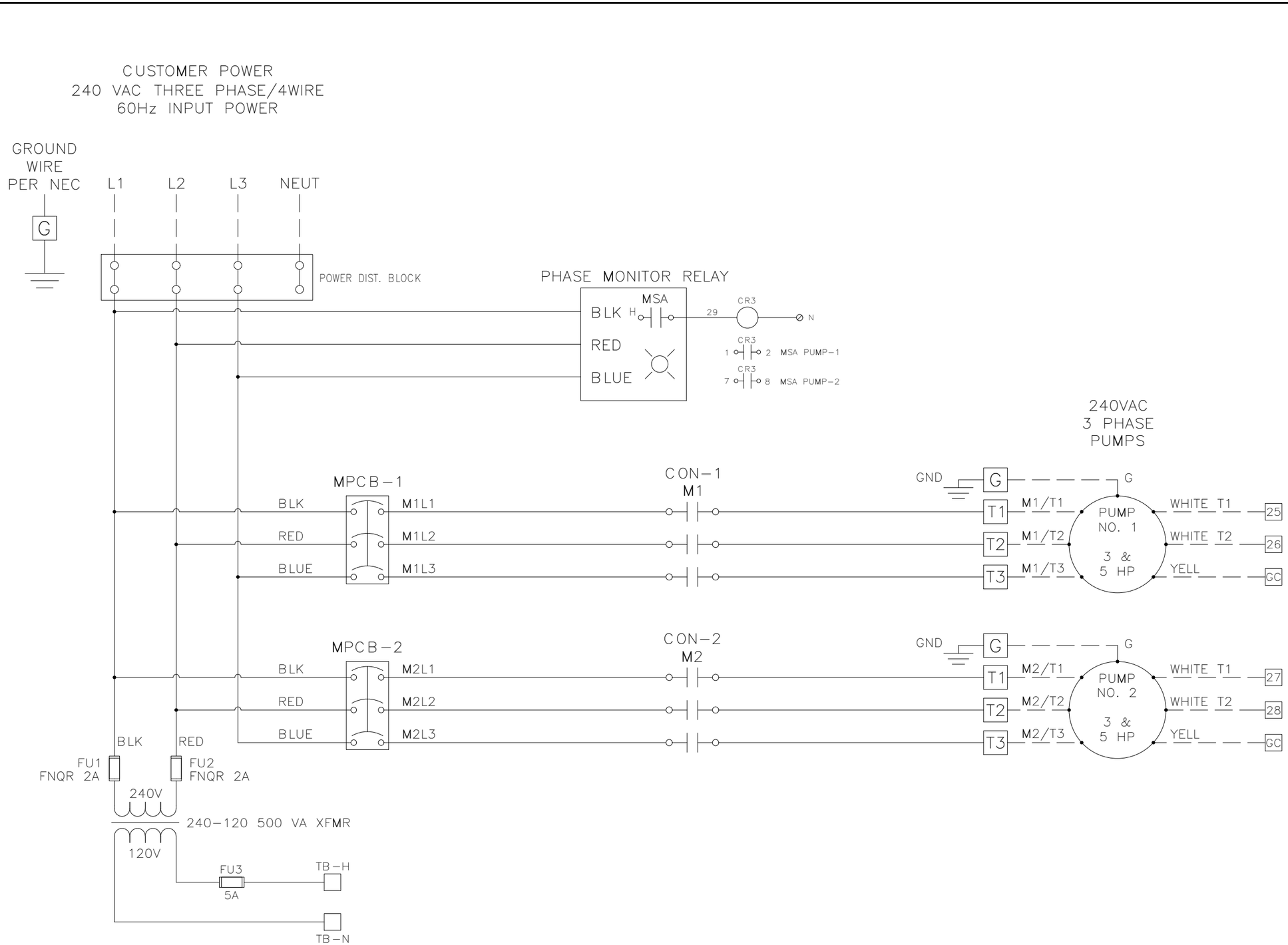
POCATELLO WPC

3HP DUPLEX PUMP PANEL

DOOR OPERATORS

DRAWING NO.
E-1.3

SHEET NO.
4 OF 8



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POCATELLO WPC

3HP DUPLEX PUMP PANEL

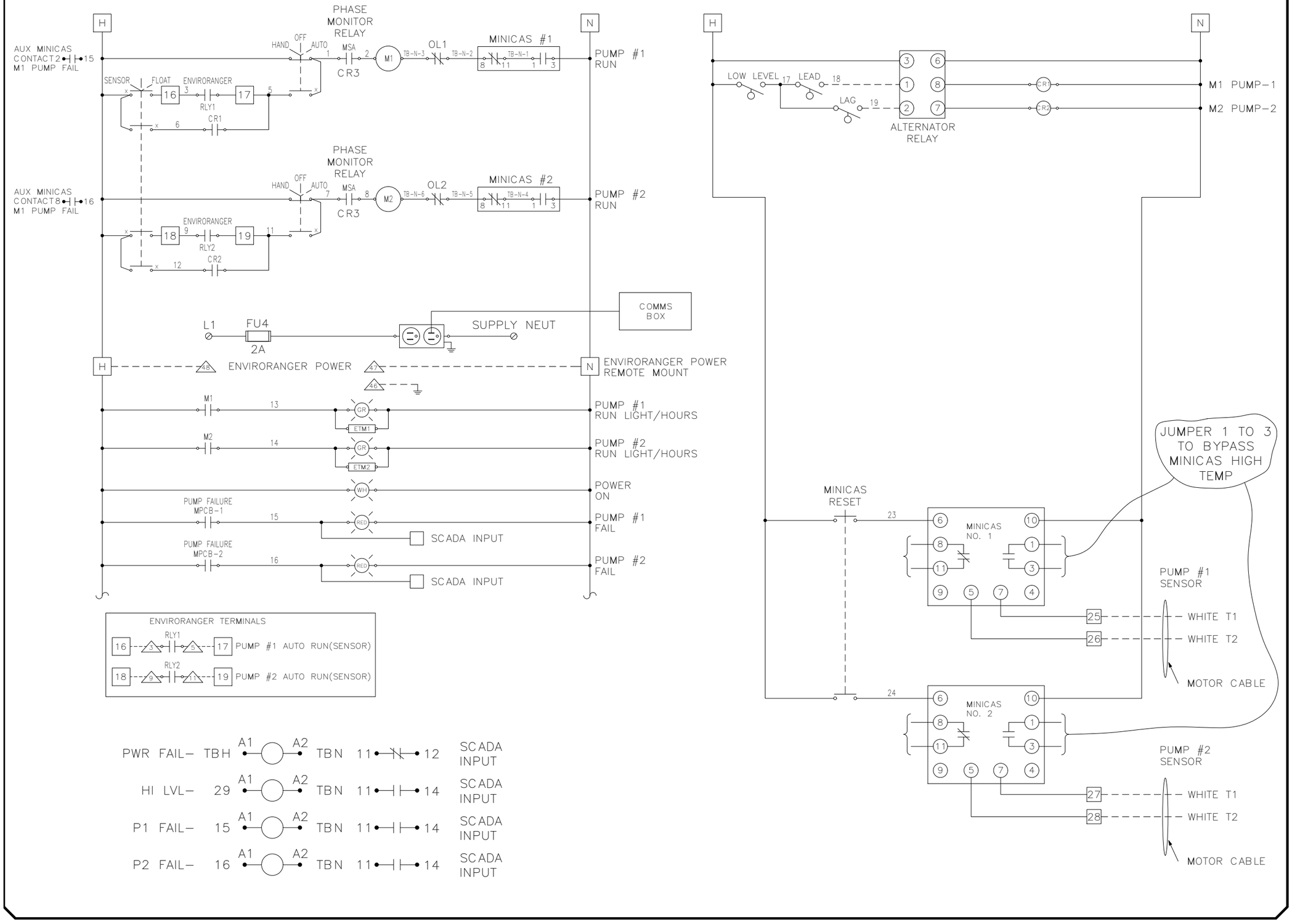
POWER WIRING SCHEMATIC

DRAWING NO.

E-1.4

SHEET NO.

