

CITY OF GRANDVIEW

BUTTERNUT WELL CONTROL UPGRADES



HLA PROJECT NO. 23193

Construction Specifications & Bid Documents

APRIL 2024

CITY OF GRANDVIEW, WASHINGTON

CONTRACT DOCUMENTS

FOR

BUTTERNUT WELL CONTROL UPGRADES



HLA PROJECT NO. 23193

OWNER:

City of Grandview
207 W. Second Street
Grandview, WA 98930

ENGINEER:

HLA Engineering and Land Surveying, Inc. (HLA)
2803 River Road
Yakima, WA 98902

APRIL 2024

CITY OF GRANDVIEW
YAKIMA COUNTY, WASHINGTON

CONTRACT DOCUMENTS
FOR

BUTTERNUT WELL CONTROL UPGRADES

HLA PROJECT NO. 23193

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SECTION 1 - ADVERTISEMENT FOR BIDS

ADVERTISEMENT FOR BIDS

City of Grandview
207 W. Second Street
Grandview, WA 98930

The City of Grandview invites separate sealed BIDS for the construction of the Butternut Well Control Upgrades, HLA Project No. 23193 including the following approximate major quantities of work:

Project scope includes demolishing existing electrical control equipment and installing new electrical control cabinet.

This contract has ten (10) working days to complete the work.

Bids will be received by the City Clerk at City Hall, 207 W. Second Street, Grandview, WA 98930, until 11:00 a.m., May 8, 2024, and then shortly thereafter will be publicly opened and read aloud at the City Council Chambers located at 207 W. Second Street.

CONTRACT DOCUMENTS may be obtained at the following website: <https://www.hlacivil.com/bid/>. Planholder list and addenda will be available on the website. Bidders are encouraged to register as planholders on the website, whom will be added to the Planholder list and will receive automatic addenda notification. All questions should be directed to Justin Bellamy, PE at 509-966-7000 or jbellamy@hlacivil.com.

Each bid or proposal must be accompanied by bond or a certified check, payable to the order of the Treasurer of the City of Grandview for the sum of not less than 5% of said bid or proposal and none will be considered unless accompanied by such deposit, to be forfeited to the City of Grandview in the event the successful bidder shall fail or refuse to enter into a Contract with the City for the making and construction of the aforesaid improvement. All bids or proposals must be in writing on the form bound in the Specifications, sealed and filed with the Clerk on or before the day and hour above mentioned.

The City of Grandview, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

Attention is called to the fact that not less than the minimum salaries and wages as set forth in the Contract Documents must be paid on this project, and that the Contractor must ensure that employees and applicants for employment are not discriminated against because of their race, color, religion, sex, or national origin.

The City of Grandview reserves the right to reject any and all bids and to waive technicalities or irregularities, and after careful consideration of all bids and factors involved, make the award to best serve the interests of the City of Grandview.

Anita Palacios

MMC, City Clerk

Publish: April 24, 2024

SECTION 2 - INFORMATION FOR BIDDERS

INFORMATION FOR BIDDERS

BIDS will be received by the City of Grandview (herein called the "OWNER"), at City Hall, 207 W. Second Street, Grandview, WA 98930, until 11:00 a.m., May 8, 2024, and then at the City Council Chambers publicly opened and read aloud.

Each BID must be submitted in a sealed envelope, addressed to the City Clerk at 207 W. Second Street, Grandview, WA 98930. Each sealed envelope containing a BID must be plainly marked on the outside as BID for Butternut Well Control Upgrades, and the envelope should bear on the outside the BIDDER'S NAME, address, and license number if applicable, and the name of the project for which the BID is submitted. If forwarded by mail, the sealed envelope containing the BID must be enclosed in another envelope addressed to the OWNER at City Hall, 207 W. Second Street, Grandview, WA 98930.

All BIDS must be made on the required BID form. All blank spaces for BID prices must be filled in, in ink or typewritten, and the original BID form must be fully completed and executed when submitted. Only one copy of the BID form is required.

The OWNER may waive any informalities or minor defects or reject any and all BIDS. Any BID may be withdrawn prior to the above scheduled time for the opening of BIDS or authorized postponement thereof. Any BID received after the time and date specified shall not be considered. Should there be reasons why the Contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the OWNER and the BIDDER.

BIDDERS must satisfy themselves of the accuracy of the estimated quantities in the BID SCHEDULE by examination of the site and a review of the Drawings and Specifications including ADDENDA. After BIDS have been submitted, the BIDDER shall not assert that there was a misunderstanding concerning the quantities of WORK or of the nature of the WORK to be done.

The CONTRACT DOCUMENTS contain the provisions required for the construction of the PROJECT. Information obtained from an officer, agent, or employee of the OWNER or any other person shall not affect the risks or obligations assumed by the CONTRACTOR nor relieve the CONTRACTOR from fulfilling any of the conditions of the Contract.

Each BID must be accompanied by an original BID BOND payable to the OWNER for five percent of the total amount of the BID. When the Agreement is executed, the bonds of the unsuccessful BIDDERS will be returned. The BID BOND of the successful BIDDER will be retained until the CONTRACT BOND has been executed and approved, after which it will be returned. A certified check may be used in lieu of a BID BOND.

A CONTRACT BOND in the amount of 100 percent of the CONTRACT PRICE, with a corporate Surety approved by the OWNER, will be required for the faithful performance of the Contract. For Contracts of \$150,000 or less, the Contractor may elect to have the OWNER retain additional funds in lieu of a CONTRACT BOND as specified in Section 1-03.4(1) of the Special Provisions

Attorneys-in-fact who sign BID BONDS or CONTRACT BONDS must file with each BOND a certified and effective dated copy of their Power of Attorney.

The party to whom the Contract is awarded will be required to execute the Agreement and obtain the CONTRACT BOND within ten (10) working days from the date when NOTICE OF AWARD is delivered to the BIDDER. The NOTICE OF AWARD shall be accompanied by the necessary Agreement and BOND forms. In case of failure of the BIDDER to execute the Agreement, the OWNER may consider the BIDDER in default, in which case the BID BOND accompanying the proposal shall become the property of the OWNER.

The OWNER may make such investigations as deemed necessary to determine the ability of the BIDDER to perform the WORK, and the BIDDER shall furnish to the OWNER all such information and data for this purpose as the OWNER may request. The OWNER reserves the right to reject any BID if the evidence submitted by, or investigation of, such BIDDER fails to satisfy the OWNER that such BIDDER is properly qualified to carry out the obligations of the Agreement and to complete the WORK contemplated therein.

A conditional or qualified BID will not be accepted.

Award will be made to the lowest responsive, responsible BIDDER or all bids will be rejected.

All applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the PROJECT shall apply to the Contract throughout.

Each BIDDER is responsible for inspecting the site and for reading and being thoroughly familiar with the CONTRACT DOCUMENTS. The failure or omission of any BIDDER to do any of the foregoing shall in no way relieve any BIDDER from any obligation in respect to its BID.

Further, the BIDDER agrees to abide by the requirement under Executive Order No. 11246, as amended, including specifically the provisions of the equal opportunity clause set forth in these Contract Documents.

The low BIDDER shall supply the names and addresses of major material SUPPLIERS and SUBCONTRACTORS when required to do so by the OWNER.

Contract time for this project is anticipated to begin by June 6, 2024.

The ENGINEER is HLA Engineering and Land Surveying, Inc. (HLA), represented by Justin L. Bellamy, PE. The ENGINEER'S address is 2803 River Road, Yakima, Washington 98902, PHONE: (509) 966-7000, EMAIL: jbellamy@hlacivil.com.

SECTION 3 - BID PACKAGE

BIDDER'S CHECKLIST

All forms listed below must be fully executed and submitted with the Bid:

- 1) BID PROPOSAL
- 2) UNIT PRICE BID PROPOSAL
- 3) BID PROPOSAL SIGNATURE PAGE
- 4) AUTHORIZED SIGNATURES (DOT FORM 420-007)
- 5) BID DEPOSIT or BID BOND

BID DEPOSIT - Sign the Bid Deposit in the space provided if the bid is accompanied by a certified check or cashier's check in the amount of not less than 5% of the total amount bid.

OR

BID BOND - This form is to be executed by the bidder and Surety Company. The amount of this bond shall be not less than 5% of the total amount bid and may be shown in dollars or on a percentage basis. Provide Power of Attorney for Surety's agent.

- 6) NON-COLLUSION AFFIDAVIT - Must be subscribed and sworn to before a Notary Public.
- 7) SURETY
- 8) LIST OF REFERENCES
- 9) CERTIFICATION OF COMPLIANCE WITH WAGE PAYMENT STATUTES

The following form must be fully executed and submitted by 12:00 P.M. (noon) of the second business day following the bid submittal deadline.

- 1) SUPPLEMENTAL BIDDER RESPONSIBILITY CRITERIA STATEMENT - Provide supporting documentation as required.

The following forms are to be executed and/or submitted for approval to the Engineer after the Contract is awarded:

- 1) CONTRACT - To be executed by the successful bidder and the City of Grandview.
- 2) DECLARATION OF OPTION FOR CONTRACT BOND OR ADDITIONAL RETAINAGE
- 3) CONTRACT BOND - To be executed by the successful bidder and his Surety Company. Provide Power of Attorney.
- 4) SCHEDULE OF WORKING HOURS
- 5) CERTIFICATE OF PUBLIC LIABILITY AND PROPERTY DAMAGE INSURANCE and contractually required endorsements must be provided by the successful bidder in accordance with the provisions of the Standard Specifications and Technical Specifications.

BID PROPOSAL

A Proposal of _____ (hereinafter called "BIDDER"), organized and existing under the laws of the State of Washington doing business as _____¹. To the City of Grandview, Washington, (hereinafter called "OWNER").

In compliance with your Advertisement for Bids, BIDDER hereby proposes to perform all work for the construction of the BUTTERNUT WELL CONTROL UPGRADES, HLA Project No. 23193, in strict accordance with the CONTRACT DOCUMENTS, within the time set forth therein, and at the prices stated below.

By submission of this BID, each BIDDER certifies, in the case of a joint BID each party thereto certifies as to its own organization, that this BID has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this BID with any other BIDDER or with any competitor.

BIDDER hereby agrees to commence work under this Contract within ten (10) calendar days after NOTICE TO PROCEED and to fully complete the PROJECT within ten (10) working days of such NOTICE TO PROCEED.

BIDDER further agrees to pay as liquidated damages the sum specified for each working day thereafter as provided in Section 1-08.9 of the Standard Specifications.

BIDDER acknowledges receipt of the following ADDENDA:

Addenda will be posted on the Engineer's website: <https://www.hlacivil.com/bid/>. Bidders are encouraged to register as planholders on the website, whom will be added to the Planholder list and will receive automatic addenda notification.

BIDDER agrees to perform all the work described in the CONTRACT DOCUMENTS for the following unit prices or lump sum amounts:

¹ Insert "a corporation," "a partnership," or "an individual" as applicable.

UNIT PRICE BID PROPOSAL

(NOTE: Unit prices for all items, all extensions, and total amount of bid must be shown. Any changes/corrections to the bid must be initialed by the signer of the bid, in accordance with Section 1-02.5.)

CITY OF GRANDVIEW
BUTTERNUT WELL CONTROL UPGRADES
HLA PROJECT NO. 23193

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY		<u>UNIT PRICE</u> DOLLARS-CTS		<u>AMOUNT</u> DOLLARS-CTS
1	Minor Change	FA	Est.	X	\$5,000.00	=	\$5,000.00
2	Mobilization	LS	---	X	---	=	
3	Control Panel Upgrades, Complete	LS	---	X	---	=	
BID SUBTOTAL							
8.0% STATE SALES TAX							
BID TOTAL							

BID PROPOSAL SIGNATURE PAGE

CITY OF GRANDVIEW
BUTTERNUT WELL CONTROL UPGRADES
HLA PROJECT NO. 23193

_____, 2024
BIDDER _____ (CONTRACTOR) _____ DATE _____

BY _____
AUTHORIZED OFFICIAL'S SIGNATURE _____ TITLE _____

(Please print or type name)

Mailing Address:

Phone: _____

E-mail address: _____

CONTRACTOR LICENSE NUMBER _____

CONTRACTOR DUNS NUMBER _____

CONTRACTOR UBI NUMBER _____

CONTRACTOR FEDERAL TAX I.D. NUMBER _____

CONTRACTOR EMPLOYMENT SECURITY DEPARTMENT NUMBER _____

CONTRACTOR INDUSTRIAL INSURANCE ACCOUNT NUMBER _____

The names of the principal officers of the corporation submitting this Proposal, or of the partnership, or of all persons interested in this Proposal as principals are as follows:

PROJECT MANAGER _____ CELL PHONE: _____

NOTES:

- 1) If the bidder is a co-partnership, so state, giving firm name under which business transacted. If the bidder is a corporation, this proposal must be executed by its duly authorized officials.
- 2) Bidders shall acknowledge receipt of all addenda, if any, in the space provided on the first page of this proposal.



Authorized Signatures

List the name and title of those individuals in your organization who are authorized to execute proposals, contracts, bonds and other documents and/or instruments on behalf of the organization. Specify if more than one signature is required.

NOTE: Signature must appear next to name

Name (Typed)	Signature	Title
Name (Typed)	Signature	Title
Name (Typed)	Signature	Title
Name (Typed)	Signature	Title
Name (Typed)	Signature	Title
Name (Typed)	Signature	Title
Name (Typed)	Signature	Title
Name (Typed)	Signature	Title
Name (Typed)	Signature	Title
Name (Typed)	Signature	Title
Name (Typed)	Signature	Title

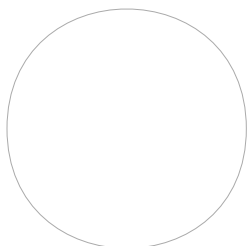
The undersigned, being duly sworn, deposes and says that the foregoing is a true statement of facts concerning the individual, corporation, co-partnership or joint venture herein named, as of the date indicated:

Name of Firm - Be Exact

Sworn to before me this _____

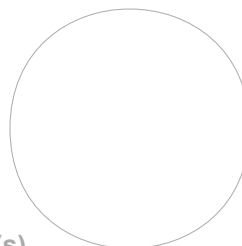
day of _____, _____

Notary Public



Notary Seal

Authorized Signature(s)



Corporate Seal(s)

BID DEPOSIT

CITY OF GRANDVIEW
BUTTERNUT WELL CONTROL UPGRADES
HLA PROJECT NO. 23193

Herewith find deposit in the form of a certified check or cashier's check in the amount of
\$ _____, which amount is not less than five percent (5%) of
our total bid for this project.

Sign Here _____

OR

BID BOND

KNOW ALL PERSONS BY THESE PRESENTS:

That we _____, as Principal,
and _____, as
Surety, are held and firmly bound unto the CITY OF GRANDVIEW, as Obligee, in the penal sum of
_____ Dollars, for the payment
of which the Principal and the Surety bind themselves, their heirs, executors, administrators, successors
and assigns, jointly and severally, by these presents.

The condition of this obligation is such that if the Obligee shall make any award to the Principal for
BUTTERNUT WELL CONTROL UPGRADES, HLA Project No. 23193, according to the terms of the
proposal or bid made by the Principal therefor, and the Principal shall duly make and enter into a Contract
with the Obligee in accordance with the terms of said proposal or bid and award and shall give bond for
the faithful performance thereof, with Surety or Sureties approved by the Obligee; or if the Principal shall,
in case of failure so to do, pay and forfeit to the Obligee the penal amount of the deposit specified in the
call for bids, then this obligation shall be null and void; otherwise it shall be and remain in full force and
effect and the Surety shall forthwith pay and forfeit to the Obligee, as penalty and liquidated damages, the
amount of this bond.

SIGNED, SEALED, AND DATED THIS _____ DAY OF _____, 2024.

Principal

Surety

_____, 2024

NON-COLLUSION AFFIDAVIT

CITY OF GRANDVIEW
BUTTERNUT WELL CONTROL UPGRADES
HLA PROJECT NO. 23193

STATE OF WASHINGTON)
) ss. NON-COLLUSION AFFIDAVIT
COUNTY OF _____)

_____, being first
duly sworn, on oath says that the bid above submitted is a genuine and not a sham or collusive bid, or
made in the interest or on behalf of any person not therein named; and the said bidder further says that
the said bidder has not directly or indirectly induced or solicited any bidder on the above work or supplies
to put in a sham bid, or any other person or corporation to refrain from bidding; and that said bidder has
not in any manner sought by collusion to secure to themselves an advantage over any other bidder or
bidders.

(Contractor's Signature)

Signed and sworn to (or affirmed) before me on _____, 2024, by

Notary Public Name

Notary Public Signature

My Appointment Expires _____

SURETY

CITY OF GRANDVIEW
BUTTERNUT WELL CONTROL UPGRADES
HLA PROJECT NO. 23193

If the Bidder is awarded a construction Contract on this bid, the Surety who provides the Contract Bond will be

_____ whose address is:

Street City State ZIP

LIST OF REFERENCES

CITY OF GRANDVIEW
BUTTERNUT WELL CONTROL UPGRADES
HLA PROJECT NO. 23193

List all projects of a similar nature completed by the BIDDER during the previous five (5) years. Similar projects are considered to be those projects with a contract amount of not less than 50 percent of the amount bid on this project with the type of construction, materials, and methods necessary for completion of this project. Provide name of contact person and phone number. Failure to complete this List of References may be cause for rejection of the BID.

<u>Previous Similar Projects</u>	<u>Contact Person</u>	<u>Phone Number</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

CERTIFICATION OF COMPLIANCE WITH WAGE PAYMENT STATUTES

CITY OF GRANDVIEW
BUTTERNUT WELL CONTROL UPGRADES
HLA PROJECT NO. 23193

Failure to return this certification as part of the Bid Proposal package will make this Bid nonresponsive and ineligible for Award.

I hereby certify, under penalty of perjury under the laws of the State of Washington, on behalf of the firm identified below that, to the best of my knowledge and belief, this firm has NOT been determined by a final and binding citation and notice of assessment issued by the Washington State Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction to have willfully violated, as defined in RCW 49.48.082, any provision of RCW chapters 49.46, 49.48, or 49.52 within three (3) years prior to the date of the Call for Bids.

OFFICIAL AUTHORIZED TO SIGN FOR BIDDER:

Bidder Name: _____
Name of Contractor/Bidder – Print full legal entity name of firm

Signature of Authorized Person

Date

Print Name and Title

Location or Place Executed (City, State)

SUPPLEMENTAL BIDDER RESPONSIBILITY CRITERIA STATEMENT

CITY OF GRANDVIEW
BUTTERNUT WELL CONTROL UPGRADES
HLA PROJECT NO. 23193

This form shall be completed in its entirety and submitted by the apparent low Bidder to the Contracting Agency by 12:00 P.M. (noon) of the second business day following the bid submittal deadline.

Bidder will be deemed not responsible if Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1), as amended, or supplemental bidder responsibility criteria listed in Section 1-02.14 of the Special Provisions, including submission of further documentation as may be requested by the Contracting Agency.

Contractor:

Name: _____

Address: _____

Phone: _____

Contact Person: _____

1. Delinquent State Taxes:

Instruction to Bidders: Check the appropriate box

- ☐ The undersigned certifies that the Bidder does not owe delinquent taxes to the Washington State Department of Revenue without a payment plan approved by the Department of Revenue.
- ☐ Alternatively, the undersigned certifies that the Bidder does owe delinquent taxes to the Washington State Department of Revenue with a payment plan approved by the Department of Revenue.

If the Bidder does owe delinquent taxes to the Washington State Department of Revenue, the Bidder must submit a written payment plan approved by the Department of Revenue, to the Contracting Agency by the deadline listed above.

- 2. **Federal Debarment:** The Bidder shall not currently be debarred or suspended by the Federal government. The Bidder shall not be listed as having an "active exclusion" on the U.S. government's "System for Award Management" database (www.sam.gov).
- 3. **Subcontractor Responsibility:** The undersigned certifies that the Bidder's standard subcontract form includes the subcontractor responsibility language required by RCW 39.06.020, and the Bidder has an established procedure it utilizes to validate the responsibility of each of its subcontractors.

4. Claims Against Retainage and Bonds:

Instruction to Bidders: Check the appropriate box

- ☐ The undersigned certifies that the Bidder has not had claims against retainage or payment bonds for public works projects in the three (3) years prior to the bid submittal date.
- ☐ Alternatively, the undersigned certifies that the Bidder has had claims against retainage or payment bonds for public works projects in the three (3) years prior to the bid submittal date.

If the Bidder has had claims against retainage and payment bonds for public works projects in the three (3) years prior to the bid submittal date, submit a list of public works projects completed during this period that have had claims against retainage and payment bonds and include name of Project, Owner and contact information for the Owner, a list of claims filed against retainage and/or payment bond for any of the projects listed; and a written explanation of circumstances surrounding each claim and the ultimate resolution of the claim.

5. Public Bidding Crime:

Instructions to Bidders: Check the appropriate box

- ☐ The undersigned certifies that the Bidder and/or its Owners have not been convicted of a crime involving bidding on a public works contract in the five (5) years prior to the bid submittal date.
- ☐ Alternatively, the undersigned confirms that the Bidder and/or its Owners have been convicted of a crime involving bidding on a public works contract in the five (5) years prior to the bid submittal date.

If the Bidder and/or its Owners have been convicted of a crime involving bidding on a public works contract, provide a written explanation identifying the date of the conviction and a description of the circumstances surrounding the conviction.

6. Termination for Cause/Termination for Default:

Instructions to Bidders: Check the appropriate box

- ☐ The undersigned certifies that the Bidder has not had any public works contracts terminated for cause or terminated for default by a government agency in the five (5) years prior to the bid submittal date.
- ☐ Alternatively, the undersigned confirms that the Bidder has had public works contracts terminated for cause or terminated for default by a government agency in the five (5) years prior to the bid submittal date.

If the Bidder has had any public works contracts terminated for cause or terminated for default in the five (5) years prior to the bid submittal date, provide a written explanation for all contracts terminated for cause or terminated for default by identifying the Project contract that was terminated, the government agency which terminated the contract, the date of the termination, and a description of the circumstances surrounding the termination.

7. Lawsuits:

Instructions to Bidders: Check the appropriate box

- ☐ The undersigned certifies that the Bidder has not had any lawsuits with judgments entered against the Bidder in the five (5) years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts.
- ☐ Alternatively, the undersigned confirms that the Bidder has had lawsuits with judgments entered against the Bidder in the five (5) years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts.

If the Bidder has had any lawsuits with judgments entered against the Bidder in the five (5) years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, submit a list of lawsuits along with a written explanation of the circumstances surrounding each lawsuit. The Contracting Agency shall evaluate these explanations to determine whether the lawsuits demonstrate a pattern of failing to meet the terms of contracts.

(Date)

(Signature)

(Print Name)

(Title)

SECTION 4 - CONTRACT AND RELATED MATERIALS

CONTRACT

THIS AGREEMENT, made and entered into in triplicate, this _____ day of _____, 2024, by and between the City of Grandview, hereinafter called the OWNER, and _____, hereinafter called the CONTRACTOR,

WITNESSETH:

That in consideration of the terms and conditions contained herein and attached and made a part of this Agreement, the parties hereto covenant and agree as follows:

- I. The CONTRACTOR shall do all work and furnish all tools, materials, and equipment for the bid amount of \$_____, for BUTTERNUT WELL CONTROL UPGRADES, HLA Project No. 23193, in accordance with and as described in the attached Plans and Specifications, and the Standard Specifications for Road, Bridge, and Municipal Construction, which are by this reference incorporated herein and made a part hereof, and shall perform any alterations in or additions to the work provided under this Contract and every part thereof.

Contract time shall begin on the first working day following the Notice to Proceed Date and shall be completed within ten (10) working days of the date of such Notice to Proceed (see SPECIAL PROVISIONS - Section 1-08.5).

If said work is not completed within the time specified, the CONTRACTOR agrees to pay to the OWNER for each and every working day said work remains uncompleted after expiration of the specified time, liquidated damages as determined in Section 1-08.9.

The CONTRACTOR shall provide and bear the expense of all equipment, work, and labor of any sort whatsoever that may be required for the transfer of materials and for constructing and completing the work provided for in this Contract and every part thereof, except such as are mentioned in the Specifications to be furnished by the OWNER.

- II. The OWNER hereby promises and agrees with the CONTRACTOR to employ, and does employ the CONTRACTOR to provide the materials and to do and cause to be done the above described work and to complete and finish the same according to the attached Plans and Specifications and the terms and conditions herein contained; and hereby contracts to pay for the same according to the attached Specifications and the schedule of unit or itemized prices hereto attached, at the time and in the manner and upon the conditions provided for in this Contract.
- III. The CONTRACTOR for himself, and for his/her heirs, executors, administrators, successors, and assigns does hereby agree to the full performance of all the covenants herein upon the part of the CONTRACTOR.
- IV. It is further provided that no liability shall attach to the OWNER by reason of entering into this Contract, except as expressly provided herein.
- V. CONTRACTOR is an independent contractor and not an employee of the OWNER. The OWNER has designated the Contract performance and the CONTRACTOR shall be responsible for the details of that work. The parties recognize the CONTRACTOR has unique skills not otherwise available to the OWNER to accomplish the purpose of the Contract. The CONTRACTOR shall supply all equipment and supplies necessary to accomplish the Contract. The parties recognize that the purpose of the Contract is not within the regular course of business of the OWNER. The parties state that the right of control over the activities necessary to perform the Contract are with the CONTRACTOR.

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed the day and year first herein above written.

OWNER:

City of Grandview, Washington

(SEAL)

By: _____

ATTEST:

Name: Ashley Lara

Title: Mayor

Name: Anita Palacios

Title: MMC, City Clerk

CONTRACTOR:

(CONTRACTOR NAME)

By: _____
AUTHORIZED OFFICIAL'S SIGNATURE

(SEAL)

Name: _____
(Please Print or Type)

ATTEST:

Address: _____

Phone: _____

Email: _____

Name: _____
(Please Print or Type)

DECLARATION OF OPTION FOR CONTRACT BOND OR ADDITIONAL RETAINAGE
(Contracts Under \$150,000 only)

CITY OF SUNNYSIDE
DIGESTER HEATING SYSTEM UPGRADES (EQUIPMENT PURCHASE)
HLA PROJECT NO. 23197A

Note: This form must be submitted at the time the Contractor executes the Contract. The Contractor shall designate the option desired by checking the appropriate space.

The Contractor elects to:

_____ (1) Furnish a contract bond in the amount of the total contract sum. An executed contract bond on the required form is included with the executed contract documents. Mandatory on contracts exceeding \$150,000.00.

_____ (2) Have the City retain, in lieu of the contract bond, ten percent (10%) of the total contract amount for a period of thirty (30) days after final acceptance or until receipt of all necessary releases from the Department of Revenue and the Department of Labor and industries and settlement of any liens filed under Chapter 60.28 RCW, whichever is later.

In choosing option 2, the Contractor agrees that if the Contractor, its heirs, executors, administrators, successors, or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and agreements in the Contract, and shall faithfully perform all the provisions of such contract and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of the Contract that may hereafter be made, at the time and in the manner therein specified, and shall pay all laborers, mechanics, subcontractors, with provisions and supplies for the carrying on of such work, on his or her part, and shall indemnify and save harmless the City of Sunnyside, Washington, its officers and agents from any claim for such payment, then the funds retained in lieu of a Contract Bond shall be released at the time provided in said option 2; otherwise, the funds shall be retained until the Contractor fulfills the said obligations.

Contractor Signature

Date

CONTRACT BOND

CITY OF GRANDVIEW
BUTTERNUT WELL CONTROL UPGRADES
HLA PROJECT NO. 23193

BOND TO CITY OF GRANDVIEW

KNOW ALL PERSONS BY THESE PRESENTS:

That we, the undersigned, _____,
as principal, and _____,

a corporation organized and existing under the laws of the State of _____, as a Surety corporation, and qualified under the laws of the State of Washington to become Surety upon bonds of contractors with municipal corporations, as Surety, are jointly and severally held and firmly bound to the City of Grandview in the penal sum of \$ _____ for the payment of which sum we bind ourselves and our successors, heirs, administrators, or personal representatives, as the case may be.

This obligation is entered into in pursuance of the statutes of the State of Washington and the Ordinances of the City of Grandview.

Dated at _____, Washington, this _____ day of _____, 2024.

Nevertheless, the conditions of the above obligation are such that:

WHEREAS, under and pursuant to action of the City of Grandview, on _____, 2024, the City Administrator of said City of Grandview, has let or is about to let to the said _____, the above bounden Principal, a certain Contract, the said Contract being numbered HLA Project No. 23193, and providing for the construction of BUTTERNUT WELL CONTROL UPGRADES which Contract is referred to herein and is made a part hereof as though attached hereto, and

WHEREAS, the said Principal has accepted, or is about to accept, the said Contract, and undertake to perform the work therein provided for in the manner and within the time set forth;

NOW, THEREFORE, if the said _____ shall faithfully perform all the provisions of said Contract in the manner and within the time therein set forth, or within such extensions of time as may be granted under said Contract, and shall pay all laborers, mechanics, sub-contractors and material men and all industrial insurance premiums, and all persons who shall supply said principal or subcontractors with provisions and supplies for the carrying on of said work, and shall indemnify and hold the City of Grandview harmless from any damage or expense by reason of failure of performance as specified in said Contract or from defects appearing or developing in the material or workmanship provided or performed under said Contract within a period of one year after its acceptance thereof by the City of Grandview, then and in that event this obligation shall be void; but otherwise it shall be and remain in full force and effect.

CITY OF GRANDVIEW
BUTTERNUT WELL CONTROL UPGRADES
HLA PROJECT NO. 23193

SURETY: _____

By: _____
(Attorney-in-fact)

Name: _____
(Please Print or Type)

Agent: _____

Address: _____

Surety Representative Name:

Surety Representative Phone:

Surety Representative Email:

CONTRACTOR:

CONTRACTOR NAME

By: _____
AUTHORIZED OFFICIAL'S SIGNATURE

Name: _____
(Please Print or Type)

SCHEDULE OF WORKING HOURS

CITY OF GRANDVIEW
BUTTERNUT WELL CONTROL UPGRADES
HLA PROJECT NO. 23193

In accordance with Section 1-08.0(2) Hours of Work, the normal straight time working hours for this project will be from _____ a.m. to _____ p.m., _____ days per week. It is understood that normal straight time working hours shall not exceed 40 hours per week, regardless of the number of days worked per week. All hours worked in excess of 40 hours per week shall be considered as overtime hours subject to the reimbursement provisions of Section 1-08.0(2) Hours of Work and Section 1-08.0(3) Reimbursement for Overtime Work of Contracting Agency Employees.

Overtime hours are defined as any hours in excess of or outside of the above normal straight time working hours when the Contractor and/or his subcontractors are on the project site performing work.

I hereby certify that my subcontractors have been notified of the normal straight time working hours provisions of this project and understand that Engineer/Contracting Agency costs for overtime hours will be deducted from amounts due to me for work performed on the project.

Contractor

Signature

Date

SECTION 5 - LABOR STANDARDS AND WAGE RATE CONDITIONS

PREVAILING WAGE RATES

The prevailing rate of wages to be paid to all workmen, laborers, or mechanics employed in the performance of any part of this Contract shall be in accordance with the provisions of Chapter 39.12 RCW, as amended. The rules and regulations of the Department of Labor and Industries and the schedule of prevailing wage rates for the locality or localities where this Contract will be performed as determined by the Industrial Statistician of the Washington State Department of Labor and Industries, are by reference made a part of this Contract. A schedule of prevailing wage rates is included in these Specifications.

Inasmuch as the CONTRACTOR will be held responsible for paying this schedule of wages, it is imperative that all contractors and subcontractors familiarize themselves with the current wage rates before submitting bids based on these Specifications.

Before any payment is made by the local government body of any sums due under this Contract, the local government body must receive from the Contractor and each subcontractor a copy of the "Statement of Intent to Pay Prevailing Wages" approved by the Washington State Department of Labor and Industries. Prior to acceptance of the project, the Contracting Agency must receive from the Contractor and each subcontractor a copy of "Affidavit of Wages Paid" and, in addition, from the prime contractor a copy of "Release for the Protection of Property Owners and General Contractor," all approved by the Washington State Department of Labor and Industries. Forms may be obtained from the Department of Labor and Industries. The Contractor and each subcontractor shall pay all fees associated with and make all applications directly to the Department of Labor and Industries. These affidavits will be required before any funds retained, according to the provisions of RCW 60.28.011, are released to the Contractor. Payment by the Contractor and subcontractor of any fees shall be considered incidental to the construction and all costs shall be included in other pay items of the project.

Pursuant to RCW 39.12.120, a contractor, subcontractor, or employer shall file a copy of its certified payroll records using the Washington State Department of Labor and Industries (L&I) online system at least once per month. If the L&I online system is not used, a contractor, subcontractor, or employer shall file a copy of its certified payroll records directly with L&I in a format approved by L&I at least once per month. A contractor, subcontractor, or employer's noncompliance with this reporting constitutes a violation of RCW 39.12.050.

Submission of certified payrolls to the Engineer is not required during the project, unless specifically requested by the Engineer or Owner. Certified payrolls submitted to the Engineer or Owner without a request will not be reviewed and will be returned to the Contractor. Contractors must keep accurate payroll records for three years following the date of acceptance of the project by the Contracting Agency. Payroll records must show the name, address, Social Security number, trade or occupation, straight time rate, hourly rate of usual benefits and overtime hours worked each day and week, including agreements to work up to 10-hour days, and the actual rate of wages. Upon receiving a written request by any interested party, the Contractor must, within ten days, submit Certified Payroll records to the Contracting Agency and the Department of Labor.

State of Washington
Department of Labor & Industries
Prevailing Wage Section - Telephone 360-902-5335
PO Box 44540, Olympia, WA 98504-4540

Washington State Prevailing Wage

The PREVAILING WAGES listed here include both the hourly wage rate and the hourly rate of fringe benefits. On public works projects, worker's wage and benefit rates must add to not less than this total. A brief description of overtime calculation requirements are provided on the Benefit Code Key.

Journey Level Prevailing Wage Rates for the Effective Date: 5/8/2024

<u>County</u>	<u>Trade</u>	<u>Job Classification</u>	<u>Wage</u>	<u>Holiday</u>	<u>Overtime</u>	<u>Note</u>	<u>*Risk Class</u>
Yakima	Asbestos Abatement Workers	Journey Level	\$47.72	<u>5D</u>	<u>1H</u>		View
Yakima	Boilermakers	Journey Level	\$74.29	<u>5N</u>	<u>1C</u>		View
Yakima	Brick Mason	Journey Level	\$57.54	<u>5A</u>	<u>1M</u>		View
Yakima	Building Service Employees	Janitor	\$16.28		<u>1</u>		View
Yakima	Building Service Employees	Shampooer	\$16.28		<u>1</u>		View
Yakima	Building Service Employees	Waxer	\$16.28		<u>1</u>		View
Yakima	Building Service Employees	Window Cleaner	\$16.28		<u>1</u>		View
Yakima	Cabinet Makers (In Shop)	Journey Level	\$16.35		<u>1</u>		View
Yakima	Carpenters	Acoustical Workers	\$74.96	<u>15J</u>	<u>4C</u>		View
Yakima	Carpenters	Bridge, Dock & Wharf Carpenter	\$75.41	<u>15J</u>	<u>4C</u>		View
Yakima	Carpenters	Journey Level	\$74.96	<u>15J</u>	<u>4C</u>		View
Yakima	Carpenters	Scaffold/Shoring Erecting & Dismantling	\$74.96	<u>15J</u>	<u>4C</u>		View
Yakima	Cement Masons	Journey Level	\$54.94	<u>7B</u>	<u>1N</u>		View
Yakima	Divers & Tenders	Bell / Vehicle or Submersible Operator (not under pressure)	\$129.71	<u>15J</u>	<u>4C</u>		View
Yakima	Divers & Tenders	Dive Supervisor/Master	\$93.94	<u>15J</u>	<u>4C</u>		View
Yakima	Divers & Tenders	Diver	\$129.71	<u>15J</u>	<u>4C</u>		View
Yakima	Divers & Tenders	Diver - 101 to 150 Feet	\$129.05	<u>15J</u>	<u>4C</u>		View
Yakima	Divers & Tenders	Diver - 151 to 220 Feet	\$130.05	<u>15J</u>	<u>4C</u>		View
Yakima	Divers & Tenders	Diver - 221 Feet and Deeper	\$131.05	<u>15J</u>	<u>4C</u>		View
Yakima	Divers & Tenders	Diver - 50 to 100 Feet	\$128.05	<u>15J</u>	<u>4C</u>		View
Yakima	Divers & Tenders	Diver on Standby	\$88.94	<u>15J</u>	<u>4C</u>		View
Yakima	Divers & Tenders	Diver Tender	\$80.82	<u>15J</u>	<u>4C</u>		View
Yakima	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 0-30.00 PSI	\$93.26	<u>15J</u>	<u>4C</u>		View
Yakima	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 30.01 - 44.00 PSI	\$98.26	<u>15J</u>	<u>4C</u>		View

Yakima	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 44.01 - 54.00 PSI	\$102.26	15J	4C		View
Yakima	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 54.01 - 60.00 PSI	\$107.26	15J	4C		View
Yakima	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 60.01 - 64.00 PSI	\$109.76	15J	4C		View
Yakima	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 64.01 - 68.00 PSI	\$114.76	15J	4C		View
Yakima	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 68.01 - 70.00 PSI	\$116.76	15J	4C		View
Yakima	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 70.01 - 72.00 PSI	\$118.76	15J	4C		View
Yakima	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 72.01 - 74.00 PSI	\$120.76	15J	4C		View
Yakima	Divers & Tenders	Manifold Operator	\$80.82	15J	4C		View
Yakima	Divers & Tenders	Manifold Operator Mixed Gas	\$85.82	15J	4C		View
Yakima	Divers & Tenders	Remote Operated Vehicle Operator/Technician	\$80.82	15J	4C		View
Yakima	Divers & Tenders	Remote Operated Vehicle Tender	\$75.41	15J	4C		View
Yakima	Dredge Workers	Assistant Engineer	\$79.62	5D	3F		View
Yakima	Dredge Workers	Assistant Mate (Deckhand)	\$79.01	5D	3F		View
Yakima	Dredge Workers	Boatmen	\$79.62	5D	3F		View
Yakima	Dredge Workers	Engineer Welder	\$81.15	5D	3F		View
Yakima	Dredge Workers	Leverman, Hydraulic	\$82.77	5D	3F		View
Yakima	Dredge Workers	Mates	\$79.62	5D	3F		View
Yakima	Dredge Workers	Oiler	\$79.01	5D	3F		View
Yakima	Drywall Applicator	Journey Level	\$75.73	15O	11S		View
Yakima	Drywall Tapers	Journey Level	\$75.73	15O	11S		View
Yakima	Electrical Fixture Maintenance Workers	Journey Level	\$43.32		1		View
Yakima	Electricians - Inside	Cable Splicer	\$82.37	5A	11F		View
Yakima	Electricians - Inside	Journey Level	\$79.54	5A	11F		View
Yakima	Electricians - Inside	Welder	\$85.21	5A	11F		View
Yakima	Electricians - Motor Shop	Craftsman	\$16.28		1		View
Yakima	Electricians - Motor Shop	Journey Level	\$16.28		1		View
Yakima	Electricians - Powerline Construction	Cable Splicer	\$93.00	5A	4D		View
Yakima	Electricians - Powerline Construction	Certified Line Welder	\$85.42	5A	4D		View
Yakima	Electricians - Powerline Construction	Groundperson	\$55.27	5A	4D		View
Yakima	Electricians - Powerline Construction	Heavy Line Equipment Operator	\$85.42	5A	4D		View

Yakima	Electricians - Powerline Construction	Journey Level Lineperson	\$85.42	5A	4D		View
Yakima	Electricians - Powerline Construction	Line Equipment Operator	\$73.35	5A	4D		View
Yakima	Electricians - Powerline Construction	Meter Installer	\$55.27	5A	4D	8W	View
Yakima	Electricians - Powerline Construction	Pole Sprayer	\$85.42	5A	4D		View
Yakima	Electricians - Powerline Construction	Powderperson	\$63.50	5A	4D		View
Yakima	Electronic Technicians	Journey Level	\$53.13	5I	1B		View
Yakima	Elevator Constructors	Mechanic	\$111.26	7D	4A		View
Yakima	Elevator Constructors	Mechanic In Charge	\$120.27	7D	4A		View
Yakima	Fabricated Precast Concrete Products	Craftsman - In-Factory Work Only	\$16.28		1		View
Yakima	Fabricated Precast Concrete Products	Journey Level	\$16.28		1		View
Yakima	Fabricated Precast Concrete Products	Journey Level - In-Factory Work Only	\$16.28		1		View
Yakima	Fence Erectors	Fence Erector	\$44.82	15J	11P	8Y	View
Yakima	Fence Erectors	Fence Laborer	\$44.82	15J	11P	8Y	View
Yakima	Flaggers	Journey Level	\$44.82	15J	11P	8Y	View
Yakima	Glaziers	Journey Level	\$43.70	7L	4L		View
Yakima	Heat & Frost Insulators And Asbestos Workers	Journey Level	\$87.15	15H	11C		View
Yakima	Heating Equipment Mechanics	Journey Level	\$75.05	5A	1X		View
Yakima	Hod Carriers & Mason Tenders	Journey Level	\$50.72	15J	11P	8Y	View
Yakima	Industrial Power Vacuum Cleaner	Journey Level	\$16.28		1		View
Yakima	Inland Boatmen	Journey Level	\$16.28		1		View
Yakima	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Cleaner Operator	\$49.48	15M	11O		View
Yakima	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Foamer Operator	\$49.48	15M	11O		View
Yakima	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Grout Truck Operator	\$49.48	15M	11O		View
Yakima	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Head Operator	\$47.41	15M	11O		View
Yakima	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Technician	\$41.20	15M	11O		View
Yakima	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	TV Truck Operator	\$44.31	15M	11O		View
Yakima	Insulation Applicators	Journey Level	\$74.96	15J	4C		View
Yakima	Ironworkers	Journeyman	\$71.42	15K	11N		View
Yakima	Laborers	Erosion Control Worker	\$47.72	15J	11P	8Y	View

Yakima	Laborers	Air, Gas Or Electric Vibrating Screed	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Airtrac Drill Operator	\$49.13	15J	11P	8Y	View
Yakima	Laborers	Ballast Regular Machine	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Batch Weighman	\$44.82	15J	11P	8Y	View
Yakima	Laborers	Brick Pavers	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Brush Cutter	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Brush Hog Feeder	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Burner	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Caisson Worker	\$49.13	15J	11P	8Y	View
Yakima	Laborers	Carpenter Tender	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Cement Dumper-paving	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Cement Finisher Tender	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Change House Or Dry Shack	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Chipping Gun (30 Lbs. And Over)	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Chipping Gun (Under 30 Lbs.)	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Choker Setter	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Chuck Tender	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Clary Power Spreader	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Clean-up Laborer	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Concrete Dumper/Chute Operator	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Concrete Form Stripper	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Concrete Placement Crew	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Concrete Saw Operator/Core Driller	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Crusher Feeder	\$44.82	15J	11P	8Y	View
Yakima	Laborers	Curing Laborer	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Demolition: Wrecking & Moving (Incl. Charred Material)	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Ditch Digger	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Diver	\$49.13	15J	11P	8Y	View
Yakima	Laborers	Drill Operator (Hydraulic, Diamond)	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Dry Stack Walls	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Dump Person	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Epoxy Technician	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Faller & Bucker Chain Saw	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Fine Graders	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Firewatch	\$44.82	15J	11P	8Y	View
Yakima	Laborers	Form Setter	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Gabian Basket Building	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Gaurdrail Erector	\$47.72	15J	11P	8Y	View
Yakima	Laborers	General Laborer	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Grade Checker & Transit Person	\$50.72	15J	11P	8Y	View
Yakima	Laborers	Grinders	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Grout Machine Tender	\$47.72	15J	11P	8Y	View

Yakima	Laborers	Groutmen (Pressure) Including Post Tension Beams	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Hazardous Waste Worker (Level A)	\$49.13	15J	11P	8Y	View
Yakima	Laborers	Hazardous Waste Worker (Level B)	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Hazardous Waste Worker (Level C)	\$47.72	15J	11P	8Y	View
Yakima	Laborers	High Scaler	\$49.13	15J	11P	8Y	View
Yakima	Laborers	Jackhammer	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Laserbeam Operator	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Maintenance Person	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Manhole Builder-Mudman	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Material Yard Person	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Miner	\$62.59	15J	11P	8Y	View
Yakima	Laborers	Mold Abatement Worker	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Motorman-Dinky Locomotive	\$62.59	15J	11P	8Y	View
Yakima	Laborers	Nozzleman (Concrete Pump, Green Cutter When Using Combination Of High Pressure Air & Water On Concrete & Rock, Sandblast, Gunitite, Shotcrete, Water Blaster, Vacuum Blaster)	\$50.72	15J	11P	8Y	View
Yakima	Laborers	Pavement Breaker	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Pilot Car	\$44.82	15J	11P	8Y	View
Yakima	Laborers	Pipe Layer (Lead)	\$50.72	15J	11P	8Y	View
Yakima	Laborers	Pipe Layer/Tailor	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Pipe Pot Tender	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Pipe Reliner	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Pipe Wrapper	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Pot Tender	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Powderman	\$49.13	15J	11P	8Y	View
Yakima	Laborers	Powderman's Helper	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Power Jacks	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Railroad Spike Puller - Power	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Raker - Asphalt	\$50.72	15J	11P	8Y	View
Yakima	Laborers	Re-timberman	\$49.13	15J	11P	8Y	View
Yakima	Laborers	Remote Equipment Operator	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Rigger/Signal Person	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Rip Rap Person	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Rivet Buster	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Rodder	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Scaffold Erector	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Scale Person	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Sloper (Over 20")	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Sloper Sprayer	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Spreader (Concrete)	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Stake Hopper	\$47.72	15J	11P	8Y	View