5 OF 8



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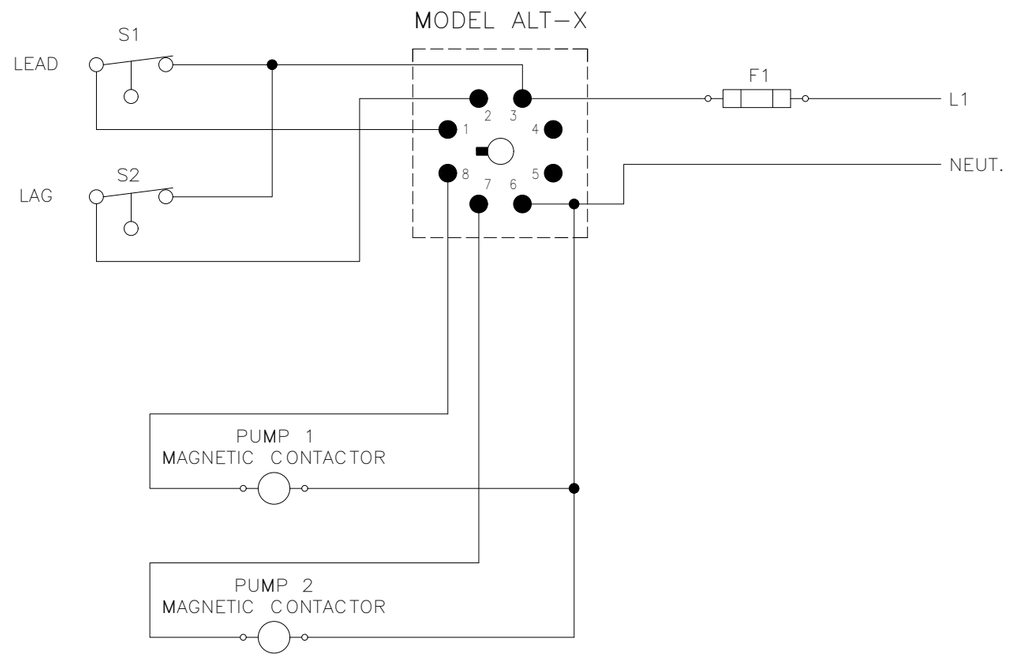
POCATELLO WPC

3 & 5 HP DUPLEX PUMP

CONTROL WIRING SCHEMATIC

DRAWING NO.
E-1.5

SHEET NO.
6 OF 8



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POCATELLO WPC

3 & 5 HP DUPLEX PUMP

ALTERNATING RELAY

MODEL ALT-X

DRAWING NO.
E-1.6

SHEET NO.
7 OF 8

TBH	TBH	TBH
* MILTRONICS		TBH
		TBH
TBN	TBN	TBN
* MILTRONICS		TBN
		TBN
1	1	1
3	3	
* MILTRONICS PUMP 1 RUN		
5	5	5
* MILTRONICS PUMP 1 RUN		
6	6	6
7	7	7
9	9	
* MILTRONICS PUMP 2 RUN		
11	11	11
* MILTRONICS PUMP 2 RUN		
12	12	12
13	13	13
14	14	14
15	15	15
* PUMP 1 FAIL SCADA RELAY		
16	16	16
* PUMP 2 FAIL SCADA RELAY		
	SPARE	
* M1/T1	M1/T1	M1/T1
* M1/T2	M1/T2	M1/T2
* M1/T3	M1/T3	M1/T3
* M1/GND	M1/GND	M1/GND
* M2/T1	M2/T1	M2/T1
* M2/T2	M2/T2	M2/T2
* M2/T3	M2/T3	M2/T3
* M2/GND	M2/GND	M2/GND
* (WHITE) HIGH LEVEL FLOAT	TBH	* POWER FAIL SCADA RELAY
* (BLACK) OFF FLOAT		TBH
* (GREEN) OFF FLOAT	17	
* (BLACK) LEAD FLOAT		
* (BLACK) LAG FLOAT		
* (GREEN) LEAD PUMP RUN FLOAT	18	18
* (GREEN) LAG PUMP RUN FLOAT	20	20
23	23	23
24	24	24
* PUMP 1 MINICAS	25	25
* PUMP 1 MINICAS	26	26
* GND	GND	GND
* PUMP 2 MINICAS	27	27
* PUMP 2 MINICAS	28	28
* (GREEN) HIGH LEVEL ALARM FLOAT	29	* HIGH LEVEL ALARM SCADA RELAY

* = FIELD WIRING

REV.	ISSUE DATE	DESCRIPTION

DESIGNED BY
DRAWN BY AUTOMATION WERX
CHECKED BY
JOB#
SCALE
DESIGN DATE 07-2021
PLOT DATE 08-31-2021

AUTOMATION WERX, LLC
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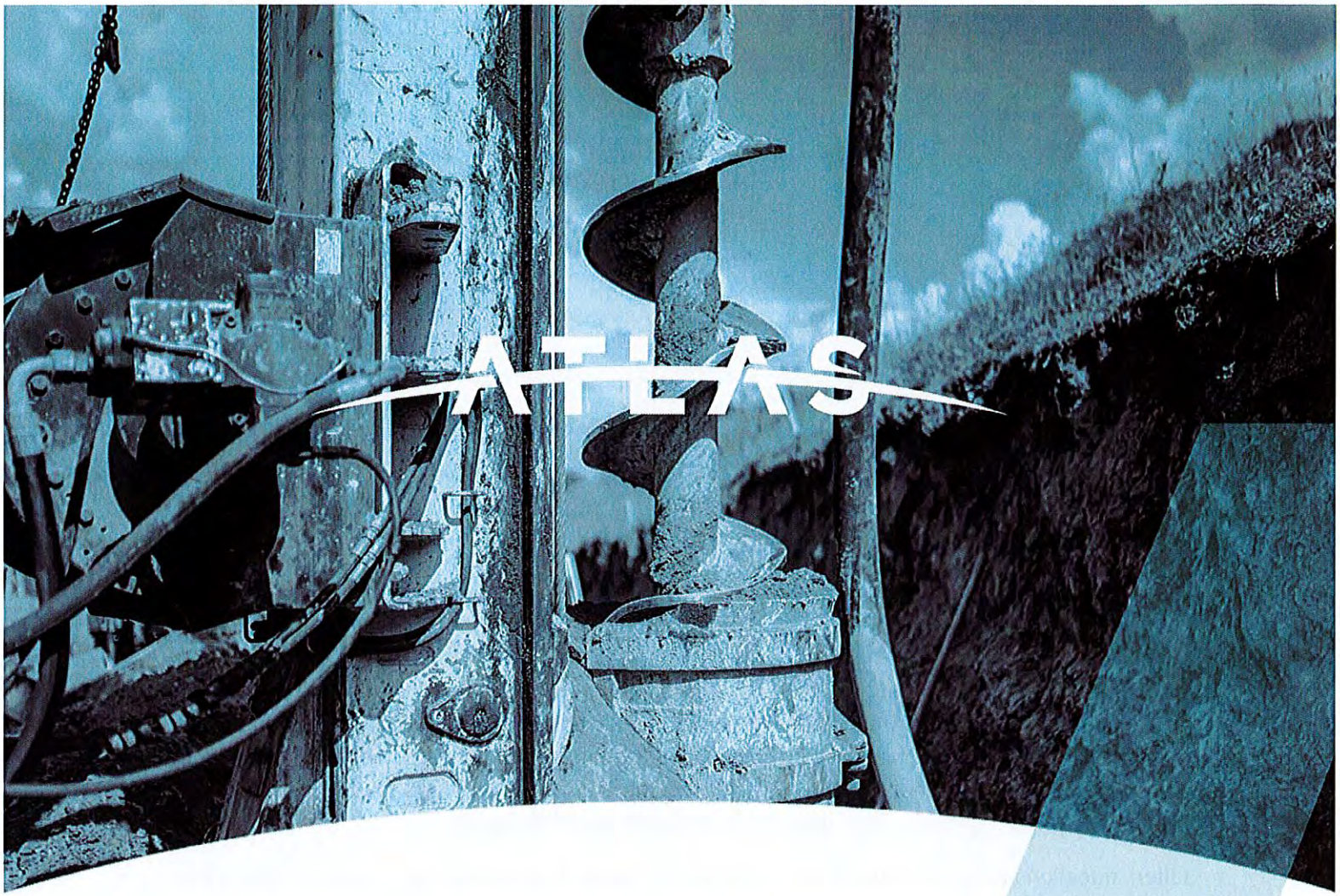
POCATELLO WPC

ELECTRICAL NOTES, CONT.

DRAWING NO.
E-1.7

SHEET NO.
8 OF 8



GEOTECHNICAL INVESTIGATION

PROPOSED LIFT STATION

Whitman Street between Hayes Street and Portneuf River
Pocatello, ID

PREPARED FOR:

Mr. Austin Suing
City of Pocatello
911 N 7th Avenue
Pocatello, ID 83201

PREPARED BY:

Atlas Technical Consultants, LLC
450 East Day Street, Suite B
Pocatello, ID 83201

May 19, 2021
P211152g

ATLAS

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May 19, 2021

Atlas No. P211152g

Mr. Austin Suing
City of Pocatello
911 N 7th Avenue
Pocatello, ID 83201

Subject: Geotechnical Investigation
Proposed Lift Station
Whitman Street between Hayes Street and Portneuf River
Pocatello, ID

In compliance with your instructions, Atlas has conducted a soils exploration and foundation evaluation for the above referenced development. Fieldwork for this investigation was conducted on April 23, 2021. Data have been analyzed to evaluate pertinent geotechnical conditions. Results of this investigation, together with our recommendations, are to be found in the following report. We have provided a PDF copy for your review and distribution.

Often, questions arise concerning soil conditions because of design and construction details that occur on a project. Atlas would be pleased to continue our role as geotechnical engineers during project implementation.

If you have any questions, please call us at (208) 233-9500.

Respectfully submitted,

Chris A. Park, PE, PMP
Senior Geotechnical Engineer

Elizabeth Brown, PE
Geotechnical Services Manager

ATLAS

CONTENTS

TABLES

APPENDICES

1. INTRODUCTION

This report presents results of a geotechnical investigation and analysis in support of data utilized in design of structures as defined in the 2018 International Building Code (IBC). Information in support of groundwater issues pertinent to the practice of Civil Engineering is included. Observations and recommendations relevant to the earthwork phase of the project are also presented. Revisions in plans or drawings for the proposed project from those enumerated in this report should be brought to the attention of the soils engineer to determine whether changes in the provided recommendations are required. Deviations from noted subsurface conditions, if encountered during construction, should also be brought to the attention of the soils engineer.