Yakima	Laborers	Stock Piler	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Swinging Stage/Boatswain Chair	\$44.82	15J	11P	8Y	View
Yakima	Laborers	Tamper & Similar Electric, Air & Gas Operated Tools	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Tamper (Multiple & Self-propelled)	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Timber Person - Sewer (Lagger, Shorer & Cribber)	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Toolroom Person (at Jobsite)	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Topper	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Track Laborer	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Track Liner (Power)	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Traffic Control Laborer	\$47.51	15J	11P	9C	View
Yakima	Laborers	Traffic Control Supervisor	\$50.68	15J	11P	9C	View
Yakima	Laborers	Truck Spotter	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Tugger Operator	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Tunnel Work-Guage and Lock Tender	\$62.59	15J	11P	8Y	View
Yakima	Laborers	Tunnel Work-Guage and Lock Tender	\$62.59	15J	11P	8Y	View
Yakima	Laborers	Vibrator	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Vinyl Seamer	\$47.72	15J	11P	8Y	View
Yakima	Laborers	Watchmen	\$40.88	15J	11P	8Y	View
Yakima	Laborers	Welder	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Well Point Laborer	\$48.45	15J	11P	8Y	View
Yakima	Laborers	Window Washer/Cleaner	\$40.88	15J	11P	8Y	View
Yakima	Laborers - Underground Sewer & Water	General Laborer & Topman	\$47.72	15J	11P	8Y	View
Yakima	Laborers - Underground Sewer & Water	Pipe Layer	\$48.45	15J	11P	8Y	View
Yakima	Landscape Construction	Landscape Construction/landscaping Or Planting Laborers	\$40.88	15J	11P	8Y	View
Yakima	Landscape Construction	Landscape Operator	\$78.71	15J	11G	8X	View
Yakima	Landscape Maintenance	Groundskeeper	\$16.28		1		View
Yakima	Lathers	Journey Level	\$75.73	150	11S		View
Yakima	Marble Setters	Journey Level	\$57.54	5A	1M		View
Yakima	Metal Fabrication (In Shop)	Fitter	\$16.28		1		View
Yakima	Metal Fabrication (In Shop)	Laborer	\$16.28		1		View
Yakima	Metal Fabrication (In Shop)	Machine Operator	\$16.28		1		View
Yakima	Metal Fabrication (In Shop)	Painter	\$16.28		1		View
Yakima	Metal Fabrication (In Shop)	Welder	\$16.28		1		View
Yakima	Millwright	Journey Level	\$76.51	15J	4C		View
Yakima	Modular Buildings	Journey Level	\$16.28		1		View
Yakima	Painters	Commercial Painter	\$45.51	6Z	1W		View
Yakima	Painters	Industrial Painter	\$52.42	6Z	1W	9D	View
Yakima	Pile Driver	Crew Tender	\$80.82	15J	4C		View
Yakima	Pile Driver	Journey Level	\$75.41	15J	4C		View

Yakima	Plasterers	Journey Level	\$70.91	7Q	1R		View
Yakima	Plasterers	Nozzleman	\$74.91	7Q	1R		View
Yakima	Playground & Park Equipment Installers	Journey Level	\$16.28		1		View
Yakima	Plumbers & Pipefitters	Journey Level	\$92.81	6Z	1Q		View
Yakima	Power Equipment Operators	Asphalt Plant Operators	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators	Assistant Engineer	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators	Barrier Machine (zipper)	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators	Batch Plant Operator: concrete	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators	Boat Operator	\$80.05	7A	11H	8X	View
Yakima	Power Equipment Operators	Bobcat	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators	Brokk - Remote Demolition Equipment	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators	Brooms	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators	Bump Cutter	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators	Cableways	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators	Chipper	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators	Compressor	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators	Concrete Finish Machine - Laser Screed	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Over 42 M	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators	Conveyors	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators	Cranes Friction: 200 tons and over	\$82.49	7A	11H	8X	View
Yakima	Power Equipment Operators	Cranes, A-frame: 10 tons and under	\$75.29	7A	11H	8X	View
Yakima	Power Equipment Operators	Cranes: 100 tons through 199 tons, or 150' of boom (including jib with attachments)	\$80.86	7A	11H	8X	View
Yakima	Power Equipment Operators	Cranes: 20 tons through 44 tons with attachments	\$79.35	7A	11H	8X	View
Yakima	Power Equipment Operators	Cranes: 200 tons- 299 tons, or 250' of boom including jib with attachments	\$81.69	7A	11H	8X	View
Yakima	Power Equipment Operators	Cranes: 300 tons and over or 300' of boom including jib with attachments	\$82.49	7A	11H	8X	View
Yakima	Power Equipment Operators	Cranes: 45 tons through 99 tons, under 150' of boom(including jib with attachments)	\$80.05	7A	11H	8X	View
Yakima	Power Equipment Operators	Cranes: Friction cranes through 199 tons	\$81.69	7A	11H	8X	View

Yakima	Power Equipment Operators	Cranes: through 19 tons with attachments, a-frame over 10 tons	\$78.74	7A	11H	8X	View
Yakima	Power Equipment Operators	Crusher	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators	Deck Engineer/Deck Winches (power)	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators	Derricks, On Building Work	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators	Dozers D-9 & Under	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators	Drill Oilers: Auger Type, Truck Or Crane Mount	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators	Drilling Machine	\$80.82	15J	11G	8X	View
Yakima	Power Equipment Operators	Elevator and man-lift: permanent and shaft type	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators	Finishing Machine, Bidwell And Gamaco & Similar Equipment	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators	Forklift: 3000 lbs and over with attachments	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators	Forklifts: under 3000 lbs. with attachments	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators	Grade Engineer: Using Blue Prints, Cut Sheets, Etc	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators	Gradechecker/Stakeman	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators	Guardrail Punch	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators	Horizontal/Directional Drill Locator	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators	Horizontal/Directional Drill Operator	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators	Hydralifts/Boom Trucks Over 10 Tons	\$78.74	7A	11H	8X	View
Yakima	Power Equipment Operators	Hydralifts/boom trucks: 10 tons and under	\$75.29	7A	11H	8X	View
Yakima	Power Equipment Operators	Leverman	\$81.65	15J	11G	8X	View
Yakima	Power Equipment Operators	Loader, Overhead, 6 Yards. But Not Including 8 Yards	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators	Loaders, Overhead Under 6 Yards	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators	Loaders, Plant Feed	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators	Loaders: Elevating Type Belt	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators	Locomotives, All	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators	Material Transfer Device	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators	Mechanics: All (Leadmen - \$0.50 per hour over mechanic)	\$80.82	15J	11G	8X	View
Yakima	Power Equipment Operators	Motor Patrol Graders	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header	\$80.02	15J	11G	8X	View

		And/or Shield					
Yakima	Power Equipment Operators	Oil Distributors, Blower Distribution & Mulch Seeding Operator	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators	Outside Hoists (Elevators and Manlifts), Air Tuggers, Strato	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators	Overhead, bridge type Crane: 20 tons through 44 tons	\$79.35	7A	11H	8X	View
Yakima	Power Equipment Operators	Overhead, bridge type: 100 tons and over	\$80.86	7A	11H	8X	View
Yakima	Power Equipment Operators	Overhead, bridge type: 45 tons through 99 tons	\$80.05	7A	11H	8X	View
Yakima	Power Equipment Operators	Pavement Breaker	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators	Pile Driver (other Than Crane Mount)	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators	Plant Oiler - Asphalt, Crusher	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators	Posthole Digger, Mechanical	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators	Power Plant	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators	Pumps - Water	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators	Quad 9, Hd 41, D10 And Over	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators	Quick Tower: no cab, under 100 feet in height base to boom	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators	Remote Control Operator On Rubber Tired Earth Moving Equipment	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators	Rigger and Bellman	\$75.29	7A	11H	8X	View
Yakima	Power Equipment Operators	Rigger/Signal Person, Bellman(Certified)	\$78.74	7A	11H	8X	View
Yakima	Power Equipment Operators	Rollagon	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators	Roller, Other Than Plant Mix	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators	Roller, Plant Mix Or Multi-lift Materials	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators	Roto-mill, Roto-grinder	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators	Saws - Concrete	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators	Scraper, Self Propelled Under 45 Yards	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators	Scrapers - Concrete & Carry All	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators	Scrapers, Self-propelled: 45 Yards And Over	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators	Service Engineers: Equipment	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators	Shotcrete/Gunite Equipment	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators	Shovel, Excavator, Backhoe, Tractors Under 15 Metric Tons	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90	\$80.82	15J	11G	8X	View

		Metric Tons					
Yakima	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 90 Metric Tons	\$81.65	15J	11G	8X	View
Yakima	Power Equipment Operators	Slipform Pavers	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators	Spreader, Topsider & Screedman	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators	Subgrader Trimmer	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators	Tower Bucket Elevators	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators	Tower Crane: over 175' through 250' in height, base to boom	\$81.69	7A	11H	8X	View
Yakima	Power Equipment Operators	Tower crane: up to 175' in height base to boom	\$80.86	7A	11H	8X	View
Yakima	Power Equipment Operators	Tower Cranes: over 250' in height from base to boom	\$82.49	7A	11H	8X	View
Yakima	Power Equipment Operators	Transporters, All Track Or Truck Type	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators	Trenching Machines	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators	Truck Crane Oiler/Driver: 100 tons and over	\$79.35	7A	11H	8X	View
Yakima	Power Equipment Operators	Truck crane oiler/driver: under 100 tons	\$78.74	7A	11H	8X	View
Yakima	Power Equipment Operators	Truck Mount Portable Conveyor	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators	Vac Truck (Vactor Guzzler, Hydro Excavator)	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators	Welder	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators	Wheel Tractors, Farmall Type	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators	Yo Yo Pay Dozer	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Asphalt Plant Operators	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Assistant Engineer	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Barrier Machine (zipper)	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Batch Plant Operator, Concrete	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Boat Operator	\$80.05	7A	11H	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Bobcat	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Brokk - Remote Demolition Equipment	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Brooms	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Bump Cutter	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Cableways	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Chipper	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Compressor	\$75.26	15J	11G	8X	View

Yakima	Power Equipment Operators-Underground Sewer & Water	Concrete Finish Machine - Laser Screed	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Concrete Pump: Truck Mount With Boom Attachment Over 42 M	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Conveyors	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Cranes Friction: 200 tons and over	\$82.49	7A	11H	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Cranes, A-frame: 10 tons and under	\$75.29	7A	11H	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Cranes: 100 tons through 199 tons, or 150' of boom (including jib with attachments)	\$80.86	7A	11H	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Cranes: 20 tons through 44 tons with attachments	\$79.35	7A	11H	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Cranes: 200 tons- 299 tons, or 250' of boom including jib with attachments	\$81.69	7A	11H	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Cranes: 300 tons and over or 300' of boom including jib with attachments	\$82.49	7A	11H	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Cranes: 45 tons through 99 tons, under 150' of boom(including jib with attachments)	\$80.05	7A	11H	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Cranes: Friction cranes through 199 tons	\$81.69	7A	11H	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Cranes: through 19 tons with attachments, a-frame over 10 tons	\$78.74	7A	11H	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Crusher	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Deck Engineer/Deck Winches (power)	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Derricks, On Building Work	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Dozers D-9 & Under	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Drill Oilers: Auger Type, Truck Or Crane Mount	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Drilling Machine	\$80.82	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Elevator and man-lift: permanent and shaft type	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Finishing Machine, Bidwell And Gamaco & Similar Equipment	\$79.31	15J	11G	8X	View

Yakima	Power Equipment Operators-Underground Sewer & Water	Forklift: 3000 lbs and over with attachments	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Forklifts: under 3000 lbs. with attachments	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Grade Engineer: Using Blue Prints, Cut Sheets, Etc	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Gradechecker/Stakeman	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Guardrail Punch	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Horizontal/Directional Drill Locator	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Horizontal/Directional Drill Operator	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Hydralifts/boom trucks: 10 tons and under	\$75.29	7A	11H	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Hydralifts/boom trucks: over 10 tons	\$78.74	7A	11H	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Leverman	\$81.65	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Loader, Overhead, 6 Yards. But Not Including 8 Yards	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Loaders, Overhead Under 6 Yards	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Loaders, Plant Feed	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Loaders: Elevating Type Belt	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Locomotives, All	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Material Transfer Device	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Mechanics: All (Leadmen - \$0.50 per hour over mechanic)	\$80.82	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Motor Patrol Graders	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Oil Distributors, Blower Distribution & Mulch Seeding Operator	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Outside Hoists (Elevators and Manlifts), Air Tuggers, Strato	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Overhead, bridge type Crane: 20 tons through 44 tons	\$79.35	7A	11H	8X	View

Yakima	Power Equipment Operators-Underground Sewer & Water	Overhead, bridge type: 100 tons and over	\$80.86	7A	11H	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Overhead, bridge type: 45 tons through 99 tons	\$80.05	7A	11H	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Pavement Breaker	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Pile Driver (other Than Crane Mount)	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Plant Oiler - Asphalt, Crusher	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Posthole Digger, Mechanical	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Power Plant	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Pumps - Water	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Quad 9, Hd 41, D10 And Over	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Quick Tower: no cab, under 100 feet in height base to boom	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Remote Control Operator On Rubber Tired Earth Moving Equipment	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Rigger and Bellman	\$75.29	7A	11H	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Rigger/Signal Person, Bellman(Certified)	\$78.74	7A	11H	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Rollagon	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Roller, Other Than Plant Mix	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Roller, Plant Mix Or Multi-lift Materials	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Roto-mill, Roto-grinder	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Saws - Concrete	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Scraper, Self Propelled Under 45 Yards	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Scrapers - Concrete & Carry All	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Scrapers, Self-propelled: 45 Yards And Over	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Shotcrete/Gunite Equipment	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Shovel, Excavator, Backhoe, Tractors Under 15 Metric Tons	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	\$79.31	15J	11G	8X	View

Yakima	Power Equipment Operators-Underground Sewer & Water	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	\$80.82	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Shovel, Excavator, Backhoes: Over 90 Metric Tons	\$81.65	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Slipform Pavers	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Spreader, Topsider & Screedman	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Subgrader Trimmer	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Tower Bucket Elevators	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Tower Crane: over 175' through 250' in height, base to boom	\$81.69	7A	11H	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Tower crane: up to 175' in height base to boom	\$80.86	7A	11H	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Tower Cranes: over 250' in height from base to boom	\$82.49	7A	11H	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Transporters, All Track Or Truck Type	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Trenching Machines	\$78.71	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Truck Crane Oiler/Driver: 100 tons and over	\$79.35	7A	11H	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Truck crane oiler/driver: under 100 tons	\$78.74	7A	11H	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Truck Mount Portable Conveyor	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Vac Truck (Vactor Guzzler, Hydro Excavator)	\$79.31	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Welder	\$80.02	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Wheel Tractors, Farmall Type	\$75.26	15J	11G	8X	View
Yakima	Power Equipment Operators-Underground Sewer & Water	Yo Yo Pay Dozer	\$79.31	15J	11G	8X	View
Yakima	Power Line Clearance Tree Trimmers	Journey Level In Charge	\$57.22	5A	4A		View
Yakima	Power Line Clearance Tree Trimmers	Spray Person	\$54.32	5A	4A		View
Yakima	Power Line Clearance Tree Trimmers	Tree Equipment Operator	\$57.22	5A	4A		View
Yakima	Power Line Clearance Tree Trimmers	Tree Trimmer	\$51.18	5A	4A		View
Yakima	Power Line Clearance Tree Trimmers	Tree Trimmer Groundperson	\$38.99	5A	4A		View
Yakima	Refrigeration & Air Conditioning Mechanics	Journey Level	\$92.81	6Z	1Q		View
Yakima	Residential Brick Mason	Journey Level	\$37.47		1		View
Yakima	Residential Carpenters	Journey Level	\$32.61		1		View
Yakima	Residential Cement Masons	Journey Level	\$28.00		1		View

Yakima	Residential Drywall Applicators	Journey Level	\$33.00		<u>1</u>		View
Yakima	Residential Drywall Tapers	Journey Level	\$27.00		<u>1</u>		View
Yakima	Residential Electricians	Journey Level	\$28.40		<u>1</u>		View
Yakima	Residential Glaziers	Journey Level	\$23.79		<u>1</u>		View
Yakima	Residential Insulation Applicators	Journey Level	\$16.35		<u>1</u>		View
Yakima	Residential Laborers	Journey Level	\$16.28		<u>1</u>		View
Yakima	Residential Marble Setters	Journey Level	\$37.47		<u>1</u>		View
Yakima	Residential Painters	Journey Level	\$17.00		<u>1</u>		View
Yakima	Residential Plumbers & Pipefitters	Journey Level	\$28.62		<u>1</u>		View
Yakima	Residential Refrigeration & Air Conditioning Mechanics	Journey Level	\$37.30	<u>5A</u>	<u>11R</u>		View
Yakima	Residential Sheet Metal Workers	Journey Level (Field or Shop)	\$54.13	<u>5A</u>	<u>1X</u>		View
Yakima	Residential Soft Floor Layers	Journey Level	\$25.27		<u>1</u>		View
Yakima	Residential Sprinkler Fitters (Fire Protection)	Journey Level	\$18.40		<u>1</u>		View
Yakima	Residential Stone Masons	Journey Level	\$18.19		<u>1</u>		View
Yakima	Residential Terrazzo Workers	Journey Level	\$16.28		<u>1</u>		View
Yakima	Residential Terrazzo/Tile Finishers	Journey Level	\$21.96		<u>1</u>		View
Yakima	Residential Tile Setters	Journey Level	\$19.07		<u>1</u>		View
Yakima	Roofers	Irritable Bituminous Roofer	\$49.53	<u>7G</u>	<u>4I</u>		View
Yakima	Roofers	Journeyman Roofer, Waterproofer, Kettleman	\$46.53	<u>7G</u>	<u>4I</u>		View
Yakima	Sheet Metal Workers	Journey Level (Field or Shop)	\$75.05	<u>5A</u>	<u>1X</u>		View
Yakima	Sign Makers & Installers (Electrical)	Journey Level	\$16.28		<u>1</u>		View
Yakima	Sign Makers & Installers (Non-Electrical)	Journey Level	\$16.28		<u>1</u>		View
Yakima	Soft Floor Layers	Journey Level	\$57.11	<u>5A</u>	<u>3J</u>		View
Yakima	Solar Controls For Windows	Journey Level	\$16.28		<u>1</u>		View
Yakima	Sprinkler Fitters (Fire Protection)	Journey Level	\$67.41	<u>7J</u>	<u>1R</u>		View
Yakima	Stage Rigging Mechanics (Non Structural)	Journey Level	\$16.28		<u>1</u>		View
Yakima	Stone Masons	Journey Level	\$57.54	<u>5A</u>	<u>1M</u>		View
Yakima	Street And Parking Lot Sweeper Workers	Journey Level	\$16.28		<u>1</u>		View
Yakima	Surveyors	Assistant Construction Site Surveyor	\$78.74	<u>7A</u>	<u>11H</u>	<u>8X</u>	View
Yakima	Surveyors	Chainman	\$75.29	<u>7A</u>	<u>11H</u>	<u>8X</u>	View
Yakima	Surveyors	Construction Site Surveyor	\$80.05	<u>7A</u>	<u>11H</u>	<u>8X</u>	View
Yakima	Surveyors	Drone Operator (when used in conjunction with survey work only)	\$75.29	<u>7A</u>	<u>11H</u>	<u>8X</u>	View
Yakima	Surveyors	Ground Penetrating Radar Operator	\$75.29	<u>7A</u>	<u>11H</u>	<u>8X</u>	View
Yakima	Telecommunication Technicians	Journey Level	\$53.13	<u>5I</u>	<u>1B</u>		View

Yakima	Telephone Line Construction - Outside	Cable Splicer	\$40.36	5A	2B		View
Yakima	Telephone Line Construction - Outside	Hole Digger/Ground Person	\$26.92	5A	2B		View
Yakima	Telephone Line Construction - Outside	Telephone Equipment Operator (Light)	\$33.74	5A	2B		View
Yakima	Telephone Line Construction - Outside	Telephone Lineperson	\$38.15	5A	2B		View
Yakima	Terrazzo Workers	Journey Level	\$43.81	5A	1M		View
Yakima	Tile Setters	Journey Level	\$43.81	5A	1M		View
Yakima	Tile, Marble & Terrazzo Finishers	Journey Level	\$35.93	5A	1M		View
Yakima	Traffic Control Stripers	Journey Level	\$89.54	15L	1K		View
Yakima	Truck Drivers	Asphalt Mix Over 20 Yards	\$59.35	5D	1V	8M	View
Yakima	Truck Drivers	Asphalt Mix To 20 Yards	\$59.15	5D	1V	8M	View
Yakima	Truck Drivers	Dump Truck	\$59.15	5D	1V	8M	View
Yakima	Truck Drivers	Dump Truck & Trailer	\$59.35	5D	1V	8M	View
Yakima	Truck Drivers	Other Trucks	\$59.04	5D	1V	8M	View
Yakima	Truck Drivers - Ready Mix	Transit Mixers 20 yards and under	\$59.35	5D	1V	8M	View
Yakima	Truck Drivers - Ready Mix	Transit Mixers over 20 yards	\$59.69	5D	1V	8M	View
Yakima	Well Drillers & Irrigation Pump Installers	Irrigation Pump Installer	\$25.44		1		View
Yakima	Well Drillers & Irrigation Pump Installers	Oiler	\$16.28		1		View
Yakima	Well Drillers & Irrigation Pump Installers	Well Driller	\$18.00		1		View

Overtime Codes

Overtime calculations are based on the hourly rate actually paid to the worker. On public works projects, the hourly rate must be not less than the prevailing rate of wage minus the hourly rate of the cost of fringe benefits actually provided for the worker.

1. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.
 - B. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
 - C. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other overtime hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
 - D. The first two (2) hours before or after a five-eight (8) hour workweek day or a four-ten (10) hour workweek day and the first eight (8) hours worked the next day after either workweek shall be paid at one and one-half times the hourly rate of wage. All additional hours worked and all worked on Sundays and holidays shall be paid at double the hourly rate of wage.
 - E. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
 - F. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other overtime hours worked, except Labor Day, shall be paid at double the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage.
 - G. The first ten (10) hours worked on Saturdays and the first ten (10) hours worked on a fifth calendar weekday in a four-ten hour schedule, shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of ten (10) hours per day Monday through Saturday and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
 - H. All hours worked on Saturdays (except makeup days if work is lost due to inclement weather conditions or equipment breakdown) shall be paid at one and one-half times the hourly rate of wage. All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
 - I. All hours worked on Sundays and holidays shall also be paid at double the hourly rate of wage.
 - J. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked over ten (10) hours Monday through Saturday, Sundays and holidays shall be paid at double the hourly rate of wage.
 - K. All hours worked on Saturdays and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.
 - M. All hours worked on Saturdays (except makeup days if work is lost due to inclement weather conditions) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

Overtime Codes Continued

- 1. N. All hours worked on Saturdays (except makeup days) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
- O. The first ten (10) hours worked on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays, holidays and after twelve (12) hours, Monday through Friday and after ten (10) hours on Saturday shall be paid at double the hourly rate of wage.
- P. All hours worked on Saturdays (except makeup days if circumstances warrant) and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.
- Q. The first two (2) hours after eight (8) regular hours Monday through Friday and up to ten (10) hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of ten (10) hours per day Monday through Saturday and all hours worked on Sundays and holidays (except Christmas day) shall be paid at double the hourly rate of wage. All hours worked on Christmas day shall be paid at two and one-half times the hourly rate of wage.
- R. All hours worked on Sundays and holidays shall be paid at two times the hourly rate of wage.
- U. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays (except Labor Day) shall be paid at two times the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage.
- V. All hours worked on Sundays and holidays (except Thanksgiving Day and Christmas day) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Thanksgiving Day and Christmas day shall be paid at double the hourly rate of wage.
- W. All hours worked on Saturdays and Sundays (except make-up days due to conditions beyond the control of the employer)) shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.
- X. The first four (4) hours after eight (8) regular hours Monday through Friday and the first twelve (12) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked over twelve (12) hours Monday through Saturday, Sundays and holidays shall be paid at double the hourly rate of wage. When holiday falls on Saturday or Sunday, the day before Saturday, Friday, and the day after Sunday, Monday, shall be considered the holiday and all work performed shall be paid at double the hourly rate of wage.
- Y. All hours worked outside the hours of 5:00 am and 5:00 pm (or such other hours as may be agreed upon by any employer and the employee) and all hours worked in excess of eight (8) hours per day (10 hours per day for a 4 x 10 workweek) and on Saturdays and holidays (except labor day) shall be paid at one and one-half times the hourly rate of wage. (except for employees who are absent from work without prior approval on a scheduled workday during the workweek shall be paid at the straight-time rate until they have worked 8 hours in a day (10 in a 4 x 10 workweek) or 40 hours during that workweek.) All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and Labor Day shall be paid at double the hourly rate of wage.
- Z. All hours worked on Saturdays and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid the straight time rate of pay in addition to holiday pay.

Overtime Codes Continued

2. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.
- B. All hours worked on holidays shall be paid at one and one-half times the hourly rate of wage.
- F. The first eight (8) hours worked on holidays shall be paid at the straight hourly rate of wage in addition to the holiday pay. All hours worked in excess of eight (8) hours on holidays shall be paid at double the hourly rate of wage.
- M. This code appears to be missing. All hours worked on Saturdays, Sundays and holidays shall be paid at double the hourly rate of wage.
- R. All hours worked on Sundays and holidays and all hours worked over sixty (60) in one week shall be paid at double the hourly rate of wage.
- U. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked over 12 hours in a day or on Sundays and holidays shall be paid at double the hourly rate of wage.
3. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.
- F. All hours worked on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sunday shall be paid at two times the hourly rate of wage. All hours worked on paid holidays shall be paid at two and one-half times the hourly rate of wage including holiday pay.
- H. All work performed on Sundays between March 16th and October 14th and all Holidays shall be compensated for at two (2) times the regular rate of pay. Work performed on Sundays between October 15th and March 15th shall be compensated at one and one half (1-1/2) times the regular rate of pay.
- J. All hours worked between the hours of 10:00 pm and 5:00 am, Monday through Friday, and all hours worked on Saturdays shall be paid at a one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
- K. Work performed in excess of eight (8) hours of straight time per day, or ten (10) hours of straight time per day when four ten (10) hour shifts are established, or forty (40) hours of straight time per week, Monday through Friday, or outside the normal 5 am to 6pm shift, and all work on Saturdays shall be paid at one and one-half times the hourly rate of wage. All work performed after 6:00 pm Saturday to 5:00 am Monday and Holidays, and all hours worked in excess of twelve (12) hours in a single shift shall be paid at double the hourly rate of wage.

After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more. When an employee returns to work without at least eight (8) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until he/she shall have the eight (8) hours rest period.

Overtime Codes Continued

4. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

- A. All hours worked in excess of eight (8) hours per day or forty (40) hours per week shall be paid at double the hourly rate of wage. All hours worked on Saturdays, Sundays and holidays shall be paid at double the hourly rate of wage
- C. On Monday through Friday, the first four (4) hours of overtime after eight (8) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay, unless a four (4) day ten (10) hour workweek has been established. On a four (4) day ten (10) hour workweek scheduled Monday through Thursday, or Tuesday through Friday, the first two (2) hours of overtime after ten (10) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay. On Saturday, the first twelve (12) hours of work shall be paid at one and one half (1-1/2) times the straight time rate of pay, except that if the job is down on Monday through Friday due to weather conditions or other conditions outside the control of the employer, the first ten (10) hours on Saturday may be worked at the straight time rate of pay. All hours worked over twelve (12) hours in a day and all hours worked on Sunday and Holidays shall be paid at two (2) times the straight time rate of pay.
- D. All hours worked in excess of eight (8) hours per day or forty (40) hours per week shall be paid at double the hourly rate of wage. All hours worked on Saturday, Sundays and holidays shall be paid at double the hourly rate of pay. Rates include all members of the assigned crew.

EXCEPTION:

On all multipole structures and steel transmission lines, switching stations, regulating, capacitor stations, generating plants, industrial plants, associated installations and substations, except those substations whose primary function is to feed a distribution system, will be paid overtime under the following rates:

The first two (2) hours after eight (8) regular hours Monday through Friday of overtime on a regular workday, shall be paid at one and one-half times the hourly rate of wage. All hours in excess of ten (10) hours will be at two (2) times the hourly rate of wage. The first eight (8) hours worked on Saturday will be paid at one and one-half (1-1/2) times the hourly rate of wage. All hours worked in excess of eight (8) hours on Saturday, and all hours worked on Sundays and holidays will be at the double the hourly rate of wage.

All overtime eligible hours performed on the above described work that is energized, shall be paid at the double the hourly rate of wage.

- E. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

On a four-day, ten-hour weekly schedule, either Monday thru Thursday or Tuesday thru Friday schedule, all hours worked after ten shall be paid at double the hourly rate of wage. The Monday or Friday not utilized in the normal four-day, ten hour work week, and Saturday shall be paid at one and one half (1½) times the regular shift rate for the first eight (8) hours. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
- G. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
- I. The First eight (8) hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of eight (8) per day on Saturdays shall be paid at double the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

Overtime Codes Continued

4. J. The first eight (8) hours worked on a Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of eight (8) hours on a Saturday shall be paid at double the hourly rate of wage. All hours worked over twelve (12) in a day, and all hours worked on Sundays and Holidays shall be paid at double the hourly rate of wage.
- K. All hours worked on a Saturday shall be paid at one and one-half times the hourly rate of wage, so long as Saturday is the sixth consecutive day worked. All hours worked over twelve (12) in a day Monday through Saturday, and all hours worked on Sundays and Holidays shall be paid at double the hourly rate of wage.
- L. The first twelve (12) hours worked on a Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on a Saturday in excess of twelve (12) hours shall be paid at double the hourly rate of pay. All hours worked over twelve (12) in a day Monday through Friday, and all hours worked on Sundays shall be paid at double the hourly rate of wage. All hours worked on a holiday shall be paid at one and one-half times the hourly rate of wage, except that all hours worked on Labor Day shall be paid at double the hourly rate of pay.
- S. On a four (4) day ten (10) hour workweek scheduled Monday through Thursday, or Tuesday through Friday, work performed in excess of (10) hours shall be paid at one and one half (1-1/2) times the hourly rate of pay. On Monday through Friday, work performed outside the normal work hours of 6:00 a.m. and 6:00 p.m. shall be paid at one and one-half (1-1/2) times the straight time rate, (except for special shifts or multiple shift operations).
- All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All work performed on Sundays and holidays shall be paid at double the hourly rate of wage. When an employee returns to work without at least eight (8) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.
- Multiple Shift Operations: When the first shift of a multiple shift (a two or three shift) operation is started at the basic straight time rate or at a specific overtime rate, all shifts of that day's operation shall be completed at that rate. Special Shifts: The Special Shift Premium is the basic hourly rate of pay plus \$2.00 an hour. When due to conditions beyond the control of the employer or when an owner (not acting as the contractor), a government agency or the contract specifications require more than four (4) hours of a special shift can only be performed outside the normal 6am to 6pm shift then the special shift premium will be applied to the basic straight time for the entire shift. When an employee works on a special shift, they shall be paid the special shift premium for each hour worked unless they are in overtime or double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday).
- U. The first four (4) hours after eight (8) regular hours Monday through Friday and the first twelve (12) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. (Except on makeup days if work is lost due to inclement weather, then the first eight (8) hours on Saturday may be paid the regular rate.) All hours worked over twelve (12) hours Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

Overtime Codes Continued

4. V. Work performed in excess of ten (10) hours of straight time per day when four ten (10) hour shifts are established or outside the normal shift (5 am to 6pm), and all work on Saturdays, except for make-up days shall be paid at time and one-half (1 ½) the straight time rate.

In the event the job is down due to weather conditions, then Saturday may, be worked as a voluntary make-up day at the straight time rate. However, Saturday shall not be utilized as a make-up day when a holiday falls on Friday. All work performed on Sundays and holidays and work in excess of twelve (12) hours per day shall be paid at double (2x) the straight time rate of pay.

After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

When an employee returns to work without a break of eight (8) hours since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

- X. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage. Work performed outside the normal shift of 6 am to 6pm shall be paid at one and one-half the straight time rate, (except for special shifts or three shift operations). All work performed on Sundays and holidays shall be paid at double the hourly rate of wage. Shifts may be established when considered necessary by the Employer.

The Employer may establish shifts consisting of eight (8) or ten (10) hours of work (subject to WAC 296-127-022), that shall constitute a normal forty (40) hour work week. The Employer can change from a 5-eight to a 4-ten hour schedule or back to the other. All hours of work on these shifts shall be paid for at the straight time hourly rate. Work performed in excess of eight hours (or ten hours per day (subject to WAC 296-127-022) shall be paid at one and one-half the straight time rate.

When due to conditions beyond the control of the Employer, or when contract specifications require that work can only be performed outside the regular day shift, then by mutual agreement a special shift may be worked at the straight time rate, eight (8) hours work for eight (8) hours pay. The starting time shall be arranged to fit such conditions of work.

When an employee returns to work without a break of eight (8) hours since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

11. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

- B After an employee has worked eight (8) hours, all additional hours worked shall be paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.

- C The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other overtime hours worked, except Labor Day, and all hours on Sunday shall be paid at double the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage. All non-overtime and non-holiday hours worked between 4:00 pm and 5:00 am, Monday through Friday, shall be paid at a premium rate of 15% over the hourly rate of wage.

Overtime Codes Continued

11. D. All hours worked on Saturdays and holidays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays shall be paid at double the hourly rate of wage.
- After an employee has worked eight (8) hours, all additional hours worked shall be paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.
- E. The first two (2) hours after eight (8) regular hours Monday through Friday, the first ten (10) hours on Saturday, and the first ten (10) hours worked on Holidays shall be paid at one and one-half times the hourly rate of wage. All hours worked over ten (10) hours Monday through Saturday, and Sundays shall be paid at double the hourly rate of wage.
- After an employee has worked eight (8) hours, all additional hours worked shall be paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.
- F. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
- On a four-day, ten-hour weekly schedule, either Monday thru Thursday or Tuesday thru Friday schedule, all hours worked after ten shall be paid at double the hourly rate of wage. The Monday or Friday not utilized in the normal four-day, ten hour work week, and Saturday shall be paid at one-half times the hourly rate of wage for the first eight (8) hours. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
- G. Work performed in excess of eight (8) hours of straight time per day, or ten (10) hours of straight time per day when four ten (10) hour shifts are established, or forty (40) hours of straight time per week, Monday through Friday, or outside the normal 5 am to 6pm shift, and all work on Saturdays shall be paid at one and one-half times the hourly rate of wage.
- All work performed after 6:00 pm Saturday to 5:00 am Monday and Holidays, and all hours worked in excess of twelve (12) hours in a single shift shall be paid at double the hourly rate of wage.
- After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of nine (9) hours or more. When an employee returns to work without at least nine (9) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until he/she shall have the nine (9) hours rest period.
- H. Work performed in excess of eight (8) hours of straight time per day, or ten (10) hours of straight time per day when four ten (10) hour shifts are established, or forty (40) hours of straight time per week, Monday through Friday, or outside the normal 5 am to 6pm shift, and all work on Saturdays shall be paid at one and one-half times the hourly rate of wage.
- All work performed after 6:00 pm Saturday to 5:00 am Monday and Holidays, and all hours worked in excess of twelve (12) hours in a single shift shall be paid at double the hourly rate of wage.
- After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of ten (10) hours or more. When an employee returns to work without at least ten (10) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until he/she shall have the ten (10) hours rest period.

Overtime Codes Continued

11. J. All hours worked on holidays shall be paid at double the hourly rate of wage.
- K. On Monday through Friday hours worked outside 4:00 am and 5:00 pm, and the first two (2) hours after eight (8) hours worked shall be paid at one and one-half times the hourly rate. All hours worked over 10 hours per day Monday through Friday, and all hours worked on Saturdays, Sundays, and Holidays worked shall be paid at double the hourly rate of wage.
- L. An employee working outside 5:00 am and 5:00 pm shall receive an additional two dollar (\$2.00) per hour for all hours worked that shift. All hours worked on holidays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at one and one-half times the hourly rate of wage.
- M. On Monday through Friday, the first four (4) hours of overtime after eight (8) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay, unless a four (4) day ten (10) hour workweek has been established. On a four (4) day ten (10) hour workweek scheduled Monday through Thursday, or Tuesday through Friday, the first two (2) hours of overtime after ten (10) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay.
- Work performed outside the normal work hours of 5:00 a.m. and 6:00 p.m. shall be paid at one and one-half (1-1/2) times the straight time rate, (except for special shifts or multiple shift operations). When the first shift of a multiple shift (a two or three shift) operation is started at the basic straight time rate or at a specific overtime rate, all shifts of that day's operation shall be completed at that rate. When due to conditions beyond the control of the Employer or when contract specifications require that work can only be performed outside the regular day shift of 5:00 am to 6:00 pm, then a special shift may be worked at the straight time rate, plus the shift pay premium when applicable. The starting time of work will be arranged to fit such conditions of work. Such shift shall consist of eight (8) hours work for eight (8) hours pay or ten (10) hours work for ten (10) hours pay for four ten shifts.
- On Saturday, the first twelve (12) hours of work shall be paid at one and one half (1-1/2) times the straight time rate of pay. All work performed after 6:00 pm Saturday to 5:00 am Monday, all work performed over twelve (12) hours, and all work performed on holidays shall be paid at double the straight time rate of pay.
- Shift Pay Premium: In an addition to any overtime already required, all hours worked between the hours of 6:00 pm and 5:00 am shall receive an additional two dollars (\$2.00) per hour.
- N. All work performed over twelve hours in a shift and all work performed on Sundays and Holidays shall be paid at double the straight time rate.
- Any time worked over eight (8) hours on Saturday shall be paid double the straight time rate, except employees assigned to work six 10-hour shifts per week shall be paid double the straight time rate for any time worked on Saturday over 10 hours.
- O. All work performed on Saturdays, Sundays, and Holidays shall be paid at one and one half (1-1/2) times the straight time rate of pay.

Overtime Codes Continued

11. P. Work performed in excess of ten (10) hours of straight time per day when four ten (10) hour shifts are established and all work on Saturdays, except for make-up days shall be paid at time and one-half (1 ½) the straight time rate.
- Work performed outside the normal work hours of 5:00 a.m. and 6:00 p.m. shall be paid at one and one-half (1-1/2) times the straight time rate, (except for special shifts or multiple shift operations). When the first shift of multiple shift (a two or three shift) operation is started at the basic straight time rate or at a specific overtime rate, all shifts of that day's operation shall be completed at that rate. When due to conditions beyond the control of the Employer or when contract specifications require that work can only be performed outside the regular day shift of 5:00 a.m. to 6:00 p.m., then a special shift may be worked at the straight time rate, plus the shift pay premium when applicable. The starting time of work will be arranged to fit such conditions of work. Such shifts shall consist of eight (8) hours work for eight (8) hours pay or ten (10) hours work for ten (10) hours pay for four ten-hour shifts.
- In the event the job is down due to weather conditions, then Saturday may, be worked as a voluntary make-up day at the straight time rate. However, Saturday shall not be utilized as a make-up day when a holiday falls on Friday. All work performed on Sundays and holidays and work in excess of twelve (12) hours per day shall be paid at double (2x) the straight time rate of pay.
- After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.
- When an employee returns to work without a break of eight (8) hours since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.
- Q. All hours worked between the hours of 6:00 pm and 6:00 am, Monday through Saturday, shall be paid at a premium rate of 35% over the hourly rate of wage. Work performed on Sundays shall be paid at double time. All hours worked on holidays shall be paid at double the hourly rate of wage.
- R. On Monday through Saturday hours worked outside 6:00 am and 7:00 pm, and all hours after eight (8) hours worked shall be paid at one and one-half times the hourly rate. All hours worked on Sundays and Holidays shall be paid at double the hourly rate of wage.
- S. The first ten (10) hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. In the event the job is down due to weather conditions, or other conditions beyond the control of the Employer, then Saturday may be worked at the straight time rate, for the first eight (8) hours, or the first ten (10) hours when a four day ten hour workweek has been established.
- All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
- When an employee returns to work without a break of eight (8) hours since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

Benefit Code Key – Effective 3/2/2024 thru 8/30/2024

Holiday Codes

5. A. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, and Christmas Day (7).
- B. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, the day before Christmas, and Christmas Day (8).
- C. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8).
- D. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8).
- H. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Day after Thanksgiving Day, And Christmas (6).
- I. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6).
- K. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, The Day Before Christmas, And Christmas Day (9).
- L. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (8).
- N. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, The Friday After Thanksgiving Day, And Christmas Day (9).
- P. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday And Saturday After Thanksgiving Day, The Day Before Christmas, And Christmas Day (9). If A Holiday Falls On Sunday, The Following Monday Shall Be Considered As A Holiday.
- Q. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6).
- R. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Day After Thanksgiving Day, One-Half Day Before Christmas Day, And Christmas Day. (7 1/2).
- S. Paid Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, And Christmas Day (7).
- Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8).
- G. Paid Holidays: New Year's Day, Martin Luther King Jr. Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and Christmas Eve Day (11).
- H. Paid Holidays: New Year's Day, New Year's Eve Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, Christmas Day, The Day After Christmas, And A Floating Holiday (10).

Holiday Codes Continued

7. T. Paid Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Last Working Day Before Christmas Day, And Christmas Day (9).
- Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (7). If a holiday falls on Saturday, the preceding Friday shall be considered as the holiday. If a holiday falls on Sunday, the following Monday shall be considered as the holiday.
- A. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any Holiday Which Falls On A Sunday Shall Be Observed As A Holiday On The Following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.
- B. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- C. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- D. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8). Unpaid Holidays: President's Day. Any paid holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any paid holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- E. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- F. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the last working day before Christmas day and Christmas day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- G. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.
- H. Holidays: New Year's Day, Martin Luther King Jr. Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- I. Holidays: New Year's Day, President's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Day Before Christmas Day And Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

Holiday Codes Continued

7. J. Holidays: New Year's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day and Christmas Day (6). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- K. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- L. Holidays: New Year's Day, Memorial Day, Labor Day, Independence Day, Thanksgiving Day, the Last Work Day before Christmas Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- N. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. When Christmas falls on a Saturday, the preceding Friday shall be observed as a holiday.
- P. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.
- Q. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.
- S. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, Christmas Day, the Day after Christmas, and A Floating Holiday (9). If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.
- V. Holidays: New Year's Day, President's Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, the day before or after Christmas, and the day before or after New Year's Day. If any of the above listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.
- W. Holidays: New Year's Day, Day After New Year's, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Eve Day, Christmas Day, the day after Christmas, the day before New Year's Day, and a Floating Holiday.
- X. Holidays: New Year's Day, Day before or after New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and the day before or after Christmas day. If a holiday falls on a Saturday or on a Friday that is the normal day off, then the holiday will be taken on the last normal workday. If the holiday falls on a Monday that is the normal day off or on a Sunday, then the holiday will be taken on the next normal workday.
- Y. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, and Christmas Day. (8) If the holiday falls on a Sunday, then the day observed by the federal government shall be considered a holiday and compensated accordingly.

Holiday Codes Continued

7. Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, Christmas Eve, and Christmas Day (9). Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday. Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.
15. G. New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, the last scheduled workday before Christmas, and Christmas Day (9). If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.
- H. Holidays: New Year's Day, Martin Luther King Jr. Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- I. Holidays: New Year's Day, President's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Day Before Christmas Day And Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- J. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, and Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.
- K. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- L. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving Day, and Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.
- M. Holidays: New Year's Day, Martin Luther King Jr. Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Eve Day and Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.
- N. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving Day, and Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.
- O. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, the day before Christmas day, and Christmas Day (10). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.

Benefit Code Key – Effective 3/2/2024 thru 8/30/2024

Note Codes

8. D. Workers working with supplied air on hazmat projects receive an additional \$1.00 per hour.
- L. Workers on hazmat projects receive additional hourly premiums as follows -Level A: \$0.75, Level B: \$0.50, And Level C: \$0.25.
- M. Workers on hazmat projects receive additional hourly premiums as follows: Levels A & B: \$1.00, Levels C & D: \$0.50.
- N. Workers on hazmat projects receive additional hourly premiums as follows -Level A: \$1.00, Level B: \$0.75, Level C: \$0.50, And Level D: \$0.25.
- S. Effective August 31, 2012 – A Traffic Control Supervisor shall be present on the project whenever flagging or spotting or other traffic control labor is being utilized. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. This classification is only effective on or after August 31, 2012.
- T. Effective August 31, 2012 – A Traffic Control Laborer performs the setup, maintenance and removal of all temporary traffic control devices and construction signs necessary to control vehicular, bicycle, and pedestrian traffic during construction operations. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. This classification is only effective on or after August 31, 2012.
- U. Workers on hazmat projects receive additional hourly premiums as follows – Class A Suit: \$2.00, Class B Suit: \$1.50, And Class C Suit: \$1.00. Workers performing underground work receive an additional \$0.40 per hour for any and all work performed underground, including operating, servicing and repairing of equipment. The premium for underground work shall be paid for the entire shift worked. Workers who work suspended by a rope or cable receive an additional \$0.50 per hour. The premium for work suspended shall be paid for the entire shift worked. Workers who do “pioneer” work (break open a cut, build road, etc.) more than one hundred fifty (150) feet above grade elevation receive an additional \$0.50 per hour.
- V. In addition to the hourly wage and fringe benefits, the following depth and enclosure premiums shall be paid. The premiums are to be calculated for the maximum depth and distance into an enclosure that a diver reaches in a day. The premiums are to be paid one time for the day and are not used in calculating overtime pay.
- Depth premiums apply to depths of fifty feet or more. Over 50' to 100' - \$2.00 per foot for each foot over 50 feet. Over 101' to 150' - \$3.00 per foot for each foot over 101 feet. Over 151' to 220' - \$4.00 per foot for each foot over 220 feet. Over 221' - \$5.00 per foot for each foot over 221 feet.
- Enclosure premiums apply when divers enter enclosures (such as pipes or tunnels) where there is no vertical ascent and is measured by the distance travelled from the entrance. 25' to 300' - \$1.00 per foot from entrance. 300' to 600' - \$1.50 per foot beginning at 300'. Over 600' - \$2.00 per foot beginning at 600'.
- W. Meter Installers work on single phase 120/240V self-contained residential meters. The Lineman/Groundmen rates would apply to meters not fitting this description.