1.1 Project Description

The proposed development is in the central portion of the City of Pocatello, Bannock County, ID, and occupies a portion of the SE¼NW¼ of Section 35, Township 6 South, Range 34 East, Boise Meridian. This project will consist of construction of a 22-foot deep lift station and an at grade precast concrete electrical building. In addition, a new 6-foot tall CMU wall may be constructed adjacent to the project site. The project area is approximately 3,000 square feet in size. Total settlements are limited to 1 inch. Loads of up to 4,000 pounds per lineal foot for wall footings were assumed for settlement calculations. Additionally, assumptions have been made for traffic loading of pavements.

1.2 Authorization

Authorization to perform this exploration and analysis was given in the form of a written authorization to proceed from Mr. Levi Adams of the City of Pocatello to Chris Park of Atlas Technical Consultants (Atlas), on April 16, 2021. Said authorization is subject to terms, conditions, and limitations described in the Professional Services Contract entered into between the City of Pocatello and Atlas. Our scope of services for the proposed development has been provided in our proposal dated April 15, 2021 and repeated below.

1.3 Scope of Investigation

The scope of this investigation included review of geologic literature and existing available geotechnical studies of the area, visual site reconnaissance of the immediate site, subsurface exploration of the site, field and laboratory testing of materials collected, and engineering analysis and evaluation of foundation materials. Our scope of work did not include stormwater disposal recommendations.

2. SITE DESCRIPTION

2.1 Site Access

Access to the site may be gained via Interstate 15 to the Clark Street exit (Exit 69). Travel southwest approximately 1.5 miles to 1st Avenue. Continue on 1st Avenue southeast

approximately 350 feet to Center Street. Proceed southwest on Center Street approximately 0.4 mile to Hayes Avenue. Travel southeast on Hayes Avenue approximately 0.2 mile to its intersection with Whitman Street. The site is located at the south corner of this intersection. Presently the site exists as a paved road and sidewalk. The location is depicted on site maps included in the **Appendix**.

2.2 Regional Geology

The site is located near the City of Pocatello in the Portneuf Valley which is bordered to the northeast by the Pocatello Range and the southwest by the Bannock Range. This area was subject to tensional forces during the Miocene Epoch (24 to 5 million years ago) causing crustal extension in an area known as the Basin and Range Province. The ranges eroded during uplift and filled the valley (Wicander and Monroe, 1989). The valley was then cut by the Bonneville Flood approximately 15,000 thousand years ago during the Pleistocene Epoch (Alt and Hyndman, 1998). Surficial sediments were deposited during the Pleistocene Epoch (2 to 0.01 million years ago) as loess deposits (Bond, 1978). Based on regional topography, local surface water flow direction, and available well log data, groundwater gradient in the vicinity of the subject property is west to southwest toward the Portneuf River.

2.3 General Site Characteristics

The site to be developed is approximately 3,000 square feet in size. Currently, the site is paved with asphalt and a concrete sidewalk. The site is bound by the Portneuf River to the southwest and Hayes Avenue to the northeast. The site is surrounded on all sides with residences. Regional drainage is southwest toward the Portneuf River. Stormwater drainage for the site is achieved by both sheet runoff to a municipal stormwater collection system.

2.4 Regional Site Climatology and Geochemistry

Average precipitation for the Bannock County region is on the order of 13 to 17 inches per year. Annual average temperature ranges from 16°F to 88°F, with daily extremes ranging from -24°F to 98°F. Average wind speed ranges to 10 miles per hour, with a prevailing direction from the southwest. Soils and sediments in the area are primarily derived from siliceous materials and exhibit low electro-chemical potential for corrosion of metals or concretes, and local aggregates are generally appropriate for Portland cement and lime cement mixtures. Surface water, groundwater, and soils in the region typically have pH levels ranging from 7 to 8.

3. SEISMIC SITE EVALUATION

3.1 Geoseismic Setting

Soils on site are classed as Site Class D in accordance with Chapter 20 of the American Society of Civil Engineers (ASCE) publication ASCE/SEI 7-16. Structures constructed on this site should be designed per IBC requirements for such a seismic classification. Our investigation did not reveal hazards resulting from potential earthquake motions including: slope instability,

liquefaction, and surface rupture caused by faulting or lateral spreading. Incidence and anticipated acceleration of seismic activity in the area is low.

3.2 Seismic Design Parameter Values

The United States Geological Survey National Seismic Hazard Maps (2008), includes a peak ground acceleration map. The map for 2% probability of exceedance in 50 years in the Western United States in standard gravity (g) indicates that a peak ground acceleration of 0.290 is appropriate for the project site based on a Site Class D.

The following section provides an assessment of the earthquake-induced earthquake loads for the site based on the Risk-Targeted Maximum Considered Earthquake (MCE_R). The MCE_R spectral response acceleration for short periods, S_{MS}, and at 1-second period, S_{M1}, are adjusted for site class effects as required by the 2018 IBC. Design spectral response acceleration parameters as presented in the 2018 IBC are defined as a 5% damped design spectral response acceleration at short periods, S_{DS}, and at 1-second period, S_{D1}.

The USGS National Seismic Hazards Mapping Project includes a program that provides values for ground motion at a selected site based on the same data that were used to prepare the USGS ground motion maps. The maps were developed using attenuation relationships for soft rock sites; the source model, assumptions, and empirical relationships used in preparation of the maps are described in Petersen and others (1996).

Table 1 – Seismic Design Values

Seismic Design Parameter	Design Value
Site Class	D "Stiff Soil"
S_s	0.474 (g)
S_1	0.155 (g)
F_a	1.421
F_v	2.290
S_{MS}	0.673 (g)
S_{M1}	0.355 (g)
S_{DS}	0.449 (g)
S_{D1}	0.237 (g)

4. SOILS EXPLORATION

4.1 Exploration and Sampling Procedures

Field exploration conducted to determine engineering characteristics of subsurface materials included a reconnaissance of the project site and investigation by soil boring. The boring was located in the field by means of a Global Positioning System (GPS) device and is reportedly accurate to within ten feet. The boring was advanced by means of a truck-mounted drilling rig equipped with continuous flight hollow-stem augers. At specified depths, samples were obtained

using a standard split-spoon sampler and Standard Penetration Test (SPT) blow counts were recorded. Uncorrected SPT blow counts are provided on the log, which can be found in the **Appendix**. At completion of exploration, the boring was backfilled with bentonite holeplug.

Samples have been visually classified in the field by professional staff, identified according to boring number and depth, placed in sealed containers, and transported to our laboratory for additional testing. Subsurface materials have been described in detail on the log provided in the **Appendix**. Results of field and laboratory tests are also presented in the **Appendix**. Atlas recommends that the log **not** be used to estimate fill material quantities.

4.2 Laboratory Testing Program

In addition to our field investigation, a supplemental laboratory testing program was conducted to determine additional pertinent engineering characteristics of subsurface materials necessary in an analysis of anticipated behavior of the proposed structures. Laboratory tests were conducted in accordance with current applicable American Society for Testing and Materials (ASTM) specifications, and results of these tests are to be found in the **Appendix**. The laboratory testing program for this report included: Atterberg Limits Testing – ASTM D4318 and Grain Size Analysis – ASTM C117/C136.

4.3 Soil and Sediment Profile

The profile below represents a generalized interpretation for the project site. Note that on site soils strata, encountered beyond the boring location, may vary from the individual soil profile presented in the log, which can be found in the **Appendix**.

Asphalt pavement was encountered at ground surface. Below the pavement, silty gravel fill was brown, slightly moist, and medium dense, with fine to coarse grained sand, fine to coarse gravel, and 4-inch-minus cobbles.

Native sandy silt found below the fill materials was brown to dark brown, slightly moist, and stiff to very stiff, with fine grained sand. Below the sandy silt, poorly graded gravel with sand was encountered. This sediment was gray-brown, slightly moist, and very dense, with fine to coarse-grained sand and fine to coarse gravel. The auger ground on a possible cobble or boulder for approximately 10 minutes at 7 feet bgs prior to breaking through. Below the poorly graded gravel with sand, sandy lean clay was brown, moist, and medium stiff to very stiff, with fine-grained sand.

At depth, poorly graded gravel with sand sediment was found. This sediment was gray-brown, slightly moist, and very dense, with fine to coarse-grained sand and fine to coarse gravel. Auger met refusal on a possible cobble or boulder at 30.4 feet bgs.

During excavation, boring sidewalls were generally stable. However, moisture contents will affect wall competency with saturated soils tending to readily slough when under load and unsupported.

4.4 Volatile Organic Scan

No environmental concerns were identified prior to commencement of the investigation. Therefore, soils obtained during on-site activities were not assessed for volatile organic compounds by portable photoionization detector. Samples obtained during our exploration activities exhibited no odors or discoloration typically associated with this type of contamination. No groundwater was encountered.

5. SITE HYDROLOGY

Existing surface drainage conditions are defined in the **General Site Characteristics** section. Information provided in this section is limited to observations made at the time of the investigation. Either regional or local ordinances may require information beyond the scope of this report.

5.1 Groundwater

During this field investigation, groundwater was not encountered in the boring advanced to a depth of 30.4 feet bgs. Soil moistures in the boring were generally slightly moist throughout.

Atlas performed a geotechnical investigation approximately 0.33 mile to the north of the project site where groundwater was not encountered to a depth of 9.0 feet bgs in October 2019. Furthermore, according to Idaho Department of Water Recourses well log data within approximately ½-mile of the project site, groundwater was measured at depths ranging between 34 and 120 feet bgs.

Based on evidence of this investigation and background knowledge of the area, Atlas estimates groundwater depths to remain greater than approximately 30 feet bgs throughout the year. This depth can be confirmed through long-term groundwater monitoring.

6. LATERAL EARTH PRESSURES

Below-grade walls will be subject to lateral earth pressures. The magnitude of earth pressure is a function of both type and compaction of backfill behind walls within the "active" zone, and allowable rotation of the top of the wall. The active zone is defined as the wedge of soil between the surface of the wall and a plane inclined 31 degrees from vertical passing through the base of the wall. All clay soils must be completely removed from within the active zone. The following recommendations should be used when dealing with lateral earth pressures on a gravity block: 1) a sliding frictional coefficient of 0.35 is appropriate considering native sandy silt and sandy lean clay soils, and 2) a sliding frictional coefficient of 0.45 is appropriate considering native poorly graded gravel with sand sediments and granular structural fill under typical conditions.

A state of plastic equilibrium is when the subject material is considered to be 1) homogeneous and unbounded and 2) at the point of incipient instability. This state is evaluated on the basis of unit weight, mechanical properties, and the definition of instability. For the purpose of this report, it is assumed that native relatively free draining soils and imported granular fill material will be the materials of concern regarding lateral earth pressures. If other materials are considered for use,

Atlas must be contacted to provide alternate lateral earth pressure information. Furthermore, changes in natural soil moisture, such as can be imposed by site stormwater systems, can change the values listed below.

Below-grade restrained walls, such as basement walls, should be designed based on at-rest pressures. Active pressures are appropriate under conditions where the wall moves or rotates away from the soil mass at failure. Passive pressures are used for conditions where the wall moves toward the soil mass at failure. Rotation, or lateral movement, of the top of the wall equal to 0.002 times the height of the wall will be necessary for on-site soil backfill to achieve an "active" loading condition. Lateral movement of the top of the wall equal to 0.001 times the height of the wall will be necessary for the "active" pressure condition for imported granular structural backfill.

6.1 Retaining Wall Backfill Materials

For lateral earth pressure analysis, Atlas anticipates that the soils of interest will be the onsite native sandy silt soils. Sandy lean clay soils are not suitable for use as backfill on the soil side of walls. Seismic lateral earth pressures have also been provided in the following tables, and were calculated per the Whitman method. For sandy lean clay soils, the following values are applicable under non-surcharged, drained conditions.

Table 2 – Lateral Earth Pressure Values for Native Sandy Lean Clay Soil

Soil Type: Sandy Lean Clay			
Internal Friction Angle:	26 °	Dry Unit Weight:	105 pcf
Cohesion:	200 psf	Bouyant Unit Weight:	68 pcf
Natural Void Ratio:	0.7	Natural Moisture:	20 %
Ground Acceleration[2]:	0.29	Backfill Slope:	0 °
At rest lateral earth pressure:	71 pcf[1]		K_0= 0.56
Active lateral earth pressure:	49 pcf[1]		K_a= 0.39
Passive lateral earth pressure:	323 pcf[1]		K_p= 2.56
Seismic active lateral earth pressure:	77 pcf[1]		K_{ae}= 0.61
Seismic passive lateral earth pressure:	229 pcf[1]		K_{pe}= 1.82

[1]Lateral earth pressure values are in pounds per square foot, per foot of wall (psf/ft). Alternately, the values presented may also be considered as equivalent fluid with units of pounds per cubic foot (pcf).
[2]Ground acceleration obtained from the USGS Seismic Design Maps.

For sandy silt soils, the following values are applicable under non-surcharged, drained conditions.

Table 3 – Lateral Earth Pressure Values for Native Sandy Silt Soil

Soil Type: Sandy Silt			
Internal Friction Angle:	28 °	Dry Unit Weight:	110 pcf
Cohesion:	100 psf	Bouyant Unit Weight:	73 pcf
Natural Void Ratio:	0.7	Natural Moisture:	17 %
Ground Acceleration[2]:	0.29	Backfill Slope:	0 °
At rest lateral earth pressure:	68 pcf[1]		K_0= 0.53
Active lateral earth pressure:	46 pcf[1]		K_a= 0.36
Passive lateral earth pressure:	356 pcf[1]		K_p= 2.77
Seismic active lateral earth pressure:	74 pcf[1]		K_{ae}= 0.58
Seismic passive lateral earth pressure:	253 pcf[1]		K_{pe}= 1.97

[1]Lateral earth pressure values are in pounds per square foot, per foot of wall (psf/ft). Alternately, the values presented may also be considered as equivalent fluid with units of pounds per cubic foot (pcf).
[2]Ground acceleration obtained from the USGS Seismic Design Maps.

Imported, compacted, structural material, which is used to backfill the soil side of walls, must demonstrate the following characteristics:

Table 4 – Lateral Earth Pressure Values for Native Sediments and Fill Materials

Soil Type: Native Poorly Graded Gravel or Compacted Sandy Gravel Fill			
Internal Friction Angle:	35 °	Dry Unit Weight:	130 pcf
Cohesion:	N/A	Bouyant Unit Weight:	85 pcf
Natural Void Ratio:	0.4	Natural Moisture:	5 %
Ground Acceleration[2]:	0.29	Backfill Slope:	0 °
At rest lateral earth pressure:	58 pcf[1]		K_0= 0.43
Active lateral earth pressure:	37 pcf[1]		K_a= 0.27
Passive lateral earth pressure:	504 pcf[1]		K_p= 3.69
Seismic active lateral earth pressure:	67 pcf[1]		K_{ae}= 0.49
Seismic passive lateral earth pressure:	358 pcf[1]		K_{pe}= 2.62

[1]Lateral earth pressure values are in pounds per square foot, per foot of wall (psf/ft). Alternately, the values presented may also be considered as equivalent fluid with units of pounds per cubic foot (pcf).
[2]Ground acceleration obtained from the USGS Seismic Design Maps.

7. EXCAVATIONS AND PRELIMINARY SHORING RECOMMENDATIONS

Shallow excavations that do not exceed 4 feet in depth may be constructed with side slopes approaching vertical. Below this depth, it is recommended that slopes be constructed in accordance with Occupational Safety and Health Administration (OSHA) regulations, Section 1926, Subpart P. Based on these regulations, on-site soils are classified as type "C" soil, and as such, excavations within these soils should be constructed at a maximum slope of 1.5 feet horizontal to 1 foot vertical (1.5:1) for excavations up to 20 feet in height. For excavations of up to 25 feet in height, Atlas recommends that temporary slopes be constructed at a maximum of 2:1. Excavations in excess of 25 feet will require additional analysis. Note that these slope angles

are considered stable for short-term conditions only, and will not be stable for long-term conditions.

All excavations must be monitored/inspected as follows:

- Daily and before the start of each shift.
- As dictated by the work being performed in the excavation.
- After every precipitation event or other events that could increase hazards (e.g. windstorm, earthquake, etc.).
- When fissures, tension cracks, sloughing, undercutting, water seepage, bulging at the bottom of the excavation, or other similar conditions occur.
- When there is a change in the size, location, or placement of the spoil pile.

Additional stabilization measures may be required if fissures, tension cracks, sloughing, undercutting, water seepage, bulging at the bottom of the excavation, or other similar conditions occur. No loads can be placed within 4 feet from the edge of the excavation, measured from the nearest load to the top of the cut.

Due to project area constraints, sloping and benching may not be practical. Alternate shoring systems such as piles and lagging or temporary shotcrete walls may be considered for the project. At this time, shoring design recommendations are outside of Atlas' scope of work. Atlas is available for further design and development if desired.

8. FOUNDATION AND SLAB DISCUSSION AND RECOMMENDATIONS

Various foundation types have been considered for support of the proposed structure. Two requirements must be met in the design of foundations. First, the applied bearing stress must be less than the ultimate bearing capacity of foundation soils to maintain stability. Second, total and differential settlement must not exceed an amount that will produce an adverse behavior of the superstructure. Allowable settlement is usually exceeded before bearing capacity considerations become important; thus, allowable bearing pressure is normally controlled by settlement considerations.

Considering subsurface conditions and the proposed construction, it is recommended that the structure be founded upon conventional spread footings and continuous wall footings. Total settlements should not exceed 1 inch if the following design and construction recommendations are observed.

8.1 Foundation Design Recommendations

Based on data obtained from the site and test results from various laboratory tests performed, Atlas recommends the following guidelines for the net allowable soil bearing capacity:

Table 5 – Soil Bearing Capacity

Footing Depth	ASTM D1557 Subgrade Compaction	Net Allowable Soil Bearing Capacity
Footings must bear on competent, undisturbed, native sandy silt soils or compacted structural fill. Existing fill materials must be completely removed from below foundation elements.[1] An excavation depth of approximately 2 feet bgs should be anticipated to expose proper bearing soils.[2]	Not Required for Native Soil 95% for Structural Fill	1,500 lbs/ft^2 A ⅓ increase is allowable for short-term loading, which is defined by seismic events or designed wind speeds.

[1]It will be required for Atlas personnel to verify the bearing soil suitability for each structure at the time of construction. [2]Depending on the time of year construction takes place, the subgrade soils may be unstable because of high moisture contents. If unstable conditions are encountered, over-excavation and replacement with granular structural fill and/or use of geotextiles may be required.