Note Codes Continued

- X. Workers on hazmat projects receive additional hourly premiums as follows - Class A Suit: \$2.00, Class B Suit: \$1.50, Class C Suit: \$1.00, and Class D Suit: \$0.50. Special Shift Premium: Basic hourly rate plus \$2.00 per hour.

When due to conditions beyond the control of the Employer or when an owner (not acting as the contractor), a government agency or the contract specifications requires that work can only be performed outside the normal 5 am to 6pm shift, then the special shift premium will be applied to the basic hourly rate. When an employee works on a special shift, they shall be paid a special shift premium for each hour worked unless they are in OT or Double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday.)

- Y. Tide Work: When employees are called out between the hours of 6:00 p.m. and 6:00 a.m. to work on tide work (work located in the tide plane) all time worked shall be at one and one-half times the hourly rate of pay.

Swinging Stage/Boatswains Chair: Employees working on a swinging state or boatswains chair or under conditions that require them to be tied off to allow their hands to be free shall receive seventy-five cents (\$0.75) per hour above the classification rate.

- Z. Workers working with supplied air on hazmat projects receive an additional \$1.00 per hour.

Special Shift Premium: Basic hourly rate plus \$2.00 per hour. When due to conditions beyond the control of the Employer or when an owner (not acting as a contractor), a government agency or the contract specifications require that more than (4) hours of a special shift can only be performed outside the normal 6 am to 6pm shift, then the special shift premium will be applied to the basic straight time for the entire shift. When an employee works on a special shift, they will be paid a special shift premium for each hour worked unless they are in overtime or double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday.)

9. A. Workers working with supplied air on hazmat projects receive an additional \$1.00 per hour.

Special Shift Premium: Basic hourly rate plus \$2.00 per hour. When due to conditions beyond the control of the Employer or when an owner (not acting as the contractor), a government agency or the contract specifications require that more than four (4) hours of a special shift can only be performed outside the normal 6 am to 6pm shift, then the special shift premium will be applied to the basic straight time for the entire shift. When an employee works on a special shift, they shall be paid a special shift premium for each hour worked unless they are in overtime or double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday.)

Certified Crane Operator Premium: Crane operators requiring certifications shall be paid \$0.50 per hour above their classification rate.

Boom Pay Premium: All cranes including tower shall be paid as follows based on boom length:

(A) – 130' to 199' – \$0.50 per hour over their classification rate.

(B) – 200' to 299' – \$0.80 per hour over their classification rate.

(C) – 300' and over – \$1.00 per hour over their classification rate.

Note Codes Continued

- B. The highest pressure registered on the gauge for an accumulated time of more than fifteen (15) minutes during the shift shall be used in determining the scale paid.

Tide Work: When employees are called out between the hours of 6:00 p.m. and 6:00 a.m. to work on tide work (work located in the tide plane) all time worked shall be at one and one-half times the hourly rate of pay. Swinging Stage/Boatswains Chair: Employees working on a swinging stage or boatswains chair or under conditions that require them to be tied off to allow their hands to be free shall receive seventy-five cents (\$0.75) per hour above the classification rate.

- C. Tide Work: When employees are called out between the hours of 6:00 p.m. and 6:00 a.m. to work on tide work (work located in the tide plane) all time worked shall be at one and one-half times the hourly rate of pay. Swinging Stage/Boatswains Chair: Employees working on a swinging stage or boatswains chair or under conditions that require them to be tied off to allow their hands to be free shall receive seventy-five cents (\$0.75) per hour above the classification rate.

Effective August 31, 2012 – A Traffic Control Supervisor shall be present on the project whenever flagging or spotting or other traffic control labor is being utilized. A Traffic Control Laborer performs the setup, maintenance and removal of all temporary traffic control devices and construction signs necessary to control vehicular, bicycle, and pedestrian traffic during construction operations. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. These classifications are only effective on or after August 31, 2012.

- D. Industrial Painter wages are required for painting within industrial facilities such as treatment plants, pipelines, towers, dams, bridges, power generation facilities and manufacturing facilities such as chemical plants, etc., or anywhere abrasive blasting is necessary to prepare surfaces, or hazardous materials encapsulation is required.

9. E. Heavy Construction includes construction, repair, alteration or additions to the production, fabrication or manufacturing portions of industrial or manufacturing plants, hydroelectric or nuclear power plants and atomic reactor construction. Workers on hazmat projects receive additional hourly premiums as follows -Level A: \$1.00, Level B: \$0.75, Level C: \$0.50, And Level D: \$0.25.

- F. Industrial Painter wages are required for painting within industrial facilities such as treatment plants, pipelines, towers, dams, power generation facilities and manufacturing facilities such as chemical plants, etc., or anywhere abrasive blasting is necessary to prepare surfaces, or hazardous materials encapsulation is required.

- H. One (1) person crew shall consist of a Party Chief. (Total Station or similar one (1) person survey system). Two (2) person survey party shall consist of a least a Party Chief and a Chain Person. Three (3) person survey party shall consist of at least a Party Chief, an Instrument Person, and a Chain Person.

Washington State Department of Labor and Industries
Policy Statement
(Regarding the Production of "Standard" or "Non-standard" Items)

Below is the department's (State L&I's) list of criteria to be used in determining whether a prefabricated item is "standard" or "non-standard". For items not appearing on WSDOT's predetermined list, these criteria shall be used by the Contractor (and the Contractor's subcontractors, agents to subcontractors, suppliers, manufacturers, and fabricators) to determine coverage under RCW 39.12. The production, in the State of Washington, of non-standard items is covered by RCW 39.12, and the production of standard items is not. The production of any item outside the State of Washington is not covered by RCW 39.12.

1. Is the item fabricated for a public works project? If not, it is not subject to RCW 39.12. If it is, go to question 2.
2. Is the item fabricated on the public works jobsite? If it is, the work is covered under RCW 39.12. If not, go to question 3.
3. Is the item fabricated in an assembly/fabrication plant set up for, and dedicated primarily to, the public works project? If it is, the work is covered by RCW 39.12. If not, go to question 4.
4. Does the item require any assembly, cutting, modification or other fabrication by the supplier? If not, the work is not covered by RCW 39.12. If yes, go to question 5.
5. Is the prefabricated item intended for the public works project typically an inventory item which could reasonably be sold on the general market? If not, the work is covered by RCW 39.12. If yes, go to question 6.
6. Does the specific prefabricated item, generally defined as standard, have any unusual characteristics such as shape, type of material, strength requirements, finish, etc? If yes, the work is covered under RCW 39.12.

Any firm with questions regarding the policy, WSDOT's Predetermined List, or for determinations of covered and non-covered workers shall be directed to State L&I at (360) 902-5330.

**WSDOT's
Predetermined List for
Suppliers - Manufacturers - Fabricators**

Below is a list of potentially prefabricated items, originally furnished by WSDOT to Washington State Department of Labor and Industries, that may be considered non-standard and therefore covered by the prevailing wage law, RCW 39.12. Items marked with an X in the "YES" column should be considered to be non-standard and therefore covered by RCW 39.12. Items marked with an X in the "NO" column should be considered to be standard and therefore not covered. Of course, exceptions to this general list may occur, and in that case shall be evaluated according to the criteria described in State and L&I's policy statement.

ITEM DESCRIPTION	YES	NO
1. Metal rectangular frames, solid metal covers, herringbone grates, and bi-directional vane grates for Catch Basin Types 1, 1L, 1P, and 2 and Concrete Inlets. See Std. Plans		X
2. Metal circular frames (rings) and covers, circular grates, and prefabricated ladders for Manhole Types 1, 2, and 3, Drywell Types 1, 2, and 3 and Catch Basin Type 2. See Std. Plans		X
3. Prefabricated steel grate supports and welded grates, metal frames and dual vane grates, and Type 1, 2, and 3 structural tubing grates for Drop Inlets. See Std. Plans.		X
4. Concrete Pipe - Plain Concrete pipe and reinforced concrete pipe Class 2 to 5 sizes smaller than 60 inch diameter.		X
5. Concrete Pipe - Plain Concrete pipe and reinforced concrete pipe Class 2 to 5 sizes larger than 60 inch diameter.		X
6. Corrugated Steel Pipe - Steel lock seam corrugated pipe for culverts and storm sewers, sizes 30 inch to 120 inches in diameter. May also be treated, 1 thru 5.		X
7. Corrugated Aluminum Pipe - Aluminum lock seam corrugated pipe for culverts and storm sewers, sizes 30 inch to 120 inches in diameter. May also be treated, #5.		X

ITEM DESCRIPTION	YES	NO
8. Anchor Bolts & Nuts - Anchor Bolts and Nuts, for mounting sign structures, luminaries and other items, shall be made from commercial bolt stock. See Contract Plans and Std. Plans for size and material type.		X
9. Aluminum Pedestrian Handrail - Pedestrian handrail conforming to the type and material specifications set forth in the contract plans. Welding of aluminum shall be in accordance with Section 9-28.14(3).	X	
10. Major Structural Steel Fabrication - Fabrication of major steel items such as trusses, beams, girders, etc., for bridges.	X	
11. Minor Structural Steel Fabrication - Fabrication of minor steel Items such as special hangers, brackets, access doors for structures, access ladders for irrigation boxes, bridge expansion joint systems, etc., involving welding, cutting, punching and/or boring of holes. See Contact Plans for item description and shop drawings.	X	
12. Aluminum Bridge Railing Type BP - Metal bridge railing conforming to the type and material specifications set forth in the Contract Plans. Welding of aluminum shall be in accordance with Section 9-28.14(3).		X
13. Concrete Piling--Precast-Prestressed concrete piling for use as 55 and 70 ton concrete piling. Concrete to conform to Section 9-19.1 of Std. Spec..	X	
14. Precast Manhole Types 1, 2, and 3 with cones, adjustment sections and flat top slabs. See Std. Plans.		X
15. Precast Drywell Types 1, 2, and with cones and adjustment Sections. See Std. Plans.		X
16. Precast Catch Basin - Catch Basin type 1, 1L, 1P, and 2 With adjustment sections. See Std. Plans.		X

ITEM DESCRIPTION	YES	NO
17. Precast Concrete Inlet - with adjustment sections, See Std. Plans		X
18. Precast Drop Inlet Type 1 and 2 with metal grate supports. See Std. Plans.		X
19. Precast Grate Inlet Type 2 with extension and top units. See Std. Plans		X
20. Metal frames, vaned grates, and hoods for Combination Inlets. See Std. Plans		X
21. Precast Concrete Utility Vaults - Precast Concrete utility vaults of various sizes. Used for in ground storage of utility facilities and controls. See Contract Plans for size and construction requirements. Shop drawings are to be provided for approval prior to casting		X
22. Vault Risers - For use with Valve Vaults and Utilities X Vaults.		X
23. Valve Vault - For use with underground utilities. See Contract Plans for details.		X
24. Precast Concrete Barrier - Precast Concrete Barrier for use as new barrier or may also be used as Temporary Concrete Barrier. Only new state approved barrier may be used as permanent barrier.		X
25. Reinforced Earth Wall Panels – Reinforced Earth Wall Panels in size and shape as shown in the Plans. Fabrication plant has annual approval for methods and materials to be used. See Shop Drawing. Fabrication at other locations may be approved, after facilities inspection, contact HQ. Lab.	X	
26. Precast Concrete Walls - Precast Concrete Walls - tilt-up wall panel in size and shape as shown in Plans. Fabrication plant has annual approval for methods and materials to be used	X	

ITEM DESCRIPTION	YES	NO
27. Precast Railroad Crossings - Concrete Crossing Structure Slabs.	X	
28. 12, 18 and 26 inch Standard Precast Prestressed Girder – Standard Precast Prestressed Girder for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)A	X	
29. Prestressed Concrete Girder Series 4-14 - Prestressed Concrete Girders for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)A	X	
30. Prestressed Tri-Beam Girder - Prestressed Tri-Beam Girders for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)A	X	
31. Prestressed Precast Hollow-Core Slab – Precast Prestressed Hollow-core slab for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)A.	X	
32. Prestressed-Bulb Tee Girder - Bulb Tee Prestressed Girder for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)A	X	
33. Monument Case and Cover See Std. Plan.		X

ITEM DESCRIPTION	YES	NO
34. Cantilever Sign Structure - Cantilever Sign Structure fabricated from steel tubing meeting AASHTO-M-183. See Std. Plans, and Contract Plans for details. The steel structure shall be galvanized after fabrication in accordance with AASHTO-M-111.	X	
35. Mono-tube Sign Structures - Mono-tube Sign Bridge fabricated to details shown in the Plans. Shop drawings for approval are required prior to fabrication.	X	
36. Steel Sign Bridges - Steel Sign Bridges fabricated from steel tubing meeting AASHTO-M-138 for Aluminum Alloys. See Std. Plans, and Contract Plans for details. The steel structure shall be galvanized after fabrication in accordance with AASHTO-M-111.	X	
37. Steel Sign Post - Fabricated Steel Sign Posts as detailed in Std Plans. Shop drawings for approval are to be provided prior to fabrication		X
38. Light Standard-Prestressed - Spun, prestressed, hollow concrete poles.	X	
39. Light Standards - Lighting Standards for use on highway illumination systems, poles to be fabricated to conform with methods and materials as specified on Std. Plans. See Special Provisions for pre-approved drawings.	X	
40. Traffic Signal Standards - Traffic Signal Standards for use on highway and/or street signal systems. Standards to be fabricated to conform with methods and material as specified on Std. Plans. See Special Provisions for pre-approved drawings	X	
41. Precast Concrete Sloped Mountable Curb (Single and DualFaced) See Std. Plans.		X

ITEM DESCRIPTION	YES	NO
42. Traffic Signs - Prior to approval of a Fabricator of Traffic Signs, the sources of the following materials must be submitted and approved for reflective sheeting, legend material, and aluminum sheeting. NOTE: *** Fabrication inspection required. Only signs tagged "Fabrication Approved" by WSDOT Sign Fabrication Inspector to be installed	X	X
	Custom Message	Std Signing Message
43. Cutting & bending reinforcing steel		X
44. Guardrail components	X	X
	Custom End Sec	Standard Sec
45. Aggregates/Concrete mixes	Covered by WAC 296-127-018	
46. Asphalt	Covered by WAC 296-127-018	
47. Fiber fabrics		X
48. Electrical wiring/components		X
49. treated or untreated timber pile		X
50. Girder pads (elastomeric bearing)	X	
51. Standard Dimension lumber		X
52. Irrigation components		X

ITEM DESCRIPTION	YES	NO
53. Fencing materials		X
54. Guide Posts		X
55. Traffic Buttons		X
56. Epoxy		X
57. Cribbing		X
58. Water distribution materials		X
59. Steel "H" piles		X
60. Steel pipe for concrete pile casings		X
61. Steel pile tips, standard		X
62. Steel pile tips, custom	X	

Prefabricated items specifically produced for public works projects that are prefabricated in a county other than the county wherein the public works project is to be completed, the wage for the offsite prefabrication shall be the applicable prevailing wage for the county in which the actual prefabrication takes place.

It is the manufacturer of the prefabricated product to verify that the correct county wage rates are applied to work they perform.

See RCW [39.12.010](#)

(The definition of "locality" in RCW [39.12.010](#)(2) contains the phrase "wherein the physical work is being performed." The department interprets this phrase to mean the actual work site.

WSDOT's List of State Occupations not applicable to Heavy and Highway Construction Projects

This project is subject to the state hourly minimum rates for wages and fringe benefits in the contract provisions, as provided by the state Department of Labor and Industries.

The following list of occupations, is comprised of those occupations that are not normally used in the construction of heavy and highway projects.

When considering job classifications for use and / or payment when bidding on, or building heavy and highway construction projects for, or administered by WSDOT, these Occupations will be excepted from the included "Washington State Prevailing Wage Rates For Public Work Contracts" documents.

- Building Service Employees
- Electrical Fixture Maintenance Workers
- Electricians - Motor Shop
- Heating Equipment Mechanics
- Industrial Engine and Machine Mechanics
- Industrial Power Vacuum Cleaners
- Inspection, Cleaning, Sealing of Water Systems by Remote Control
- Laborers - Underground Sewer & Water
- Machinists (Hydroelectric Site Work)
- Modular Buildings
- Playground & Park Equipment Installers
- Power Equipment Operators - Underground Sewer & Water
- Residential *** ALL ASSOCIATED RATES ***
- Sign Makers and Installers (Non-Electrical)
- Sign Makers and Installers (Electrical)
- Stage Rigging Mechanics (Non Structural)

The following occupations may be used only as outlined in the preceding text concerning "WSDOT's list for Suppliers - Manufacturers - Fabricators"

- Fabricated Precast Concrete Products
- Metal Fabrication (In Shop)

Definitions for the Scope of Work for prevailing wages may be found at the Washington State Department of Labor and Industries web site and in WAC Chapter 296-127.

Washington State Department of Labor and Industries
Policy Statements
(Regarding Production and Delivery of Gravel, Concrete, Asphalt, etc.)

WAC 296-127-018 Agency filings affecting this section

Coverage and exemptions of workers involved in the production and delivery of gravel, concrete, asphalt, or similar materials.

(1) The materials covered under this section include but are not limited to: Sand, gravel, crushed rock, concrete, asphalt, or other similar materials.

(2) All workers, regardless of by whom employed, are subject to the provisions of chapter 39.12 RCW when they perform any or all of the following functions:

(a) They deliver or discharge any of the above-listed materials to a public works project site:

(i) At one or more point(s) directly upon the location where the material will be incorporated into the project; or

(ii) At multiple points at the project; or

(iii) Adjacent to the location and coordinated with the incorporation of those materials.

(b) They wait at or near a public works project site to perform any tasks subject to this section of the rule.

(c) They remove any materials from a public works construction site pursuant to contract requirements or specifications (e.g., excavated materials, materials from demolished structures, clean-up materials, etc.).

(d) They work in a materials production facility (e.g., batch plant, borrow pit, rock quarry, etc.) which is established for a public works project for the specific, but not necessarily exclusive, purpose of supplying materials for the project.

(e) They deliver concrete to a public works site regardless of the method of incorporation.

(f) They assist or participate in the incorporation of any materials into the public works project.

(3) All travel time that relates to the work covered under subsection (2) of this section requires the payment of prevailing wages. Travel time includes time spent waiting to load, loading, transporting, waiting to unload, and delivering materials. Travel time would include all time spent in travel in support of a public works project whether the vehicle is empty or full. For example, travel time spent returning to a supply source to obtain another load of material for use on a public works site or returning to the public works site to obtain another load of excavated material is time spent in travel that is subject to prevailing wage. Travel to a supply source, including travel from a public works site, to obtain materials for use on a private project would not be travel subject to the prevailing wage.

(4) Workers are not subject to the provisions of chapter 39.12 RCW when they deliver materials to a stockpile.

(a) A "stockpile" is defined as materials delivered to a pile located away from the site of incorporation such that the stockpiled materials must be physically moved from the stockpile and transported to another location on the project site in order to be incorporated into the project.

(b) A stockpile does not include any of the functions described in subsection (2)(a) through (f) of this section; nor does a stockpile include materials delivered or distributed to multiple locations upon the project site; nor does a stockpile include materials dumped at the place of incorporation, or adjacent to the location and coordinated with the incorporation.

(5) The applicable prevailing wage rate shall be determined by the locality in which the work is performed. Workers subject to subsection (2)(d) of this section, who produce such materials at an off-site facility shall be paid the applicable prevailing wage rates for the county in which the off-site facility is located. Workers subject to subsection (2) of this section, who deliver such materials to a public works project site shall be paid the applicable prevailing wage rates for the county in which the public works project is located.

[Statutory Authority: Chapter 39.12 RCW, RCW 43.22.051 and 43.22.270. 08-24-101, § 296-127-018, filed 12/2/08, effective 1/2/09. Statutory Authority: Chapters 39.04 and 39.12 RCW and RCW 43.22.270. 92-01-104 and 92-08-101, § 296-127-018, filed 12/18/91 and 4/1/92, effective 8/31/92.]

SECTION 6 – SPECIAL PROVISIONS AND TECHNICAL SPECIFICATIONS

CITY OF GRANDVIEW
YAKIMA COUNTY, WASHINGTON

SPECIAL PROVISIONS AND TECHNICAL SPECIFICATIONS
FOR

BUTTERNUT WELL CONTROL UPGRADES

HLA PROJECT NO. 23193

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SPECIAL PROVISIONS

FOR

CITY OF GRANDVIEW

BUTTERNUT WELL CONTROL UPGRADES

HLA PROJECT NO. 23193

INTRODUCTION TO THE SPECIAL PROVISIONS

(January 4, 2024 APWA GSP)

The work on this project shall be accomplished in accordance with the *Standard Specifications for Road, Bridge and Municipal Construction*, 2024 edition, as issued by the Washington State Department of Transportation (WSDOT) and the American Public Works Association (APWA), Washington State Chapter (hereafter "Standard Specifications"). The Standard Specifications, as modified or supplemented by these Special Provisions, all of which are made a part of the Contract Documents, shall govern all of the Work.

These Special Provisions are made up of both General Special Provisions (GSPs) from various sources, which may have project-specific fill-ins; and project-specific Special Provisions. Each Provision either supplements, modifies, or replaces the comparable Standard Specification, or is a new Provision. The deletion, amendment, alteration, or addition to any subsection or portion of the Standard Specifications is meant to pertain only to that particular portion of the section, and in no way should it be interpreted that the balance of the section does not apply.

The GSPs are labeled under the headers of each GSP, with the effective date of the GSP and its source. For example:

(March 8, 2013 APWA GSP)
(April 1, 2013 WSDOT GSP)

Also incorporated into the Contract Documents by reference are:

- *Manual on Uniform Traffic Control Devices for Streets and Highways*, currently adopted edition, with Washington State modifications, if any
- *Standard Plans for Road, Bridge and Municipal Construction*, WSDOT Manual M21-01, current edition

Contractor shall obtain copies of these publications, at Contractor's own expense.

DESCRIPTION OF WORK

(March 13, 1995 WSDOT GSP)

This Contract provides for the improvement of the Butternut Well Control Upgrades and other work, all in accordance with the attached Contract Plans, these Contract Provisions, and the Standard Specifications.

The quantities of work indicated in the proposal are to be considered as estimates and are for comparative bidding purposes only. All payments will be made on the basis of actual field measurement of Contract work completed.

All work shall be done in accordance with the Plans, the Standard Specifications for Road, Bridge, and Municipal Construction prepared by the Washington State Department of Transportation dated 2024 referenced codes and organizations, and these Special Provisions.

1-01 DEFINITIONS AND TERMS

1-01.3 Definitions

(January 19, 2022 APWA GSP)

Delete the heading **Completion Dates** and the three paragraphs that follow it, and replace them with the following:

Dates

Bid Opening Date

The date on which the Contracting Agency publicly opens and reads the Bids.

Award Date

The date of the formal decision of the Contracting Agency to accept the lowest responsible and responsive Bidder for the Work.