The following sliding frictional coefficient values should be used: 1) 0.35 for footings bearing on native sandy lean clay and sandy silt soils, and 2) 0.45 for footings bearing on native poorly graded gravel with sand sediments and granular structural fill.

Footings should be proportioned to meet either the stated soil bearing capacity or the 2018 IBC minimum requirements. Total settlement should be limited to approximately 1 inch, and differential settlement should be limited to approximately ½ inch. Objectionable soil types encountered at the bottom of footing excavations should be removed and replaced with structural fill. Excessively loose or soft areas that are encountered in the footings subgrade will require over-excavation and backfilling with structural fill. To minimize the effects of slight differential movement that may occur because of variations in the character of supporting soils and seasonal moisture content, Atlas recommends continuous footings be suitably reinforced to make them as rigid as possible. For frost protection, the bottom of external footings should be 36 inches below finished grade.

8.2 Floor Slab-on-Grade

Uncontrolled fill was encountered in portions of the site. Atlas recommends that these fill materials be compacted in place to at least 95 percent of the maximum dry density as determined by ASTM D1557. Once final grades have been determined, Atlas is available to provide additional recommendations.

9. PAVEMENT DISCUSSION AND RECOMMENDATIONS

Atlas has made assumptions for traffic loading variables based on the character of the proposed construction. The Client shall review and understand these assumptions to make sure they reflect intended use and loading of pavements both now and in the future. Based on experience with soils in the region, a subgrade California Bearing Ratio (CBR) value of 4 has been assumed for near-surface sandy silt soils on site. The following are minimum thickness requirements for assured pavement function. Depending on site conditions, additional work, e.g. soil preparation,

may be required to support construction equipment. These have been listed within the **Soft Subgrade Soils** section.

9.1 Gravel Pavement Section

The American Association of State Highway and Transportation Officials (AASHTO) design method has been used to calculate the following pavement section. A calculation sheet provided in the **Appendix** indicates the soil constant, traffic loading, traffic projections, and material constants used to calculate the pavement section. Atlas recommends that materials used in the construction of asphaltic concrete pavements meet requirements of the ISPWC Standard Specification for Highway Construction. Construction of the pavement section should be in accordance with these specifications and should adhere to guidelines recommended in the section on **Construction Considerations**.

Note that gravel pavement sections are typically for low-volume roadways (ESALs of less than 100,000), and are not intended to support large amounts of regular traffic. Regular maintenance in the form of grading will be required to maintain a flat and passable condition. Soft or unstable areas will develop if water is allowed to pond or collect on the surface. Therefore, grading is required to ensure that water is directed off the pavement surface. During and shortly after storm events, tracking of surface materials can be expected. Traffic during wet periods should be avoided to limit damage to the structural section. Damage to the pavement will be in the form of rutting and/or pumping of pavement section materials. Reconstruction of the exposed gravel base should be expected at least every 5 years.

Table 6 – AASHTO Gravel Pavement Specifications

Pavement Section Component	Gravel Surfaced Pavement Light Duty
Crushed Aggregate Base	6.0 Inches
Structural Subbase	12.0 Inches
Compacted Subgrade	See **Pavement Subgrade Preparation** Section

[1]**It will be required for Atlas personnel to verify subgrade competency at the time of construction.**

- Aggregate Base: Material complying with ISPWC Standards for Crushed Aggregate Materials.
- Structural Subbase: Granular structural fill material complying with the requirements detailed in the **Structural Fill** section of this report except that the maximum material diameter is no more than $^2/_3$ the component thickness. Gradation and suitability requirements shall be per ISPWC Section 801, Table 1.

9.2 Pavement Subgrade Preparation

Uncontrolled fill was encountered in portions of the site. Atlas recommends that these fill materials be compacted in place to at least 95 percent of the maximum dry density as determined by ASTM D698. The existing fill materials are not suitable for use as either the base or subbase

components of the recommended pavement section. Once final grades have been determined, Atlas is available to provide additional recommendations.

9.3 Common Pavement Section Construction Issues

The subgrade upon which above pavement sections are to be constructed must be properly stripped, compacted, inspected, and proof-rolled. Proof rolling of subgrade soils should be accomplished using a heavy rubber-tired, fully loaded, tandem-axle dump truck or equivalent. Verification of subgrade competence by Atlas personnel at the time of construction is required. Fill materials on the site must demonstrate the indicated compaction prior to placing material in support of the pavement section. Atlas anticipated that pavement areas will be subjected to moderate traffic. Atlas does not anticipate pumping material to become evident during compaction, but subgrade silts near and above optimum moisture contents may tend to pump. Pumping or soft areas must be removed and replaced with structural fill.

Fill material and aggregates in support of the pavement section must be compacted to no less than 95 percent of the maximum dry density as determined by ASTM D698 for flexible pavements and by ASTM D1557 for rigid pavements. If a material placed as a pavement section component cannot be tested by usual compaction testing methods, then compaction of that material must be approved by observed proof rolling. Minor deflections from proof rolling for flexible pavements are allowable. Deflections from proof rolling of rigid pavement support courses should not be visually detectable.

10. CONSTRUCTION CONSIDERATIONS

Recommendations in this report are based upon structural elements of the project being founded on competent, native sandy silt soils or compacted structural fill. Structural areas should be stripped to an elevation that exposes these soil types.

10.1 Earthwork

Excessively organic soils, deleterious materials, or disturbed soils generally undergo high volume changes when subjected to loads, which is detrimental to subgrade behavior in the area of pavements, floor slabs, structural fills, and foundations. It is recommended that organic or disturbed soils, if encountered, be removed and wasted or stockpiled for later use. Stripping depths should be adjusted in the field to assure that the entire root zone or disturbed zone is removed prior to placement and compaction of structural fill materials. Exact removal depths should be determined during grading operations by Atlas personnel, and should be based upon subgrade soil type, composition, and firmness or soil stability. If underground storage tanks, underground utilities, wells, or septic systems are discovered during construction activities, they must be decommissioned then removed or abandoned in accordance with governing Federal, State, and local agencies. Excavations developed as the result of such removal must be backfilled with structural fill materials as defined in the **Structural Fill** section.

Atlas should oversee subgrade conditions (i.e., moisture content) as well as placement and compaction of new fill (if required) after native soils are excavated to design grade. Recommendations for structural fill presented in this report can be used to minimize volume changes and differential settlements that are detrimental to the behavior of footings, pavements, and floor slabs. Sufficient density tests should be performed to properly monitor compaction. For structural fill beneath building structures, one in-place density test per lift for every 5,000 square feet is recommended. In parking and driveway areas, this can be decreased to one test per lift for every 10,000 square feet.

10.2 Dry Weather

If construction is to be conducted during dry seasonal conditions, many problems associated with soft soils may be avoided. However, some rutting of subgrade soils may be induced by shallow groundwater conditions related to springtime runoff or irrigation activities during late summer through early fall. Solutions to problems associated with soft subgrade soils are outlined in the **Soft Subgrade Soils** section. Problems may also arise because of lack of moisture in native and fill soils at time of placement. This will require the addition of water to achieve near-optimum moisture levels. Low-cohesion soils exposed in excavations may become friable, increasing chances of sloughing or caving. Measures to control excessive dust should be considered as part of the overall health and safety management plan.

10.3 Wet Weather

If construction is to be conducted during wet seasonal conditions (commonly from mid-November through May), problems associated with soft soils must be considered as part of the construction plan. During this time of year, fine-grained soils such as silts and clays will become unstable with increased moisture content, and eventually deform or rut. Additionally, constant low temperatures reduce the possibility of drying soils to near optimum conditions.

10.4 Soft Subgrade Soils

Shallow fine-grained subgrade soils that are high in moisture content should be expected to pump and rut under construction traffic. Throughout construction, soft areas may develop after the existing asphalt is removed and heavy rubber tired equipment drives over the site. In addition, areas where significant cracking has occurred will likely have soft subgrade soils because of moisture infiltration and will be prone to pumping and rutting. During periods of wet weather, construction may become very difficult if not impossible. The following recommendations and options have been included for dealing with soft subgrade conditions:

- Track-mounted vehicles should be used used to remove the existing asphalt and to perform any other necessary excavations. Heavy rubber-tired equipment should be prohibited from operating directly on the native subgrade and areas in which structural fill materials have been placed. Construction traffic should be restricted to designated roadways that do not cross, or cross on a limited basis, proposed roadway or parking areas.
- Soft areas can be over-excavated and replaced with granular structural fill.

- Construction roadways on soft subgrade soils should consist of a minimum 2-foot thickness of large cobbles of 4 to 6 inches in diameter with sufficient sand and fines to fill voids. Construction entrances should consist of a 6-inch thickness of clean, 2-inch minimum, angular drain-rock and must be a minimum of 10 feet wide and 30 to 50 feet long. During the construction process, top dressing of the entrance may be required for maintenance.
- Scarification and aeration of subgrade soils can be employed to reduce the moisture content of wet subgrade soils. After stripping is complete, the exposed subgrade should be ripped or disked to a depth of 1½ feet and allowed to air dry for 2 to 4 weeks. Further disking should be performed on a weekly basis to aid the aeration process.
- Alternative soil stabilization methods include use of geotextiles, lime, and cement stabilization. Atlas is available to provide recommendations and guidelines at your request.

10.5 Frozen Subgrade Soils

Prior to placement of structural fill materials or foundation elements, frozen subgrade soils must either be allowed to thaw or be stripped to depths that expose non-frozen soils and wasted or stockpiled for later use. Stockpiled materials must be allowed to thaw and return to near-optimal conditions prior to use as structural fill.

The onsite, shallow silty soils are susceptible to frost heave during freezing temperatures. For exterior flatwork and other structural elements, adequate drainage away from subgrades is critical. Compaction and use of structural fill will also help to mitigate the potential for frost heave. Complete removal of frost susceptible soils for the full frost depth, followed by replacement with a non-frost susceptible structural fill, can also be used to mitigate the potential for frost heave. Atlas is available to provide further guidance/assistance upon request.

10.6 Structural Fill

Soils recommended for use as structural fill are those classified as GW, GP, SW, and SP in accordance with the Unified Soil Classification System (USCS) (ASTM D2487). Use of silty soils (USCS designation of GM, SM, and ML) as structural fill may be acceptable. However, use of silty soils (GM, SM, and ML) as structural fill below footings is prohibited. These materials require very high moisture contents for compaction and require a long time to dry out if natural moisture contents are too high and may also be susceptible to frost heave under certain conditions. Therefore, these materials can be quite difficult to work with as moisture content, lift thickness, and compactive effort becomes difficult to control. If silty soil is used for structural fill, lift thicknesses should not exceed 6 inches (loose), and fill material moisture must be closely monitored at both the working elevation and the elevations of materials already placed. Following placement, silty soils must be protected from degradation resulting from construction traffic or subsequent construction.

Recommended granular structural fill materials, those classified as GW, GP, SW, and SP, should consist of a 6-inch minus select, clean, granular soil with no more than 50 percent oversize (greater than ¾-inch) material and no more than 12 percent fines (passing No. 200 sieve). These

fill materials should be placed in layers not to exceed 12 inches in loose thickness. Prior to placement of structural fill materials, surfaces must be prepared as outlined in the **Construction Considerations** section. Structural fill material should be moisture-conditioned to achieve optimum moisture content prior to compaction. For structural fill below footings, areas of compacted backfill must extend outside the perimeter of the footings for a distance equal to the thickness of fill between the bottom of foundation and underlying soils, or 5 feet, whichever is less. All fill materials must be monitored during placement and tested to confirm compaction requirements, outlined below, have been achieved.

Each layer of structural fill must be compacted, as outlined below:

- Below Structures and Rigid Pavements: A minimum of 95 percent of the maximum dry density as determined by ASTM D1557.
- Below Flexible Pavements: A minimum of 92 percent of the maximum dry density as determined by ASTM D1557 or 95 percent of the maximum dry density as determined by ASTM D698.

The ASTM D1557 test method must be used for samples containing up to 40 percent oversize (greater than ¾-inch) particles. If material contains more than 40 percent but less than 50 percent oversize particles, compaction of fill must be confirmed by proof rolling each lift with a 10-ton vibratory roller (or equivalent) until the maximum density has been achieved. Density testing must be performed after each proof rolling pass until the in-place density test results indicate a drop (or no increase) in the dry density, defined as maximum density or "break over" point. The number of required passes should be used as the requirements on the remainder of fill placement. Material should contain sufficient fines to fill void spaces, and must not contain more than 50 percent oversize particles.

10.7 Backfill of Walls

Backfill materials must conform to the requirements of structural fill, as defined in this report. For wall heights greater than 2.5 feet, the maximum material size should not exceed 4 inches in diameter. Placing oversized material against rigid surfaces interferes with proper compaction, and can induce excessive point loads on walls. Backfill shall not commence until the wall has gained sufficient strength to resist placement and compaction forces. Further, retaining walls above 2.5 feet in height shall be backfilled in a manner that will limit the potential for damage from compaction methods and/or equipment. It is recommended that only small hand-operated compaction equipment be used for compaction of backfill within a horizontal distance equal to the height of the wall, measured from the back face of the wall.

Backfill should be compacted in accordance with the specifications for structural fill, except in those areas where it is determined that future settlement is not a concern, such as planter areas. In nonstructural areas, backfill must be compacted to a firm and unyielding condition.

10.8 Excavations

Shallow excavations that do not exceed 4 feet in depth may be constructed with side slopes approaching vertical. Below this depth, it is recommended that slopes be constructed in accordance with Occupational Safety and Health Administration (OSHA) regulations, Section 1926, Subpart P. Based on these regulations, on-site soils are classified as type "C" soil, and as such, excavations within these soils should be constructed at a maximum slope of 1½ feet horizontal to 1 foot vertical (1½:1) for excavations up to 20 feet in height. Excavations in excess of 20 feet will require additional analysis. Note that these slope angles are considered stable for short-term conditions only, and will not be stable for long-term conditions.

During the subsurface exploration, boring sidewalls generally exhibited little indication of collapse. However; for deep excavations, native granular sediments cannot be expected to remain in position. These materials are prone to failure and may collapse, thereby undermining upper soil layers. This is especially true when excavations approach depths near the water table. Care must be taken to ensure that excavations are properly backfilled in accordance with procedures outlined in this report.

10.9 Groundwater Control

Special precautions may be required for control of surface runoff and subsurface seepage. It is recommended that runoff be directed away from open excavations. Silty soils may become soft and pump if subjected to excessive traffic during time of surface runoff. Ponded water in construction areas should be drained through methods such as trenching, sloping, crowning grades, nightly smooth drum rolling, or installing a French drain system. Additionally, temporary or permanent driveway sections should be constructed if extended wet weather is forecasted.

11. GENERAL COMMENTS

Based on the subsurface conditions encountered during this investigation and available information regarding the proposed project, the site is adequate for the planned construction. When plans and specifications are complete, and if significant changes are made in the character or location of the proposed structure, consultation with Atlas must be arranged as supplementary recommendations may be required. Suitability of subgrade soils and compaction of structural fill materials must be verified by Atlas personnel prior to placement of structural elements. Additionally, monitoring and testing should be performed to verify that suitable materials are used for structural fill and that proper placement and compaction techniques are utilized.

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Appendix I WARRANTY AND LIMITING CONDITIONS

Atlas warrants that findings and conclusions contained herein have been formulated in accordance with generally accepted professional engineering practice in the fields of foundation engineering, soil mechanics, and engineering geology only for the site and project described in this report. These engineering methods have been developed to provide the client with information regarding apparent or potential engineering conditions relating to the site within the scope cited above and are necessarily limited to conditions observed at the time of the site visit and research. Field observations and research reported herein are considered sufficient in detail and scope to form a reasonable basis for the purposes cited above.

Exclusive Use

This report was prepared for exclusive use of the property owner(s), at the time of the report, and their retained design consultants ("Client"). Conclusions and recommendations presented in this report are based on the agreed-upon scope of work outlined in this report together with the Contract for Professional Services between the Client and Materials Testing and Inspection ("Consultant"). Use or misuse of this report, or reliance upon findings hereof, by parties other than the Client is at their own risk. Neither Client nor Consultant make representation of warranty to such other parties as to accuracy or completeness of this report or suitability of its use by such other parties for purposes whatsoever, known or unknown, to Client or Consultant. Neither Client nor Consultant shall have liability to indemnify or hold harmless third parties for losses incurred by actual or purported use or misuse of this report. No other warranties are implied or expressed.

Report Recommendations are Limited and Subject to Misinterpretation

There is a distinct possibility that conditions may exist that could not be identified within the scope of the investigation or that were not apparent during our site investigation. Findings of this report are limited to data collected from noted explorations advanced and do not account for unidentified fill zones, unsuitable soil types or conditions, and variability in soil moisture and groundwater conditions. To avoid possible misinterpretations of findings, conclusions, and implications of this report, Atlas should be retained to explain the report contents to other design professionals as well as construction professionals.

Since actual subsurface conditions on the site can only be verified by earthwork, note that construction recommendations are based on general assumptions from selective observations and selective field exploratory sampling. Upon commencement of construction, such conditions may be identified that require corrective actions, and these required corrective actions may impact the project budget. Therefore, construction recommendations in this report should be considered preliminary, and Atlas should be retained to observe actual subsurface conditions during earthwork construction activities to provide additional construction recommendations as needed.

Since geotechnical reports are subject to misinterpretation, **do not** separate the soil logs from the report. Rather, provide a copy of, or authorize for their use, the complete report to other design

professionals or contractors. Locations of exploratory sites referenced within this report should be considered approximate locations only. For more accurate locations, services of a professional land surveyor are recommended.