Contract Execution Date

The date the Contracting Agency officially binds the Agency to the Contract.

Notice to Proceed Date

The date stated in the Notice to Proceed on which the Contract time begins.

Substantial Completion Date

The day the Engineer determines the Contracting Agency has full and unrestricted use and benefit of the facilities, both from the operational and safety standpoint, any remaining traffic disruptions will be rare and brief, and only minor incidental work, replacement of temporary substitute facilities, plant establishment periods, or correction or repair remains for the Physical Completion of the total Contract.

Physical Completion Date

The day all of the Work is physically completed on the project. All documentation required by the Contract and required by law does not necessarily need to be furnished by the Contractor by this date.

Completion Date

The day all the Work specified in the Contract is completed and all the obligations of the Contractor under the contract are fulfilled by the Contractor. All documentation required by the Contract and required by law must be furnished by the Contractor before establishment of this date.

Final Acceptance Date

The date on which the Contracting Agency accepts the work as complete.

Supplement this Section with the following:

All references in the Standard Specifications or WSDOT General Special Provisions, to the terms "Department of Transportation", "Washington State Transportation Commission", "Commission", "Secretary of Transportation", "Secretary", "Headquarters", and "State Treasurer" shall be revised to read "Contracting Agency".

All references to the terms "State" or "state" shall be revised to read "Contracting Agency" unless the reference is to an administrative agency of the State of Washington, a State statute or regulation, or the context reasonably indicates otherwise.

All references to "State Materials Laboratory" shall be revised to read "Contracting Agency designated location".

All references to "final contract voucher certification" shall be interpreted to mean the Contracting Agency form(s) by which final payment is authorized, and final completion and acceptance granted.

Additive

A supplemental unit of work or group of bid items, identified separately in the Bid Proposal, which may, at the discretion of the Contracting Agency, be awarded in addition to the base bid.

Alternate

One of two or more units of work or groups of bid items, identified separately in the Bid Proposal, from which the Contracting Agency may make a choice between different methods or material of construction for performing the same work.

Business Day

A business day is any day from Monday through Friday except holidays as listed in Section 1-08.5.

Contract Bond

The definition in the Standard Specifications for "Contract Bond" applies to whatever bond form(s) are required by the Contract Documents, which may be a combination of a Payment Bond and a Performance Bond.

Contract Documents

See definition for "Contract".

Contract Time

The period of time established by the terms and conditions of the Contract within which the Work must be physically completed.

Notice of Award

The written notice from the Contracting Agency to the successful Bidder signifying the Contracting Agency's acceptance of the Bid Proposal.

Notice to Proceed

The written notice from the Contracting Agency or Engineer to the Contractor authorizing and directing the Contractor to proceed with the Work and establishing the date on which the Contract time begins.

Traffic

Both vehicular and non-vehicular traffic, such as pedestrians, bicyclists, wheelchairs, and equestrian traffic.

Further supplement this section with the following:

Agent(s)

Any and all representatives or delegates, who, on behalf of the Contracting Agency, represent the Contracting Agency's interests, including but not limited to employees, consultants and subconsultants.

The terms defined in Section 1-01.3 of the Standard Specifications shall be further described by the following:

Contracting Agency

City of Grandview
207 W. Second Street
Grandview, WA 98930

The terms "Contracting Agency", "Agency" and "Owner" are interchangeable.

Engineer

HLA Engineering and Land Surveying, Inc. (HLA)
2803 River Road
Yakima, WA 98902

Working Drawings

Working drawings are further defined as electrical diagrams, catalog cut sheets, manufacturer's informational sheets describing salient features, performance curves, or samples of fabricated and manufactured items (including mechanical and electrical equipment) required for the construction project.

1-02 BID PROCEDURES AND CONDITIONS

1-02.1 Prequalification of Bidders

Delete this section and replace it with the following:

1-02.1 Qualifications of Bidder

(January 24, 2011 APWA GSP)

Before award of a public works contract, a bidder must meet at least the minimum qualifications of RCW 39.04.350(1) to be considered a responsible bidder and qualified to be awarded a public works project.

1-02.2 Plans and Specifications

Delete this section and replace it with the following:

Information as to where Bid Documents can be obtained or reviewed will be found in the Call for Bids (Advertisement for Bids) for the work. During the bid period, electronic PDF plans and specifications, including any addenda will be available to download at <https://hlacivil.com/bid>. Following bid period, electronic PDF plans and specifications will only be available upon request. No paper copies will be provided.

1-02.4 Examination of Plans, Specifications, and Site of Work

1-02.4(1) General

(December 30, 2022 APWA GSP Option B)

The first sentence of the ninth paragraph, beginning with "Prospective Bidder desiring...", is revised to read:

Prospective Bidders desiring an explanation or interpretation of the Bid Documents, shall request the explanation or interpretation in writing by close of business four (4) business days preceding the bid opening to allow a written reply to reach all prospective Bidders before the submission of their Bids.

Add the following paragraph:

No pre-bid approval on any proposed substitute equipment shall be granted prior to the bid opening unless specified otherwise in these Specifications.

1-02.5 Proposal Forms

(July 31, 2017 APWA GSP)

Delete this section and replace it with the following:

The Proposal Form will identify the project and its location and describe the work. It will also list estimated quantities, units of measurement, the items of work, and the materials to be furnished at the unit bid prices. The bidder shall complete spaces on the proposal form that call for, but are not limited to, unit prices; extensions; summations; the total bid amount; signatures; date; and, where applicable, retail sales taxes and acknowledgment of addenda; the bidder's name, address, telephone number, and signature; the bidder's UDBE/DBE/M/WBE commitment, if applicable, a State of Washington Contractor's Registration Number; and a Business License Number, if applicable. Bids shall be completed by typing or shall be printed in ink by hand, preferably in black ink. The required certifications are included as part of the Proposal Form.

The Contracting Agency reserves the right to arrange the proposal forms with alternates and additives, if such be to the advantage of the Contracting Agency. The bidder shall bid on all alternates and additives set forth in the Proposal Form unless otherwise specified.

1-02.6 Preparation of Proposal

(January 4, 2024 APWA GSP, Option B)

Supplement the second paragraph with the following:

4. If a minimum bid amount has been established for any item, the unit or lump sum price must equal or exceed the minimum amount stated.
5. Any correction to a bid made by interlineation, alteration, or erasure, shall be initialed by the signer of the bid.

Delete the last two paragraphs, and replace them with the following:

The Bidder shall submit with their Bid a completed Contractor Certification Wage Law Compliance form, provided by the Contracting Agency. Failure to return this certification as part of the Bid Proposal package will make this Bid Nonresponsive and ineligible for Award. A Contractor Certification of Wage Law Compliance form is included in the Proposal Forms.

The Bidder shall make no stipulation on the Bid Form, nor qualify the bid in any manner.

A bid by a corporation shall be executed in the corporate name, by the president or a vice president (or other corporate officer accompanied by evidence of authority to sign).

A bid by a partnership shall be executed in the partnership name, and signed by a partner. A copy of the partnership agreement shall be submitted with the Bid Form if any DBE requirements are to be satisfied through such an agreement.

A bid by a joint venture shall be executed in the joint venture name and signed by a member of the joint venture. A copy of the joint venture agreement shall be submitted with the Bid Form if any DBE requirements are to be satisfied through such an agreement.

Supplement this section with the following:

Any bid item which has a unit price but no extension column amount shall have the extension amount determined by multiplying the unit price times the unit quantity. Any bid item which does not have a unit price but does have an extension column amount shall have the unit price determined by dividing the extension amount by the unit quantity. Should both the unit price and the extension column amount be left blank, then the entire bid shall be considered non-responsive.

1-02.7 Bid Deposit

(March 8, 2013 APWA GSP)

Supplement this section with the following:

Bid bonds shall contain the following:

1. Contracting Agency-assigned number for the project;
2. Name of the project;
3. The Contracting Agency named as obligee;
4. The amount of the bid bond stated either as a dollar figure or as a percentage which represents five percent of the maximum bid amount that could be awarded;

5. Signature of the bidder's officer empowered to sign official statements. The signature of the person authorized to submit the bid should agree with the signature on the bond, and the title of the person must accompany the said signature;
6. The signature of the surety's officer empowered to sign the bond and the power of attorney.

If so stated in the Contract Provisions, bidder must use the bond form included in the Contract Provisions.

If so stated in the Contract Provisions, cash will not be accepted for a bid deposit.

1-02.9 Delivery of Proposal

Delete this section and replace it with the following:

Each Proposal shall be submitted in a sealed envelope, with the Project Title and Project Number as stated in the Call for Bids clearly marked on the outside of the envelope, or as otherwise required in the Bid Documents, to ensure proper handling and delivery.

Proposals that are received as required will be publicly opened and read as specified in Section 1-02.12. The Contracting Agency will not open or consider any Bid Proposal that is received after the time specified in the Call for Bids for receipt of Bid Proposals, or received in a location other than that specified in the Call for Bids.

If an emergency or unanticipated event interrupts normal work processes of the Contracting Agency so that Proposals cannot be received at the office designated for receipt of bids as specified in Section 1-02.12 the time specified for receipt of the Proposal will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which the normal work processes of the Contracting Agency resume.

1-02.10 Withdrawing, Revising, or Supplementing Proposal (July 23, 2015 APWA GSP)

Delete this section, and replace it with the following:

After submitting a physical Bid Proposal to the Contracting Agency, the Bidder may withdraw, revise, or supplement it if:

1. The Bidder submits a written request signed by an authorized person and physically delivers it to the place designated for receipt of Bid Proposals, and
2. The Contracting Agency receives the request before the time set for receipt of Bid Proposals, and
3. The revised or supplemented Bid Proposal (if any) is received by the Contracting Agency before the time set for receipt of Bid Proposals.

If the Bidder's request to withdraw, revise, or supplement its Bid Proposal is received before the time set for receipt of Bid Proposals, the Contracting Agency will return the unopened Proposal package to the Bidder. The Bidder must then submit the revised or supplemented package in its entirety. If the Bidder does not submit a revised or supplemented package, then its bid shall be considered withdrawn.

Late revised or supplemented Bid Proposals or late withdrawal requests will be date recorded by the Contracting Agency and returned unopened. Mailed, emailed, or faxed requests to withdraw, revise, or supplement a Bid Proposal are not acceptable.

1-02.13 Irregular Proposals
(January 4, 2024 APWA GSP)

Delete this section and replace it with the following:

1. A Proposal will be considered irregular and will be rejected if:
 - a. The Bidder is not prequalified when so required;
 - b. The Bidder adds provisions reserving the right to reject or accept the Award, or enter into the Contract;
 - c. A price per unit cannot be determined from the Bid Proposal;
 - d. The Proposal form is not properly executed;
 - e. The Bidder fails to submit or properly complete a subcontractor list ([WSDOT Form 271-015](#)), if applicable, as required in Section 1-02.6;
 - f. The Bidder fails to submit or properly complete a Disadvantaged Business Enterprise Certification ([WSDOT Form 272-056](#)), if applicable, as required in Section 1-02.6;
 - g. The Bidder fails to submit Written Confirmations ([WSDOT Form 422-031](#)) from each DBE firm listed on the Bidder's completed DBE Utilization Certification that they are in agreement with the bidder's DBE participation commitment, if applicable, as required in Section 1-02.6, or if the written confirmation that is submitted fails to meet the requirements of the Special Provisions;
 - h. The Bidder fails to submit DBE Good Faith Effort documentation, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to demonstrate that a Good Faith Effort to meet the Condition of Award was made;
 - i. The Bidder fails to submit a DBE Bid Item Breakdown ([WSDOT Form 272-054](#)), if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to meet the requirements of the Special Provisions;
 - j. The Bid Proposal does not constitute a definite and unqualified offer to meet the material terms of the Bid invitation.
2. A Proposal may be considered irregular and may be rejected if:
 - a. The Proposal does not include a unit price for every Bid item;
 - b. Any of the unit prices are excessively unbalanced (either above or below the amount of a reasonable Bid) to the potential detriment of the Contracting Agency;
 - c. The authorized Proposal Form furnished by the Contracting Agency is not used or is altered;
 - d. The completed Proposal form contains unauthorized additions, deletions, alternate Bids, or conditions;
 - e. Receipt of Addenda is not acknowledged;
 - f. A member of a joint venture or partnership and the joint venture or partnership submit Proposals for the same project (in such an instance, both Bids may be rejected); or
 - g. If Proposal form entries are not made in ink.

1-02.14 Disqualification of Bidders
(May 17, 2018 APWA GSP, Option B)

Delete this section and replace it with the following:

A Bidder will be deemed not responsible if the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1), as amended; or does not meet Supplemental Criteria 1-7 listed in this Section.

The Contracting Agency will verify that the Bidder meets the mandatory bidder responsibility criteria in RCW 39.04.350(1), and Supplemental Criteria 1-2. Evidence that the Bidder meets Supplemental Criteria 3-7 shall be provided by the Bidder as stated later in this Section.

1. **Delinquent State Taxes**

- A. **Criterion:** The Bidder shall not owe delinquent taxes to the Washington State Department of Revenue without a payment plan approved by the Department of Revenue.
- B. **Documentation:** The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder does not owe delinquent taxes to the Washington State Department of Revenue, or if delinquent taxes are owed to the Washington State Department of Revenue, the Bidder must submit a written payment plan approved by the Department of Revenue, to the Contracting Agency by the deadline listed below.

2. **Federal Debarment**

- A. **Criterion:** The Bidder shall not currently be debarred or suspended by the Federal government.
- B. **Documentation:** The Bidder shall not be listed as having an "active exclusion" on the U.S. government's "System for Award Management" database (www.sam.gov).

3. **Subcontractor Responsibility**

- A. **Criterion:** The Bidder's standard subcontract form shall include the subcontractor responsibility language required by RCW 39.06.020, and the Bidder shall have an established procedure which it utilizes to validate the responsibility of each of its subcontractors. The Bidder's subcontract form shall also include a requirement that each of its subcontractors shall have and document a similar procedure to determine whether the sub-tier subcontractors with whom it contracts are also "responsible" subcontractors as defined by RCW 39.06.020.
- B. **Documentation:** The Bidder, if and when required as detailed below, shall submit a copy of its standard subcontract form for review by the Contracting Agency, and a written description of its procedure for validating the responsibility of subcontractors with which it contracts.

4. **Claims Against Retainage and Bonds**

- A. **Criterion:** The Bidder shall not have a record of excessive claims filed against the retainage or payment bonds for public works projects in the three years prior to the bid submittal date, that demonstrate a lack of effective management by the Bidder of making timely and appropriate payments to its subcontractors, suppliers, and workers, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency.
- B. **Documentation:** The Bidder, if and when required as detailed below, shall submit a list of the public works projects completed in the three years prior to the bid submittal date that have had claims against retainage and bonds and include for each project the following information:
- Name of project
 - The owner and contact information for the owner;
 - A list of claims filed against the retainage and/or payment bond for any of the projects listed;
 - A written explanation of the circumstances surrounding each claim and the ultimate resolution of the claim.

5. **Public Bidding Crime**

- A. **Criterion:** The Bidder and/or its owners shall not have been convicted of a crime involving bidding on a public works contract in the five years prior to the bid submittal date.

- B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder and/or its owners have not been convicted of a crime involving bidding on a public works contract.

6. Termination for Cause / Termination for Default

- A. Criterion: The Bidder shall not have had any public works contract terminated for cause or terminated for default by a government agency in the five years prior to the bid submittal date, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency.
- B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder has not had any public works contract terminated for cause or terminated for default by a government agency in the five years prior to the bid submittal date; or if Bidder was terminated, describe the circumstances.

7. Lawsuits

- A. Criterion: The Bidder shall not have lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency.
- B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder has not had any lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, or shall submit a list of all lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date, along with a written explanation of the circumstances surrounding each such lawsuit. The Contracting Agency shall evaluate these explanations to determine whether the lawsuits demonstrate a pattern of failing to meet of terms of construction related contracts.

As evidence that the Bidder meets the Supplemental Criteria stated above, the apparent low Bidder must submit to the Contracting Agency by 12:00 P.M. (noon) of the second business day following the bid submittal deadline, a written statement verifying that the Bidder meets the supplemental criteria together with supporting documentation (sufficient in the sole judgment of the Contracting Agency) demonstrating compliance with the Supplemental Criteria. The Contracting Agency reserves the right to request further documentation as needed from the low Bidder and documentation from other Bidders as well to assess Bidder responsibility and compliance with all bidder responsibility criteria. The Contracting Agency also reserves the right to obtain information from third-parties and independent sources of information concerning a Bidder's compliance with the mandatory and supplemental criteria, and to use that information in their evaluation. The Contracting Agency may consider mitigating factors in determining whether the Bidder complies with the requirements of the supplemental criteria.

The basis for evaluation of Bidder compliance with these mandatory and supplemental criteria shall include any documents or facts obtained by Contracting Agency (whether from the Bidder or third parties) including but not limited to: (i) financial, historical, or operational data from the Bidder; (ii) information obtained directly by the Contracting Agency from others for whom the Bidder has worked, or other public agencies or private enterprises; and (iii) any additional information obtained by the Contracting Agency which is believed to be relevant to the matter.

If the Contracting Agency determines the Bidder does not meet the bidder responsibility criteria above and is therefore not a responsible Bidder, the Contracting Agency shall notify the Bidder in writing, with the reasons for its determination. If the Bidder disagrees with this determination, it may appeal the determination within two (2) business days of the Contracting Agency's determination by presenting its appeal and any additional information to the Contracting Agency. The Contracting

Agency will consider the appeal and any additional information before issuing its final determination. If the final determination affirms that the Bidder is not responsible, the Contracting Agency will not execute a contract with any other Bidder until at least two business days after the Bidder determined to be not responsible has received the Contracting Agency's final determination.

Request to Change Supplemental Bidder Responsibility Criteria Prior To Bid: Bidders with concerns about the relevancy or restrictiveness of the Supplemental Bidder Responsibility Criteria may make or submit requests to the Contracting Agency to modify the criteria. Such requests shall be in writing, describe the nature of the concerns, and propose specific modifications to the criteria. Bidders shall submit such requests to the Contracting Agency no later than five (5) business days prior to the bid submittal deadline and address the request to the Project Engineer or such other person designated by the Contracting Agency in the Bid Documents.

1-02.15 Pre-Award Information (December 30, 2022 APWA GSP)

Revise this section to read:

Before awarding any contract, the Contracting Agency may require one or more of these items or actions of the apparent lowest responsible bidder:

1. A complete statement of the origin, composition, and manufacture of any or all materials to be used,
2. Samples of these materials for quality and fitness tests,
3. A progress schedule (in a form the Contracting Agency requires) showing the order of and time required for the various phases of the work,
4. A breakdown of costs assigned to any bid item,
5. Attendance at a conference with the Engineer or representatives of the Engineer,
6. Obtain, and furnish a copy of, a business license to do business in the city or county where the work is located.
7. Any other information or action taken that is deemed necessary to ensure that the bidder is the lowest responsible bidder.

1-03 AWARD AND EXECUTION OF CONTRACT

1-03.1 Consideration of Bids (December 30, 2022 APWA GSP)

Revise the first paragraph to read:

After opening and reading proposals, the Contracting Agency will check them for correctness of extensions of the prices per unit and the total price. If a discrepancy exists between the price per unit and the extended amount of any bid item, the price per unit will control. If a minimum bid amount has been established for any item and the bidder's unit or lump sum price is less than the minimum specified amount, the Contracting Agency will unilaterally revise the unit or lump sum price, to the minimum specified amount and recalculate the extension. The total of extensions, corrected where necessary, including sales taxes where applicable and such additives and/or alternates as selected by the Contracting Agency, will be used by the Contracting Agency for award purposes and to fix the Awarded Contract Price amount and the amount of the contract bond.

1-03.2 Award of Contract

Supplement this section with the following:

The Contract will be awarded to the apparent low bidder on the basis of the total of all bid items and schedules accepted by the Contracting Agency. The Contractor shall submit bids for all bid schedules, including all alternate and/or additive bid schedules as applicable, to be considered a responsive bidder. The Contracting Agency reserves the right to select any bid schedules for award, in no particular order.

1-03.3 Execution of Contract

(January 4, 2024 APWA GSP Option B)

Revise this section to read:

Within 3 calendar days of Award date (not including Saturdays, Sundays and Holidays), the successful Bidder shall provide the information necessary to execute the Contract to the Contracting Agency. The Bidder shall send the contact information, including the full name, email address, and phone number, for the authorized signer and bonding agent to the Contracting Agency.

Copies of the Contract Provisions, including the unsigned Form of Contract, will be available for signature by the successful bidder on the first business day following award. The number of copies to be executed by the Contractor will be determined by the Contracting Agency.

Within ten (10) calendar days after the award date, the successful bidder shall return the signed Contracting Agency-prepared contract, an insurance certification as required by Section 1-07.18, a satisfactory bond as required by law and Section 1-03.4, the Transfer of Coverage form for the Construction Stormwater General Permit with sections I, III, and VIII completed when provided. Before execution of the contract by the Contracting Agency, the successful bidder shall provide any pre-award information the Contracting Agency may require under Section 1-02.15.

Until the Contracting Agency executes a contract, no proposal shall bind the Contracting Agency nor shall any work begin within the project limits or within Contracting Agency-furnished sites. The Contractor shall bear all risks for any work begun outside such areas and for any materials ordered before the contract is executed by the Contracting Agency.

If the bidder experiences circumstances beyond their control that prevents return of the contract documents within the calendar days after the award date stated above, the Contracting Agency may grant up to a maximum of twenty (20) additional calendar days for return of the documents, provided the Contracting Agency deems the circumstances warrant it.

Supplement this section with the following:

Failure to return the required documents within the allotted time shall be considered as non-responsive and shall result in forfeiture of the bid bond or deposit of the bidder in accordance with Section 1-03.5.

1-03.4 Contract Bond

(July 23, 2015 APWA GSP)

Delete the first paragraph and replace it with the following:

The successful bidder shall provide executed payment and performance bond(s) for the full contract amount. The bond may be a combined payment and performance bond; or be separate payment and performance bonds. In the case of separate payment and performance bonds, each shall be for the full contract amount. The bond(s) shall:

1. Be on a Contracting Agency-furnished form(s);
2. Be signed by an approved surety (or sureties) that:
 - a. Is registered with the Washington State Insurance Commissioner, and
 - b. Appears on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner;

3. Guarantee that the Contractor will perform and comply with all obligations, duties, and conditions under the Contract, including but not limited to the duty and obligation to indemnify, defend, and protect the Contracting Agency against all losses and claims related directly or indirectly from any failure:
 - a. Of the Contractor (or any of the employees, subcontractors, or lower tier subcontractors of the Contractor) to faithfully perform and comply with all contract obligations, conditions, and duties or
 - b. Of the Contractor (or the subcontractors or lower tier subcontractors of the Contractor) to pay all laborers, mechanics, subcontractors, lower tier subcontractors, material person, or any other person who provides supplies or provisions for carrying out the work;
4. Be conditioned upon the payment of taxes, increases, and penalties incurred on the project under titles 50, 51, and 82 RCW; and
5. Be accompanied by a power of attorney for the Surety's officer empowered to sign the bond; and
6. Be signed by an officer of the Contractor empowered to sign official statements (sole proprietor or partner). If the Contractor is a corporation, the bond(s) must be signed by the president or vice president, unless accompanied by written proof of the authority of the individual signing the bond(s) to bind the corporation (i.e., corporate resolution, power of attorney, or a letter to such effect signed by the president or vice president).