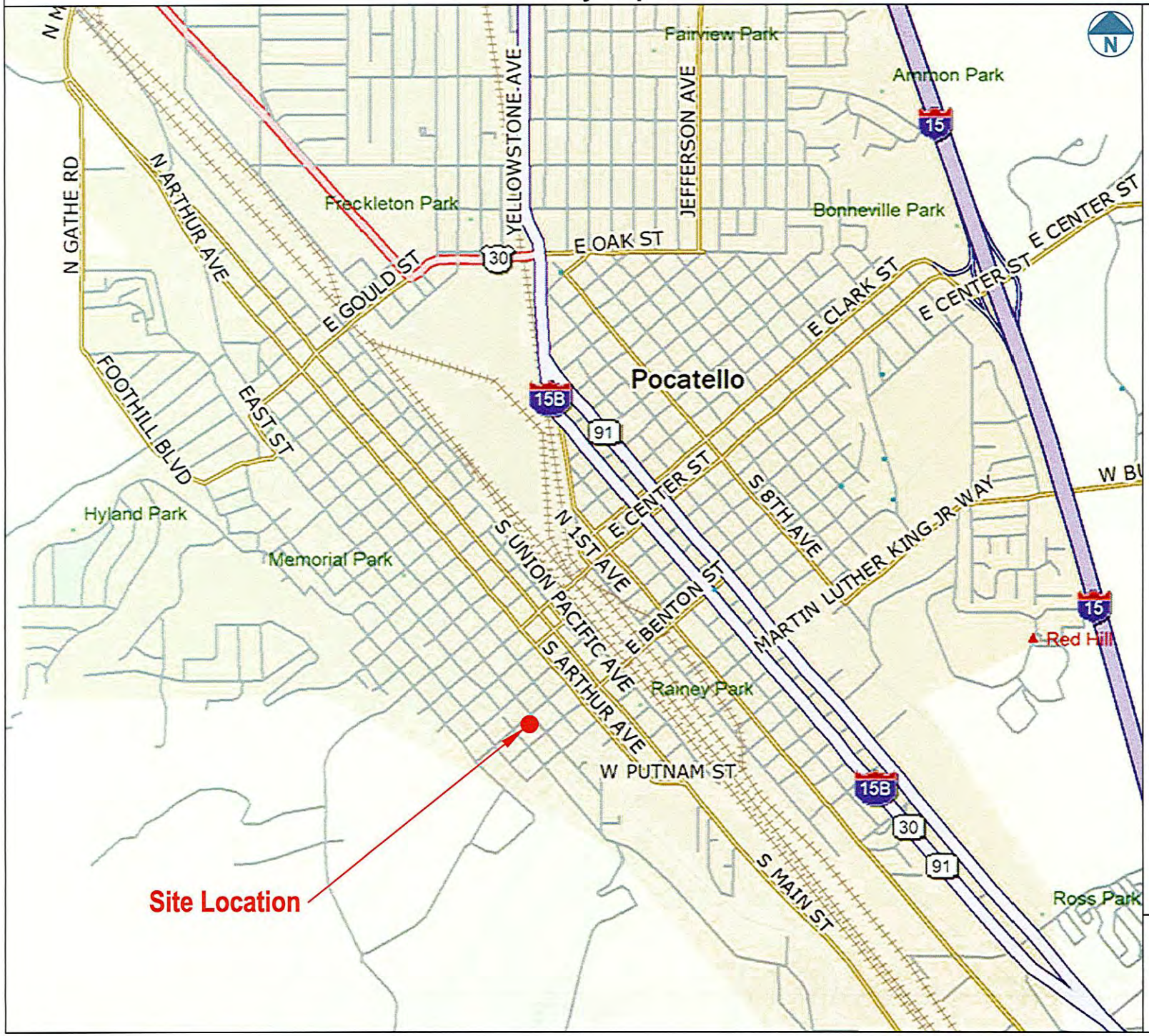
This report is also limited to information available at the time it was prepared. In the event additional information is provided to Atlas following publication of our report, it will be forwarded to the client for evaluation in the form received.

Environmental Concerns

Comments in this report concerning either onsite conditions or observations, including soil appearances and odors, are provided as general information. These comments are not intended to describe, quantify, or evaluate environmental concerns or situations. Since personnel, skills, procedures, standards, and equipment differ, a geotechnical investigation report is not intended to substitute for a geoenvironmental investigation or a Phase II/III Environmental Site Assessment. If environmental services are needed, Atlas can provide, via a separate contract, those personnel who are trained to investigate and delineate soil and water contamination.

Vicinity Map

Figure 1



MAP NOTES:

- Delorme Street Atlas
- Not to Scale

LEGEND

Approximate Site Location

Proposed Lift Station
West Whitman Street
Pocatello, ID

Modified from DeLorme by: CCW
May 3, 2021
Drawing: P211152g

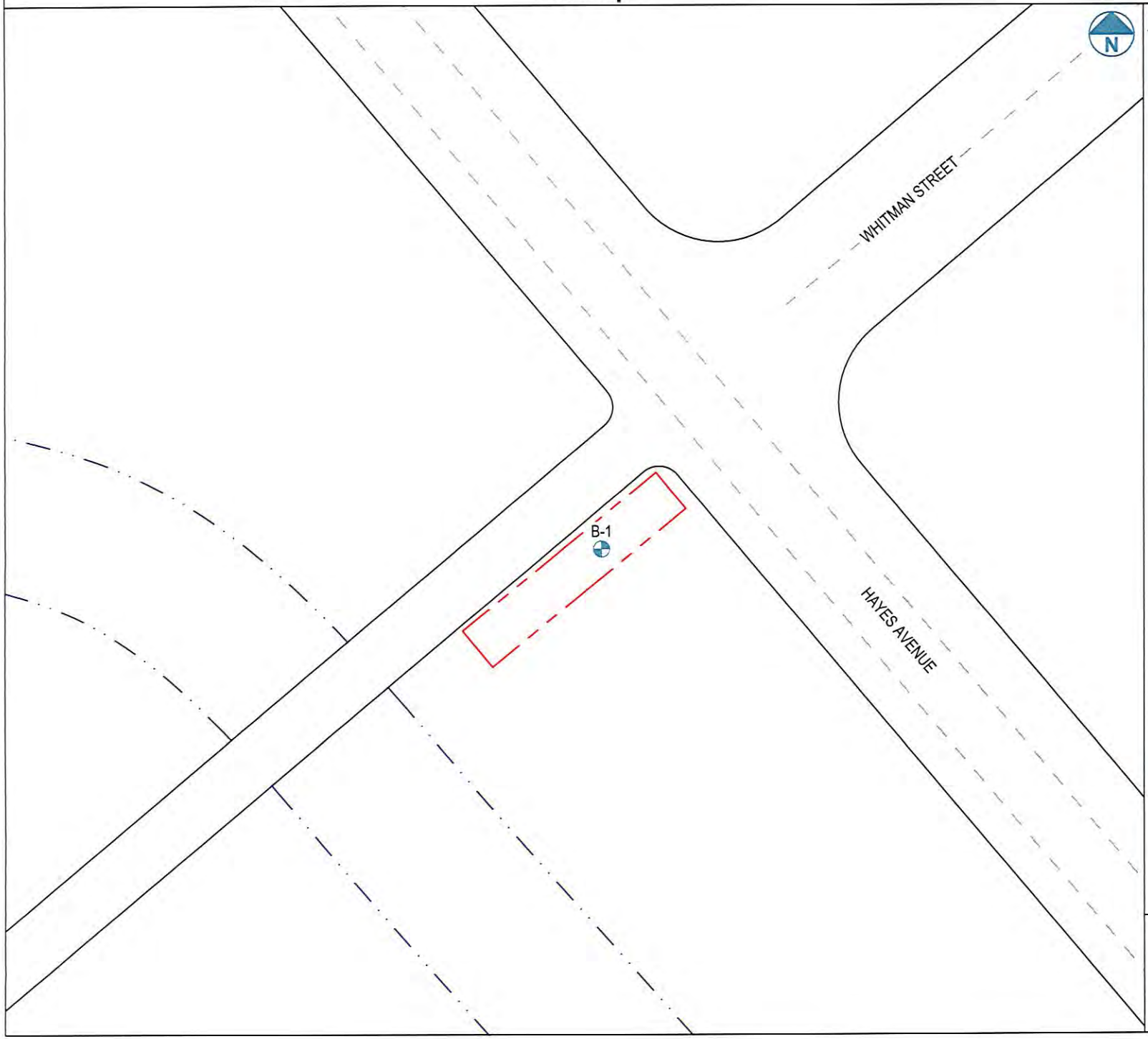
ATLAS

450 East Day St, Suite B
Pocatello, ID 83201

Phone: (208) 233-9500
Fax: (208) 233-9900
Web: oneatlas.com

Site Map

Figure 2



NOTES:

- Not to Scale

LEGEND

Approximate Site Boundary

Approximate Atlas Boring Location

Portneuf River

Proposed Lift Station
West Whitman Street
Pocatello, ID

Drawn by: CCW
May 3, 2021
Drawing: P211152g

ATLAS

450 East Day St, Suite B
Pocatello, ID 83201

Phone: (208) 233-9500
Fax: (208) 233-9900
Web: oneatlas.com

FIELD BORING LOG

BORING NO.: B-1
TOTAL DEPTH: 30.4'

PROJECT INFORMATION

PROJECT: Whitman Lift Station
LOCATION: South Corner of Whitman and Hayes
Pocatello, ID
JOB NO.: P2111529
LOGGED BY: Chris Park, PE

DRILLING INFORMATION

DRILLING CO.: Haztech Drilling, Inc.
METHOD OF DRILLING: 6" Hollow Stem Auger
SAMPLING METHODS: Split Spoon
DATES DRILLED: April 23, 2021
LATITUDE/LONGITUDE: 42.85780, -112.45118

Water level during drilling | Standard Split Spoon | Auger Sample | California Sampler

DEPTH	SOIL TYPE	DESCRIPTION	MOISTURE (%)	LL/PI	% < #4	% < #200	SAMPLE	BLOWS	BLOWS PER FOOT (N)
0		ASPHALTIC CONCRETE: 2 inches							
		SILTY GRAVEL FILL (GM-FILL): Brown, slightly moist, medium dense, with fine-grained sand, fine to coarse gravel, and 4-inch minus cobbles. --1-inch-minus gravel noted from 0.75 to 2.0 feet bgs.						6/12/6	
5								5/6/8	0 30 60
		SANDY SILT (ML): Brown to dark brown, slightly moist, stiff to very stiff, with fine-grained sand.							
10								23/32/50 for 4"	0 30 60
		POORLY GRADED GRAVEL WITH SAND (GP): Gray-brown, slightly moist, very dense, with fine to coarse-grained sand and fine to coarse gravel. --Auger ground on possible cobble or boulder for about 10 minutes at 7.0 feet bgs before breaking through.	18.5	43/23	86	61.0			
15								2/3/4	0 30 60
		SANDY LEAN CLAY (CL): Brown, moist, medium stiff to very stiff, with fine-grained sand. --Minor intermittent fine gravel noted throughout.							
20								4/5/8	0 30 60
25								4/5/11	0 30 60
		POORLY GRADED GRAVEL WITH SAND (GP): Gray-brown, slightly moist, very dense, with fine to coarse-grained sand and fine to coarse gravel. --Refusal on possible cobble or boulder.							
30								50 for 5"	

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Appendix V GEOTECHNICAL GENERAL NOTES

Unified Soil Classification System			
Major Divisions		**Symbol**	**Soil Descriptions**
Coarse-Grained Soils < 50% passes No.200 sieve	Gravel & Gravelly Soils < 50% coarse	GW	Well-graded gravels; gravel/sand mixtures with little or no fines
		GP	Poorly-graded gravels; gravel/sand mixtures with little or no fines
		GM	Silty gravels; poorly-graded gravel/sand/silt mixtures
		GC	Clayey gravels; poorly-graded gravel/sand/clay mixtures
	Sand & Sandy Soils > 50% coarse fraction	SW	Well-graded sands; gravelly sands with little or no fines
		SP	Poorly-graded sands; gravelly sands with little or no fines
		SM	Silty sands; poorly-graded sand/gravel/silt mixtures
		SC	Clayey sands; poorly-graded sand/gravel/clay mixtures
Fine-Grained Soils > 50% passes No.200 sieve	Silts & Clays LL < 50	ML	Inorganic silts; sandy, gravelly or clayey silts
		CL	Lean clays; inorganic, gravelly, sandy, or silty, low to medium-plasticity clays
		OL	Organic, low-plasticity clays and silts
	Silts & Clays LL > 50	MH	Inorganic, elastic silts; sandy, gravelly or clayey elastic silts
		CH	Fat clays; high-plasticity, inorganic clays
		OH	Organic, medium to high-plasticity clays and silts
Highly Organic Soils		PT	Peat, humus, hydric soils with high organic content

Relative Density and Consistency Classification	
Coarse-Grained Soils	**SPT Blow Counts (N)**
Very Loose:	< 4
Loose:	4-10
Medium Dense:	10-30
Dense:	30-50
Very Dense:	> 50
Fine-Grained Soils	**SPT Blow Counts (N)**
Very Soft:	< 2
Soft:	2-4
Medium Stiff:	4-8
Stiff:	8-15
Very Stiff:	15-30
Hard:	> 30

Moisture Content and Cementation Classification	
Description	**Field Test**
Dry	Absence of moisture, dry to touch
Slightly Moist	Damp, but no visible moisture
Moist	Visible moisture
Wet	Visible free water
Saturated	Soil is usually below water table
Description	**Field Test**
Weak	Crumbles or breaks with handling or slight finger pressure
Moderate	Crumbles or breaks with considerable finger pressure
Strong	Will not crumble or break with finger pressure

Particle Size	
Boulders:	> 12 in.
Cobbles:	12 to 3 in.
Gravel:	3 in. to 5 mm
Coarse-Grained Sand:	5 to 0.6 mm
Medium-Grained Sand:	0.6 to 0.2 mm
Fine-Grained Sand:	0.2 to 0.075 mm
Silts:	0.075 to 0.005 mm
Clays:	< 0.005 mm

Acronym List	
GS	grab sample
LL	Liquid Limit
M	moisture content
NP	non-plastic
PI	Plasticity Index
Q_p	penetrometer value, unconfined compressive strength, tsf
V	vane value, ultimate shearing strength, tsf

Appendix VI AASHTO GRAVEL PAVEMENT DESIGN

Pavement Section Design Location: Proposed Whitman Lift Station, Gravel Pavement Section

Average Daily Traffic Count:	100	All Lanes & Both Directions	
Design Life:	10	Years	
Percent of Traffic in Design Lane:	50%		
Terminal Seviceability Index (Pt):	2.5		
Level of Reliability:	95		
Subgrade CBR Value:	4	**Subgrade Mr:**	6,000

Calculation of Design-18 kip ESALs

	Daily Traffic	Growth Rate	Load Factors	Design ESALs
Passenger Cars:	28	2.0%	0.0008	90
Buses:	0	2.0%	0.6806	0
Panel & Pickup Trucks:	20	2.0%	0.0122	975
2-Axle, 6-Tire Trucks:	1	2.0%	0.1890	755
Emergency Vehicles:	0.5	2.0%	4.4800	8,952
Dump Trucks:	0	2.0%	3.6300	0
Tractor Semi Trailer Trucks:	0	2.0%	2.3719	0
Double Trailer Trucks	0	2.0%	2.3187	0
Heavy Tractor Trailer Combo Trucks:	0	2.0%	2.9760	0
Average Daily Traffic in Design Lane:	50			

Total Design Life 18-kip ESALs:	10,773
Actual Log (ESALs):	4.032
Trial SN:	2.00
Trial Log (ESALs):	4.171
Pavement Section Design SN:	2.04

	Design Depth Inches	Structural Coefficient	Drainage Coefficient
Asphaltic Concrete:	0.00	0.42	n/a
Asphalt-Treated Base:	0.00	0.25	n/a
Cement-Treated Base:	0.00	0.17	n/a
Crushed Aggregate Base:	6.00	0.14	1.0
Subbase:	12.00	0.10	1.0
Special Aggregate Subgrade:	0.00	0.09	0.9

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, you can benefit from a lowered exposure to problems associated with subsurface conditions at project sites and development of them that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed herein, contact your GBA-member geotechnical engineer. Active engagement in GBA exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Understand the Geotechnical-Engineering Services Provided for this Report

Geotechnical-engineering services typically include the planning, collection, interpretation, and analysis of exploratory data from widely spaced borings and/or test pits. Field data are combined with results from laboratory tests of soil and rock samples obtained from field exploration (if applicable), observations made during site reconnaissance, and historical information to form one or more models of the expected subsurface conditions beneath the site. Local geology and alterations of the site surface and subsurface by previous and proposed construction are also important considerations. Geotechnical engineers apply their engineering training, experience, and judgment to adapt the requirements of the prospective project to the subsurface model(s). Estimates are made of the subsurface conditions that will likely be exposed during construction as well as the expected performance of foundations and other structures being planned and/or affected by construction activities.

The culmination of these geotechnical-engineering services is typically a geotechnical-engineering report providing the data obtained, a discussion of the subsurface model(s), the engineering and geologic engineering assessments and analyses made, and the recommendations developed to satisfy the given requirements of the project. These reports may be titled investigations, explorations, studies, assessments, or evaluations. Regardless of the title used, the geotechnical-engineering report is an engineering interpretation of the subsurface conditions within the context of the project and does not represent a close examination, systematic inquiry, or thorough investigation of all site and subsurface conditions.

Geotechnical-Engineering Services are Performed for Specific Purposes, Persons, and Projects, and At Specific Times

Geotechnical engineers structure their services to meet the specific needs, goals, and risk management preferences of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client.

Likewise, geotechnical-engineering services are performed for a specific project and purpose. For example, it is unlikely that a geotechnical-engineering study for a refrigerated warehouse will be the same as one prepared for a parking garage; and a few borings drilled during a preliminary study to evaluate site feasibility will not be adequate to develop geotechnical design recommendations for the project.

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project or purpose;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, the reliability of a geotechnical-engineering report can be affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying the recommendations in it. A minor amount of additional testing or analysis after the passage of time – if any is required at all – could prevent major problems.

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read the report in its entirety. Do not rely on an executive summary. Do not read selective elements only. *Read and refer to the report in full.*

You Need to Inform Your Geotechnical Engineer About Change

Your geotechnical engineer considered unique, project-specific factors when developing the scope of study behind this report and developing the confirmation-dependent recommendations the report conveys. Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the elevation, configuration, location, orientation, function or weight of the proposed structure and the desired performance criteria;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project or site changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept*

responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface using various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing is performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgement to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team through project completion to obtain informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, they are <u>not</u> final, because the geotechnical engineer who developed them relied heavily on judgement and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* exposed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a continuing member of the design team, to:

- confer with other design-team members;
- help develop specifications;
- review pertinent elements of other design professionals' plans and specifications; and
- be available whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction-phase observations.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for information purposes only.* To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. This happens in part because soil and rock on project sites are typically heterogeneous and not manufactured materials with well-defined engineering properties like steel and concrete. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are <u>Not</u> Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually provide environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures.* If you have not obtained your own environmental information about the project site, ask your geotechnical consultant for a recommendation on how to find environmental risk-management guidance.

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, the engineer's services were not designed, conducted, or intended to prevent migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will <u>not</u> of itself be sufficient to prevent moisture infiltration. Confront the risk of moisture infiltration*** by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are <u>not</u> building-envelope or mold specialists.***

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