Supplement this section with the following:

The Contractor shall guarantee the material provided and workmanship performed under the Contract for a period of one year from and after the final acceptance thereof by the Contracting Agency. Repair and/or replacement of defective materials and workmanship shall be as specified in Section 1-05.12(1).

In addition to the requirements for the Contract Bond according to Section 1-03.4 of the Standard Specifications, the Bond shall further indemnify and hold the Contracting Agency harmless from defects appearing or developing in the material or workmanship provided or performed under the Contract within a period of one year after final acceptance by the Contracting Agency. The Contract Bond document is bound in these Specifications.

Add the following new section:

1-03.4(1) Retainage in Lieu of Contract Bond
(May 17, 2018 APWA GSP)

For contracts of \$150,000 or less, the Contractor may, at the Contractor's option, authorize the Contracting Agency to retain 10% of the contract amount in lieu of furnishing a performance and/or payment bond. If the Contractor elects this option, the retainage shall be held for a period of thirty (30) days after the date of final acceptance, or until receipt of all necessary releases from the Departments of Revenue and of Labor and Industries and settlement of any liens filed under RCW 60.28, whichever is later. The Contractor must advise the Contracting Agency in writing of the Contractor's election to authorize retainage in lieu of a bond, at the time of execution of the Contract.

In choosing this option, the Contractor agrees that if the Contractor, its heirs, executors, administrators, successors, or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and agreements in the Contract, and shall faithfully perform all the provisions of such contract and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of the Contract that may hereafter be made, at the time and in the manner therein specified, and shall pay all laborers, mechanics, subcontractors, and material suppliers, and all persons who shall supply such person or persons, or subcontractors, with provisions and supplies for the carrying on of such work, on his or her part, and shall indemnify and save

harmless the Contracting Agency, its officers and agents from any claim for such payment, then the funds retained in lieu of a performance bond shall be released at the time provided above; otherwise, the funds shall be retained until the Contractor fulfills the said obligations.

1-03.7 Judicial Review

(December 30, 2022 APWA GSP)

Revise this section to read:

All decisions made by the Contracting Agency regarding the Award and execution of the Contract or Bid rejection shall be conclusive subject to the scope of judicial review permitted under Washington Law. Such review, if any, shall be timely filed in the Superior Court of the county where the Contracting Agency headquarters is located, provided that where an action is asserted against a county, RCW 36.01.050 shall control venue and jurisdiction.

1-04 SCOPE OF THE WORK

1-04.1 Intent of the Contract

1-04.1(2) Bid Items Not Included in the Proposal

Delete the first paragraph in its entirety and replace it with the following:

If work is required to complete the project according to the intent of the Plans and Specifications but no bid item is provided in the Bid Schedule, then the Contractor shall include the cost for providing the necessary work in the unit or lump sum price for the bid item most closely related to the work.

1-04.2 Coordination of Contract Documents, Plans, Special Provisions, Specifications, and Addenda

(December 30, 2022 APWA GSP)

Revise the second paragraph to read:

Any inconsistency in the parts of the contract shall be resolved by following this order of precedence (e.g., 1 presiding over 2, 2 over 3, 3 over 4, and so forth):

1. Addenda,
2. Proposal Form,
3. Special Provisions,
4. Contract Plans,
5. Standard Specifications,
6. Contracting Agency's Standard Plans or Details (if any), and
7. WSDOT Standard Plans for Road, Bridge, and Municipal Construction.

1-04.4 Changes

(January 19, 2022 APWA GSP)

The first two sentences of the last paragraph of Section 1-04.4 are deleted.

Section 1-04.4 is supplemented with the following:

No changes in the work covered by the approved Contract Documents shall be made without having prior written or oral (as deemed appropriate due to urgency of change) approval of the Owner. If oral approval is granted, it shall be documented in writing shortly thereafter. Charges or credits for the work covered by the approved change shall be determined by one or more, or a combination of the following methods:

- a. Unit bid prices previously approved.
- b. An agreed lump sum.

c. The actual costs of:

- (1) Labor, including foremen;
- (2) Materials entering permanently into the work;
- (3) The ownership or rental costs of construction plant and equipment during the time of use on the extra work;
- (4) Power and consumable supplies for the operation of power equipment;
- (5) Insurance;
- (6) Social Security and Medicare and unemployment contributions.

Should authorized changes be made based upon the actual cost of material and labor, the costs thereof and costs allowed for overhead profit, bonds, insurance, etc., shall be determined via Section 1-09.6 Force Account of the Standard Specifications.

1-04.4(1) Minor Changes

Delete the first paragraph and replace it with the following:

Payments or credits for changes may be made under the Bid item "Minor Change". At the discretion of the Contracting Agency, this procedure for Minor Changes may be used in lieu of the more formal procedure as outlined in Section 1-04.4, Changes. All "Minor Change" work will be within the scope of the Contract Work and will not change Contract Time.

1-04.5 Procedure, Protest, and Dispute by the Contractor (January 19, 2022 APWA GSP)

Revise item 1 of the first paragraph to read:

1. Give a signed written notice of protest to the Engineer or the Engineer's field Inspectors within seven (7) calendar days of receiving a change order or an Engineer's Written Determination.

1-04.6 Variation in Estimated Quantities

Supplement this section with the following:

The quantities listed in the unit price Bid Proposal are estimates for bidding purposes only. There will be no adjustments in price due to increases or decreases in quantities regardless of the magnitude. The 25 percent provisions of this Section 1-04.6 shall not apply to: **All Bid Items**. Payment will be made at the unit contract price for actual quantities of work completed.

1-04.11 Final Cleanup

Supplement this section with the following:

Partial cleanup shall be done by the Contractor when he feels it is necessary or when, in the opinion of the Contracting Agency, partial cleanup should be done prior to either final cleanup or final inspection. The cleanup work shall be done immediately upon written notification of the Engineer and other work shall not proceed until this partial cleanup is accomplished. Should the Contractor not conduct the cleanup as directed and in a timely manner, the Owner shall take action to have such cleanup work completed by others and will deduct such costs from any payment due the Contractor.

1-05 CONTROL OF WORK

1-05.1 Authority of the Engineer

Supplement this section with the following:

Unless otherwise expressly provided in the Contract Drawings, Specifications, and Addenda, the means and methods of construction shall be such as the Contractor may choose; subject, however, to the Engineer's right to reject means and methods proposed by the Contractor which (1) will constitute or create a hazard to the work, or to persons or property; or (2) will not produce finished work in accordance with the terms of the Contract. The Engineer's approval of the Contractor's means and methods of construction or his failure to exercise his right to reject such means or methods shall not relieve the Contractor of the obligation to accomplish the result intended by the Contract; nor shall the exercise of such right to reject create a cause for action for damages.

At the Contractor's risk, the Engineer may suspend all or part of the work according to Section 1-08.6.

1-05.3 Working Drawings

Supplement this section with the following:

Working Drawings shall be transmitted to HLA with the Submittal Transmittal sheet provided to the Contractor after project award. The Submittal Transmittal form includes certification language stating the submittal has been reviewed by the Contractor and complies with the Plans and Specifications. Catalog cuts shall include marks to indicate the specific item that is to be provided for the project and shall include applicable bid item number. If alternate items are submitted for approval, the Contractor shall indicate the proposed location and use of the item.

If PDF format is found to be unacceptable, the Contractor shall submit to the Engineer for review and approval a copy of all Working Drawings required in the project documents. The data shown on the Working Drawings will be complete with respect to dimensions, design criteria, products and materials of construction, and like information to enable the Engineer to review the submittal. At the time of submittal, the Contractor shall, in writing, call attention to any deviations that the item or material submitted may have from the requirements of the Contract Specifications. When the Contractor does call such deviations to the attention of the Engineer, the Contractor shall state in his letter whether or not such deviations involve any deduction or extra cost adjustment.

Unless otherwise approved by the Engineer, Working Drawings and samples shall be submitted only by the Prime Contractor, who shall indicate by a signed stamp on the Working Drawing, or other means, that he (the Prime Contractor) has checked the Working Drawing. The Contractor's stamp of approval on the Working Drawings shall constitute a representation to the Owner and Engineer that the Contractor has either determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers, or similar data and assumes full responsibility for doing so, and that he has reviewed or coordinated each Working Drawing or sample with the requirements of the Contract Documents. Working Drawings submitted by subcontractors, directly to the Owner or sub-consultants, will be rejected for the purpose of approval.

The practice of submitting incomplete or unchecked Working Drawings for the Engineer to correct or finish will not be acceptable, and Working Drawings which, in the opinion of the Engineer, clearly indicate that they have not been checked by the Contractor will be considered as not complying with the intent of the Contract Documents and will be returned to the Contractor for resubmission in proper form.

The Engineer will review with reasonable promptness Working Drawings and samples, but the Engineer's review shall be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to the means, methods, sequences, techniques or procedures of construction, or to safety precautions or programs incidental thereto. The review by the Engineer of a separate item as such will not indicate review of the assembly in which the item functions.

When the Working Drawings have been reviewed by the Engineer, an electronic (.pdf) copy including a transmittal memo will be returned to the Contractor. No submittal or Working Drawing will be recognized without the Engineer's review attached. In case of dispute, the Engineer's electronic copy will be recognized as the accepted copy of record. If major changes or corrections are necessary, the Working Drawings may be rejected, and one set will be returned to the Contractor with such changes or corrections indicated. The Contractor shall make any corrections required by the Engineer and shall resubmit the required number of corrected Working Drawings or samples for review. No changes shall be made by the Contractor to resubmitted Working Drawings other than those changes indicated by the Engineer, unless such changes are clearly described in a letter accompanying the resubmitted Working Drawings.

Where a Working Drawing or sample is required by the Specifications, no related work shall be commenced until the submittal has been reviewed and approved by the Engineer.

1-05.3(1) Project Record Drawings (New Section)

The following new section shall be added to the Standard Specifications:

The Contractor shall maintain a neatly marked, full-size set of record drawings showing the final location and layout of all new construction. Drawings shall be kept current weekly, with all field instruction, change orders, and construction adjustment.

The preparation and upkeep of the Record Drawings is to be the assigned responsibility of a single, experienced, and qualified individual. The quality of the Record Drawings, in terms of accuracy, clarity, and completeness, is to be adequate to allow the Contracting Agency to modify the computer-aided drafting (CAD) Contract Drawings to produce a complete set of Record Drawings for the Contracting Agency without further investigative effort by the Contracting Agency.

The Record Drawing markups shall document all changes in the Work, both concealed and visible. Items that must be shown on the markups include but are not limited to:

- Actual dimensions, arrangement, and materials used when different than shown in the Plans.
- Changes made by Change Order or Field Order.
- Changes made by the Contractor.
- Accurate locations of storm sewer, sanitary sewer, water mains and other water appurtenances, structures, conduits, light standards, vaults, width of roadways, sidewalks, landscaping area, building footprints, channelization and pavement markings, etc. Include pipe invert elevations, top of castings (manholes, inlets, etc.).

Drawings shall be subject to the inspection of the Engineer at all times. Prior to acceptance of the work, the Contractor shall deliver to the Engineer one set of neatly marked record drawings showing the information required above.

1-05.3(3) "Or Equal" Materials (New Section)

The following new section shall be added to the Standard Specifications:

The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Contract Documents, including "or equal" materials and equipment as specified in the Technical Specifications, or those substitute materials and equipment approved by the Engineer and identified by Addendum. The materials and equipment described in the Contract Documents establish a standard of required type, function, and quality to be met by any proposed substitute or "or equal" item. Request for Engineer's clarification of materials and equipment considered "or equal" must be received by the Engineer at least five (5) days prior to the bid opening date. The burden of proof of the merit of the proposed item is upon the Bidder. Engineer's decision of approval or disapproval of a proposed item will be final. If Engineer approves any proposed substitute item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner.

The Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal. The Engineer may require the Contractor to furnish additional data regarding the proposed substitute item. The Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until the Engineer's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Working Drawing for an "or equal." The Engineer will advise the Contractor in writing of any negative determination.

The Engineer will record the Engineer's costs in evaluating a substitute proposed or submitted by the Contractor. Whether or not the Engineer approves a substitute item so proposed or submitted by Contractor, the Contractor shall reimburse the Owner for the charges of the Engineer for evaluating each such proposed substitute. The Contractor shall also reimburse the Owner for the Engineer's fees of making changes in the Contract Documents (or in the provisions of any other direct contract with the Owner) resulting from acceptance of each proposed substitute.

1-05.7 Removal of Defective and Unauthorized Work

(October 1, 2005 APWA GSP)

Supplement this section with the following:

If the Contractor fails to remedy defective or unauthorized work within the time specified in a written notice from the Engineer, or fails to perform any part of the work required by the Contract Documents, the Engineer may correct and remedy such work as may be identified in the written notice, with Contracting Agency forces or by such other means as the Contracting Agency may deem necessary.

If the Contractor fails to comply with a written order to remedy what the Engineer determines to be an emergency situation, the Engineer may have the defective and unauthorized work corrected immediately, have the rejected work removed and replaced, or have work the Contractor refuses to perform completed by using Contracting Agency or other forces. An emergency situation is any situation when, in the opinion of the Engineer, a delay in its remedy could be potentially unsafe, or might cause serious risk of loss or damage to the public.

Direct or indirect costs incurred by the Contracting Agency attributable to correcting and remedying defective or unauthorized work, or work the Contractor failed or refused to perform, shall be paid by the Contractor. Payment will be deducted by the Engineer from monies due, or to become due, the Contractor. Such direct and indirect costs shall include in particular, but without limitation, compensation for additional professional services required, and costs for repair and replacement of work of others destroyed or damaged by correction, removal, or replacement of the Contractor's unauthorized work.

No adjustment in contract time or compensation will be allowed because of the delay in the performance of the work attributable to the exercise of the Contracting Agency's rights provided by this Section.

The rights exercised under the provisions of this section shall not diminish the Contracting Agency's right to pursue any other avenue for additional remedy or damages with respect to the Contractor's failure to perform the work as required.

1-05.11 Final Inspection

Delete this section and replace it with the following:

1-05.11 Final Inspections and Operational Testing

(October 1, 2005 APWA GSP)

1-05.11(1) Substantial Completion Date

When the Contractor considers the work to be substantially complete, the Contractor shall so notify the Engineer, in writing, and request the Engineer establish the Substantial Completion Date. The Contractor's request shall list the specific items of work that remain to be completed in order to reach physical completion. The Engineer will schedule an inspection of the work with the Contractor to

determine the status of completion. The Engineer may also establish the Substantial Completion Date unilaterally.

If, after this inspection, the Engineer concurs with the Contractor that the work is substantially complete and ready for its intended use, the Engineer, by written notice to the Contractor, will set the Substantial Completion Date. If, after this inspection the Engineer does not consider the work substantially complete and ready for its intended use, the Engineer will, by written notice, so notify the Contractor giving the reasons therefore.

Upon receipt of written notice concurring in or denying substantial completion, whichever is applicable, the Contractor shall pursue vigorously, diligently and without unauthorized interruption, the work necessary to reach Substantial and Physical Completion. The Contractor shall provide the Engineer with a revised schedule indicating when the Contractor expects to reach substantial and physical completion of the work.

The above process shall be repeated until the Engineer establishes the Substantial Completion Date and the Contractor considers the work physically complete and ready for final inspection.

When a Project contains multiple locations, the Engineer may require all work to be completed prior to beginning work in another location. This may include completion of all work, including between substantial and physical completion, at the Engineer's discretion.

A Contractor's representative with authority shall be present during the final inspection.

1-05.11(2) Final Inspection and Physical Completion Date

When the Contractor considers the work physically complete and ready for final inspection, the Contractor by written notice, shall request the Engineer to schedule a final inspection. The Engineer will set a date for final inspection. The Engineer and the Contractor will then make a final inspection and the Engineer will notify the Contractor in writing of all particulars in which the final inspection reveals the work incomplete or unacceptable. The Contractor shall immediately take such corrective measures as are necessary to remedy the listed deficiencies. Corrective work shall be pursued vigorously, diligently, and without interruption until physical completion of the listed deficiencies. This process will continue until the Engineer is satisfied the listed deficiencies have been corrected.

If action to correct the listed deficiencies is not initiated within 7 days after receipt of the written notice listing the deficiencies, the Engineer may, upon written notice to the Contractor, take whatever steps are necessary to correct those deficiencies pursuant to Section 1-05.7.

The Contractor will not be allowed an extension of contract time because of a delay in the performance of the work attributable to the exercise of the Engineer's right hereunder.

Upon correction of all deficiencies, the Engineer will notify the Contractor and the Contracting Agency, in writing, of the date upon which the work was considered physically complete. That date shall constitute the Physical Completion Date of the contract but shall not imply acceptance of the work or that all the obligations of the Contractor under the contract have been fulfilled.

1-05.11(3) Operational Testing

It is the intent of the Contracting Agency to have at the Physical Completion Date a complete and operable system. Therefore, when the work involves the installation of machinery or other mechanical equipment; street lighting, electrical distribution or signal systems; irrigation systems; buildings; or other similar work it may be desirable for the Engineer to have the Contractor operate and test the work for a period of time after final inspection but prior to the physical completion date. Whenever items of work are listed in the Contract Provisions for operational testing they shall be fully tested under operating conditions for the time period specified to ensure their acceptability prior to the Physical Completion Date. During and following the test period, the Contractor shall correct any items of workmanship, materials, or equipment which prove faulty, or that are not in first class operating condition. Equipment, electrical controls, meters, or other devices and equipment to be tested during this period shall be tested under the observation of the Engineer, so that the Engineer may determine their suitability for the purpose for which

they were installed. The Physical Completion Date cannot be established until testing and corrections have been completed to the satisfaction of the Engineer.

The costs for power, gas, labor, material, supplies, and everything else needed to successfully complete operational testing, shall be included in the unit contract prices related to the system being tested, unless specifically set forth otherwise in the proposal.

Operational and test periods, when required by the Engineer, shall not affect a manufacturer's guaranties or warranties furnished under the terms of the contract.

1-05.12(1) One-Year Guarantee Period (New Section)
(March 8, 2013 APWA GSP)

The following new section shall be added to the Standard Specifications:

The Contractor shall return to the project and repair or replace all defects in workmanship and material discovered within one year after Final Acceptance of the Work. The Contractor shall start work to remedy any such defects within 7 calendar days of receiving Contracting Agency's written notice of a defect and shall complete such work within the time stated in the Contracting Agency's notice. In case of an emergency, where damage may result from delay or where loss of services may result, such corrections may be made by the Contracting Agency's own forces or another contractor, in which case the cost of corrections shall be paid by the Contractor. In the event the Contractor does not accomplish corrections within the time specified, the work will be otherwise accomplished and the cost of same shall be paid by the Contractor.

When corrections of defects are made, the Contractor shall then be responsible for correcting all defects in workmanship and materials in the corrected work for one year after acceptance of the corrections by Contracting Agency.

This guarantee is supplemental to and does not limit or affect the requirements that the Contractor's work comply with the requirements of the Contract or any other legal rights or remedies of the Contracting Agency.

Supplement this section with the following:

The Contractor agrees the above one-year limitation shall not exclude nor diminish the Contracting Agency's rights under any law to obtain damages and recover costs resulting from defective and unauthorized work discovered after one year.

1-05.13 Superintendents, Labor and Equipment of Contractor
(August 14, 2013 APWA GSP)

Delete the sixth and seventh paragraphs of this section.

1-05.16 Water and Power (New Section)

The following new section shall be added to the Standard Specifications:

Water Supply: Water for use on this project shall be furnished by the Contracting Agency and the Contractor shall convey the water from the nearest convenient hydrant or other source at his own expense. The hydrants shall be used in accordance with the appropriate Water Department regulations. The Contracting Agency reserves the right to deny the use of fire hydrants where deemed inappropriate by the Contracting Agency.

Power Supply: The Contractor shall make necessary arrangements and shall bear the costs for power necessary for the performance of the work.

Measurement and Payment: No separate measurement and payment for water and power will be made. This pertains to water required for dust control, water settling trenches (when approved by the

Engineer), and any other water as required by the Contract Documents. All costs for hauling, conveying, and applying water shall be included in the various bid items of the proposal.

1-06 CONTROL OF MATERIAL

1-06.1(4) Fabrication Inspection Expense

(June 27, 2011 APWA GSP)

Delete this section in its entirety.

1-06.6 Recycled Materials

Delete this section, including its subsections, and replace it with the following:

The Contractor shall make their best effort to utilize recycled materials in the construction of this project. Approval of such material use shall be as detailed elsewhere in the Standard Specifications.

1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC

1-07.1 Laws to be Observed

(October 1, 2005 APWA GSP)

Supplement this section with the following:

In cases of conflict between different safety regulations, the more stringent regulation shall apply.

The Washington State Department of Labor and Industries shall be the sole and paramount administrative agency responsible for the administration of the provisions of the Washington Industrial Safety and Health Act of 1973 (WISHA).

The Contractor shall maintain at the project site office, or other well-known place at the project site, all articles necessary for providing first aid to the injured. The Contractor shall establish, publish, and make known to all employees, procedures for ensuring immediate removal to a hospital, or doctor's care, persons, including employees, who may have been injured on the project site. Employees should not be permitted to work on the project site before the Contractor has established and made known procedures for removal of injured persons to a hospital or a doctor's care.

The Contractor shall have sole responsibility for the safety, efficiency, and adequacy of the Contractor's plant, appliances, and methods, and for any damage or injury resulting from their failure, or improper maintenance, use, or operation. The Contractor shall be solely and completely responsible for the conditions of the project site, including safety for all persons and property in the performance of the work. This requirement shall apply continuously, and not be limited to normal working hours. The required or implied duty of the Engineer to conduct construction review of the Contractor's performance does not, and shall not, be intended to include review and adequacy of the Contractor's safety measures in, on, or near the project site.

Amend the second sentence of the first paragraph to read:

The Contractor shall indemnify and save harmless the State (including the Commission, the Secretary, and any agents, officers, and employees) and the Contracting Agency (including any agents, officers, employees, and representatives) against any claims which may arise because the Contractor (or any employee of the Contractor or subcontractor or materialman) violated a legal requirement.

1-07.2 State Taxes

Delete this section, including its sub-sections, in its entirety and replace it with the following:

1-07.2 State Sales Tax

(June 27, 2011 APWA GSP)

The Washington State Department of Revenue has issued special rules on the State sales tax. Sections 1-07.2(1) through 1-07.2(3) are meant to clarify those rules. The Contractor should contact the Washington State Department of Revenue for answers to questions in this area. The Contracting Agency will not adjust its payment if the Contractor bases a bid on a misunderstood tax liability.

The Contractor shall include all Contractor-paid taxes in the unit bid prices or other contract amounts. In some cases, however, state retail sales tax will not be included. Section 1-07.2(2) describes this exception.

The Contracting Agency will pay the retained percentage (or release the Contract Bond if a FHWA-funded Project) only if the Contractor has obtained from the Washington State Department of Revenue a certificate showing that all contract-related taxes have been paid (RCW 60.28.051). The Contracting Agency may deduct from its payments to the Contractor any amount the Contractor may owe the Washington State Department of Revenue, whether the amount owed relates to this contract or not. Any amount so deducted will be paid into the proper State fund.

1-07.2(1) State Sales Tax - Rule 171

WAC 458-20-171, and its related rules, apply to building, repairing, or improving streets, roads, etc., which are owned by a municipal corporation, or political subdivision of the state, or by the United States, and which are used primarily for foot or vehicular traffic. This includes storm or combined sewer systems within and included as a part of the street or road drainage system and power lines when such are part of the roadway lighting system. For work performed in such cases, the Contractor shall include Washington State Retail Sales Taxes in the various unit bid item prices, or other contract amounts, including those that the Contractor pays on the purchase of the materials, equipment, or supplies used or consumed in doing the work.

1-07.2(2) State Sales Tax - Rule 170

WAC 458-20-170, and its related rules, apply to the constructing and repairing of new or existing buildings, or other structures, upon real property. This includes, but is not limited to, the construction of streets, roads, highways, etc., owned by the state of Washington; water mains and their appurtenances; sanitary sewers and sewage disposal systems unless such sewers and disposal systems are within, and a part of, a street or road drainage system; telephone, telegraph, electrical power distribution lines, or other conduits or lines in or above streets or roads, unless such power lines become a part of a street or road lighting system; and installing or attaching of any article of tangible personal property in or to real property, whether or not such personal property becomes a part of the realty by virtue of installation.

For work performed in such cases, the Contractor shall collect from the Contracting Agency, retail sales tax on the full contract price. The Contracting Agency will automatically add this sales tax to each payment to the Contractor. For this reason, the Contractor shall not include the retail sales tax in the unit bid item prices, or in any other contract amount subject to Rule 170, with the following exception.

Exception: The Contracting Agency will not add in sales tax for a payment the Contractor or a subcontractor makes on the purchase or rental of tools, machinery, equipment, or consumable supplies not integrated into the project. Such sales taxes shall be included in the unit bid item prices or in any other contract amount.

1-07.2(3) Services

The Contractor shall not collect retail sales tax from the Contracting Agency on any contract wholly for professional or other services (as defined in Washington State Department of Revenue Rules 138 and 244).

1-07.6 Permits and Licenses

Supplement this section with the following:

The Contractor and all subcontractors are responsible for obtaining and paying for business licenses in the City of Grandview.

All costs required to comply with this section shall be the responsibility of the Contractor.

1-07.7 Load Limits

(March 13, 1995 WSDOT GSP)

Section 1-07.7 is supplemented with the following:

If the sources of materials provided by the Contractor necessitates hauling over roads other than State Highways, the Contractor shall, at the Contractor's expense, make all arrangements for the use of the haul routes.

1-07.11(2) Contractual Requirements

Section 1-07.11(2) is supplemented with the following:

(January 24, 2024 WSDOT GSP)

11. The Contractor shall comply with the following nondiscrimination provisions, and the Contractor shall ensure the nondiscrimination provisions are included in all subcontracts:

- a. Nondiscrimination Requirement. During the term of this Contract, the Contractor, including all subcontractors, shall not discriminate on the bases enumerated at RCW 49.60.530(3). In addition, the Contractor, including all subcontractors, shall give written notice of this nondiscrimination requirement to any labor organizations with which the Contractor, or subcontractor, has a collective bargaining or other agreement.
- b. Obligation to Cooperate. The Contractor, including all subcontractors, shall cooperate and comply with any Washington state agency investigation regarding any allegation that the Contractor, including any subcontractor, has engaged in discrimination prohibited by this Contract pursuant to RCW 49.60.530(3).
- c. Default. Notwithstanding any provision to the contrary, the Contracting Agency may suspend the Contract in accordance with Section 1-08.6, upon notice of a failure to participate and cooperate with any state agency investigation into alleged discrimination prohibited by this Contract, pursuant to RCW 49.60.530(3). Any such suspension will remain in place until the Contracting Agency receives notification that Contractor, including any subcontractor, is cooperating with the investigating state agency. In the event the Contractor, or subcontractor, is determined to have engaged in discrimination identified at RCW 49.60.530(3), the Contracting Agency may terminate this Contract in whole or in part in accordance with Section 1-08.10(1), and in addition to the sanctions listed in Section 1-07.11(5), the Contractor, subcontractor, or both, may be referred for debarment as provided in RCW 39.26.200. The Contractor or subcontractor may be given a reasonable time in which to cure this noncompliance, including implementing conditions consistent with any court-ordered injunctive relief or settlement agreement.
- d. Remedies for Breach. Notwithstanding any provision to the contrary, in the event of Contract termination or suspension for engaging in discrimination, the Contractor, subcontractor, or both, shall be liable for contract damages as authorized by law including, but not limited to, any cost difference between the original contract and the replacement or cover contract and all administrative costs directly related to the replacement contract, which damages are distinct from any penalties imposed under Chapter 49.60, RCW. The Contracting Agency shall have the right to deduct from any monies due to Contractor or subcontractor, or that thereafter become due, an amount for damages Contractor or subcontractor will owe Contracting Agency for default under this Provision.

1-07.13 Contractor's Responsibility for Work

1-07.13(3) Relief of Responsibility for Damage by Public Traffic

Delete this section and replace it with the following:

When it is necessary for public traffic to utilize the street and associated facilities during construction, the Contractor shall be responsible for damages to improvements. The Contractor shall provide all necessary protection and temporary facilities to accommodate both vehicular and pedestrian traffic during construction.

1-07.17 Utilities and Similar Facilities

Supplement this section with the following:

Public and private utilities, or their contractors, will furnish all work necessary to adjust, relocate, replace, or construct their facilities unless otherwise provided for in the Plans or these Special Provisions. Such adjustment, relocation, replacement, or construction will be done during the prosecution of the work for this project.

The following addresses and telephone number of utility companies known or suspected of having facilities within the project limits are supplied for the Contractor's convenience:

Utility Company	Address	Phone Number
City of Grandview	207 W. Second Street, Grandview, WA 98930	(509) 882-9211
Pacific Power	500 North Keys Road, Yakima, WA 98901	(509) 899-7287
Charter Communications	1005 North 16 th Avenue, Yakima, WA 98902	(509) 731-8227

Locations and dimensions shown on the Plans for existing facilities are in accordance with available information obtained without uncovering, measuring, or other verification. It shall be the Contractor's responsibility to investigate the presence and location of all utilities prior to bid opening and to assess their impacts on his construction activities.

The Contractor shall call the Utility Notification Center (One-Call Agency) for field location, not less than two or more than ten business days before the scheduled date for commencement of excavation which may affect underground utility facilities, unless otherwise agreed upon by the parties involved. A business day is defined as any day other than Saturday, Sunday, or a legal local, state, or federal holiday. The telephone number for the One-Call Agency for this project is 1-800-424-5555. If no one-number locator service is available, notice shall be provided individually by the Contractor to those owners known to or suspected of having underground facilities within the area of proposed excavation.

It is the responsibility of the Contractor to verify pertinent locations and elevations of utility connection points and utility crossings. The Contractor shall field verify depths of utilities by potholing prior to beginning any new construction to allow for adjustment in grade or alignment. Potholing shall be considered incidental to other bid items and no additional compensation will be paid.

Utilities, new or old, may be renewed, relocated, or adjusted for the proposed construction. The Contractor shall, prior to beginning any work, meet with all utility organizations (public and private) in the field to familiarize himself with existing utility locations, along with familiarizing himself with plans and schedules for the installation of new, relocated, or adjusted utilities. Both public and private utility organizations, along with private contractors working for these organizations, may be doing utility installations within the area. The Contractor shall coordinate the proposed construction work with these utility installations. Additionally, the Contractor shall coordinate and bear the cost of any needs for supporting utility poles in place.

The Contractor shall arrange with the owners and operators of the respective utility systems to mark the locations and, if necessary or prudent, to expose the existing utilities prior to construction of the facilities contained in this Contract.

The Contractor shall coordinate his work with other contractors who may be working in the project area and cooperate with them.

The Contractor is alerted to the existence of Chapter 19.122 RCW, a law relating to underground utilities. Any cost to the Contractor incurred as a result of this law shall be at the Contractor's expense. In addition to the requirements of RCW 19.122, the Contractor shall use surface features and other evidence in determining the approximate utility location prior to excavation.

Where the location of the work is in proximity to overhead wires and power lines, the Contractor shall coordinate all work with the utility and shall provide for such measures as may be necessary for the protection of workmen.

1-07.18 Public Liability and Property Damage Insurance

Delete this section in its entirety, and replace it with the following:

1-07.18 Insurance

(January 4, 2024 APWA GSP)

1-07.18(1) General Requirements

- A. The Contractor shall procure and maintain the insurance described in all subsections of section 1-07.18 of these Special Provisions, from insurers with a current A. M. Best rating of not less than A-: VII and licensed to do business in the State of Washington. The Contracting Agency reserves the right to approve or reject the insurance provided, based on the insurer's financial condition.
- B. The Contractor shall keep this insurance in force without interruption from the commencement of the Contractor's Work through the term of the Contract and for thirty (30) days after the Physical Completion date, unless otherwise indicated below.
- C. If any insurance policy is written on a claims-made form, its retroactive date, and that of all subsequent renewals, shall be no later than the effective date of this Contract. The policy shall state that coverage is claims made and state the retroactive date. Claims-made form coverage shall be maintained by the Contractor for a minimum of 36 months following the Completion Date or earlier termination of this Contract, and the Contractor shall annually provide the Contracting Agency with proof of renewal. If renewal of the claims made form of coverage becomes unavailable, or economically prohibitive, the Contractor shall purchase an extended reporting period ("tail") or execute another form of guarantee acceptable to the Contracting Agency to assure financial responsibility for liability for services performed.
- D. The Contractor's Automobile Liability, Commercial General Liability and Excess or Umbrella Liability insurance policies shall be primary and non-contributory insurance as respects the Contracting Agency's insurance, self-insurance, or self-insured pool coverage. Any insurance, self-insurance, or self-insured pool coverage maintained by the Contracting Agency shall be excess of the Contractor's insurance and shall not contribute with it.
- E. The Contractor shall provide the Contracting Agency and all additional insureds with written notice of any policy cancellation, within two business days of their receipt of such notice.
- F. The Contractor shall not begin work under the Contract until the required insurance has been obtained and approved by the Contracting Agency.
- G. Failure on the part of the Contractor to maintain the insurance as required shall constitute a material breach of contract, upon which the Contracting Agency may, after giving five business days' notice to the Contractor to correct the breach, immediately terminate the Contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so

expended to be repaid to the Contracting Agency on demand, or at the sole discretion of the Contracting Agency, offset against funds due the Contractor from the Contracting Agency.

- H. All costs for insurance shall be incidental to and included in the unit or lump sum prices of the Contract and no additional payment will be made.
- I. Under no circumstances shall a wrap up policy be obtained, for either initiating or maintaining coverage, to satisfy insurance requirements for any policy required under this Section. A “wrap up policy” is defined as an insurance agreement or arrangement under which all the parties working on a specified or designated project are insured under one policy for liability arising out of that specified or designated project.

1-07.18(2) Additional Insured

All insurance policies, with the exception of Workers Compensation, and of Professional Liability and Builder's Risk (if required by this Contract) shall name the following listed entities as additional insured(s) using the forms or endorsements required herein:

- the Contracting Agency and its officers, elected officials, employees, agents, and volunteers

The above-listed entities shall be additional insured(s) for the full available limits of liability maintained by the Contractor, irrespective of whether such limits maintained by the Contractor are greater than those required by this Contract, and irrespective of whether the Certificate of Insurance provided by the Contractor pursuant to 1-07.18(4) describes limits lower than those maintained by the Contractor.

For Commercial General Liability insurance coverage, the required additional insured endorsements shall be at least as broad as ISO forms CG 20 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.

1-07.18(3) Subcontractors

The Contractor shall cause each subcontractor of every tier to provide insurance coverage that complies with all applicable requirements of the Contractor-provided insurance as set forth herein, except the Contractor shall have sole responsibility for determining the limits of coverage required to be obtained by subcontractors.

The Contractor shall ensure that all subcontractors of every tier add all entities listed in 1-07.18(2) as additional insureds, and provide proof of such on the policies as required by that section as detailed in 1-07.18(2) using an endorsement as least as broad as ISO CG 20 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.

Upon request by the Contracting Agency, the Contractor shall forward to the Contracting Agency evidence of insurance and copies of the additional insured endorsements of each subcontractor of every tier as required in 1-07.18(4) Verification of Coverage.

1-07.18(4) Verification of Coverage

The Contractor shall deliver to the Contracting Agency a Certificate(s) of Insurance and endorsements for each policy of insurance meeting the requirements set forth herein when the Contractor delivers the signed Contract for the work. Failure of Contracting Agency to demand such verification of coverage with these insurance requirements or failure of Contracting Agency to identify a deficiency from the insurance documentation provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

Verification of coverage shall include:

1. An ACORD certificate or a form determined by the Contracting Agency to be equivalent.
2. Copies of all endorsements naming Contracting Agency and all other entities listed in 1-07.18(2) as additional insured(s), showing the policy number. The Contractor may submit a copy of any blanket additional insured clause from its policies instead of a separate endorsement.

3. Any other amendatory endorsements to show the coverage required herein.
4. A notation of coverage enhancements on the Certificate of Insurance shall not satisfy these requirements – actual endorsements must be submitted.

Upon request by the Contracting Agency, the Contractor shall forward to the Contracting Agency a full and certified copy of the insurance policy(s). If Builders Risk insurance is required on this Project, a full and certified copy of that policy is required when the Contractor delivers the signed Contract for the work.

1-07.18(5) Coverages and Limits

The insurance shall provide the minimum coverages and limits set forth below. Contractor's maintenance of insurance, its scope of coverage, and limits as required herein shall not be construed to limit the liability of the Contractor to the coverage provided by such insurance, or otherwise limit the Contracting Agency's recourse to any remedy available at law or in equity.

All deductibles and self-insured retentions must be disclosed and are subject to approval by the Contracting Agency. The cost of any claim payments falling within the deductible or self-insured retention shall be the responsibility of the Contractor. In the event an additional insured incurs a liability subject to any policy's deductibles or self-insured retention, said deductibles or self-insured retention shall be the responsibility of the Contractor.

1-07.18(5)A Commercial General Liability

Commercial General Liability insurance shall be written on coverage forms at least as broad as ISO occurrence form CG 00 01, including but not limited to liability arising from premises, operations, stop gap liability, independent contractors, products-completed operations, personal and advertising injury, and liability assumed under an insured contract. There shall be no exclusion for liability arising from explosion, collapse or underground property damage.

The Commercial General Liability insurance shall be endorsed to provide a per project general aggregate limit, using ISO form CG 25 03 05 09 or an equivalent endorsement.

Contractor shall maintain Commercial General Liability Insurance arising out of the Contractor's completed operations for at least three years following Substantial Completion of the Work.

Such policy must provide the following minimum limits:

\$2,000,000	Each Occurrence
\$3,000,000	General Aggregate
\$3,000,000	Products & Completed Operations Aggregate
\$2,000,000	Personal & Advertising Injury each offence
\$2,000,000	Stop Gap / Employers' Liability each accident

1-07.18(5)B Automobile Liability

Automobile Liability shall cover owned, non-owned, hired, and leased vehicles; and shall be written on a coverage form at least as broad as ISO form CA 00 01. If the work involves the transport of pollutants, the automobile liability policy shall include MCS 90 and CA 99 48 endorsements.

Such policy must provide the following minimum limit:

\$1,000,000	Combined single limit each accident
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1-07.18(5)C Workers' Compensation

The Contractor shall comply with Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington.

1-07.24 Rights of Way
(July 23, 2015 APWA GSP)

Delete this section, and replace it with the following:

Street right-of-way lines, limits of easements, and limits of construction permits are indicated in the Plans. The Contractor's construction activities shall be confined within these limits, unless arrangements for use of private property are made.

Generally, the Contracting Agency will have obtained, prior to bid opening, all rights-of-way and easements, both permanent and temporary, necessary for carrying out the work. Exceptions to this are noted in the Bid Documents or will be brought to the Contractor's attention by a duly issued Addendum.

Whenever any of the work is accomplished on or through property other than public right-of-way, the Contractor shall meet and fulfill all covenants and stipulations of any easement agreement obtained by the Contracting Agency from the owner of the private property. Copies of the easement agreements may be included in the Contract Provisions or made available to the Contractor as soon as practical after they have been obtained by the Engineer.

Whenever easements or rights of entry have not been acquired prior to advertising, these areas are so noted in the Plans. The Contractor shall not proceed with any portion of the work in areas where right-of-way, easements or rights of entry have not been acquired until the Engineer certifies to the Contractor that the right-of-way or easement is available or that the right of entry has been received. If the Contractor is delayed due to acts of omission on the part of the Contracting Agency in obtaining easements, rights of entry or right-of-way, the Contractor will be entitled to an extension of time. The Contractor agrees that such delay shall not be a breach of contract.

Each property owner shall be given 48 hours notice prior to entry by the Contractor. This includes entry onto easements and private property where private improvements must be adjusted.

The Contractor shall be responsible for providing, without expense or liability to the Contracting Agency, any additional land and access thereto that the Contractor may desire for temporary construction facilities, storage of materials, or other Contractor needs. However, before using any private property, whether adjoining the work or not, the Contractor shall file with the Engineer a written permission of the private property owner, and, upon vacating the premises, a written release from the property owner of each property disturbed or otherwise interfered with by reasons of construction pursued under this contract. The statement shall be signed by the private property owner, or proper authority acting for the owner of the private property affected, stating that permission has been granted to use the property and all necessary permits have been obtained or, in the case of a release, that the restoration of the property has been satisfactorily accomplished. The statement shall include the parcel number, address, and date of signature. Written releases must be filed with the Engineer before the Completion Date will be established.

1-07.29 Notifying Property Owners (New Section)

The following new section shall be added to the Standard Specifications:

When construction activities will affect ingress and egress or utility service to a property along the project alignment, the Contractor shall be responsible for notifying the occupant/occupants of the property 24 hours prior to the construction activity beginning. If personal contact with the occupant is not possible, the Contractor shall leave written notification. Property owner notification requirements shall be coordinated with the Owner.

1-07.30 Safety Standards (New Section)

The following new section shall be added to the Standard Specifications:

All work shall be performed in accordance with all applicable local, state, and federal health and safety codes, standards, regulations, and/or accepted industry standards. It shall be the

responsibility of the Contractor to ensure that his work force and the public are adequately protected against any hazards.

The Contracting Agency shall have the authority at all times to issue a stop work order at no penalty to the Contracting Agency if, in its opinion, working conditions present an undue hazard to the public, property, or the work force. Such authority shall not, however, relieve the Contractor of responsibility for the maintenance of safe working conditions or assess any responsibility to the Contracting Agency or Engineer for the identification of any or all unsafe conditions.

1-08 PROSECUTION AND PROGRESS

Add the following new section:

1-08.0 Preliminary Matters *(May 25, 2006 APWA GSP)*

Add the following new section:

1-08.0(1) Preconstruction Conference *(October 10, 2008 APWA GSP)*

Prior to the Contractor beginning the work, a preconstruction conference will be held between the Contractor, the Engineer and such other interested parties as may be invited. The purpose of the preconstruction conference will be:

1. To review the initial progress schedule;
2. To establish a working understanding among the various parties associated or affected by the work;
3. To establish and review procedures for progress payment, notifications, approvals, submittals, etc.;
4. To establish normal working hours for the work;
5. To review safety standards and traffic control; and
6. To discuss such other related items as may be pertinent to the work.

The Contractor shall prepare and submit at the preconstruction conference the following:

1. A breakdown of all lump sum items;
2. A preliminary schedule of working drawing submittals; and
3. A list of material sources for approval if applicable.

Add the following new section:

1-08.0(2) Hours of Work *(December 8, 2014 APWA GSP)*

Except in the case of emergency or unless otherwise approved by the Engineer, the normal working hours for the Contract shall be any consecutive 8-hour period between 7:00 a.m. and 6:00 p.m. Monday through Friday, exclusive of a lunch break. If the Contractor desires different than the normal working hours stated above, the request must be submitted in writing prior to the preconstruction conference, subject to the provisions below. The working hours for the Contract shall be established at or prior to the preconstruction conference.

All working hours and days are also subject to local permit and ordinance conditions (such as noise ordinances).

If the Contractor wishes to deviate from the established working hours, the Contractor shall submit a written request to the Engineer for consideration. This request shall state what hours are being requested, and why. Requests shall be submitted for review no later than five (5) working days prior to the day(s) the Contractor is requesting to change the hours.

If the Contracting Agency approves such a deviation, such approval may be subject to certain other conditions, which will be detailed in writing. For example:

1. On non-Federal aid projects, requiring the Contractor to reimburse the Contracting Agency for the costs in excess of straight-time costs for Contracting Agency representatives who worked during such times. (The Engineer may require designated representatives to be present during the work. Representatives who may be deemed necessary by the Engineer include, but are not limited to: survey crews; personnel from the Contracting Agency's material testing lab; inspectors; and other contracting Agency employees or third-party consultants, when, in the opinion of the Engineer, such work necessitates their presence.)
2. Considering the work performed on Saturdays, Sundays, and holidays as working days with regard to the contract time.
3. Considering multiple work shifts as multiple working days with respect to contract time even though the multiple shifts occur in a single 24-hour period.
4. If a 4-10 work schedule is requested and approved the non-working day for the week will be charged as a working day.
5. If Davis Bacon wage rates apply to this Contract, all requirements must be met and recorded properly on certified payroll.

1-08.0(3) Reimbursement for Overtime Work of Contracting Agency Employees (New Section)

The following new section shall be added to the Standard Specifications:

Where the Contractor elects to work on a nonworking day, as defined in Section 1-08.5 of the Standard Specifications, or longer than the normal working hours specified in Section 1-08.0(2), such work shall be considered as overtime work. If a 4-10 schedule is approved and the Contractor elects to work the fifth day or works multiple shifts in a single 24-hour period, such work shall be considered overtime work, or the Contractor will be charged an additional working day, at his option. On all such overtime work, a Resident Engineer will be present and a survey crew may be required at the discretion of the Engineer. In all such cases, the Contracting Agency may deduct overtime costs of employees and/or representatives of the Contracting Agency from amounts due or to become due to the Contractor.

The Contractor by these specifications does hereby authorize the Engineer to deduct such costs from the amount due or to become due to the Contractor.

1-08.1(7) Payments to Subcontractors and Lower-Tier Subcontractors

1-08.1(7)C Subcontractor Retainage

The first sentence in the last paragraph of Section 1-08.1(7)C is revised to read:

(February 13, 2024 WSDOT GSP)

If the Contractor fails to comply with the requirements of this Section and the first-tier subcontractor's retainage or retainage bond is wrongfully withheld, the Contractor will be subject to the actions described in Section 1-08.1(10).

1-08.1(9) Required Subcontract Clauses

1-08.1(9)B Clauses Required in Subcontracts of All Tiers

The second paragraph of Section 1-08.1(9)B is supplemented with the following:

(January 24, 2024 WSDOT GSP)

1. 1-07.11 **Requirements for Nondiscrimination** – Item 11 from Section 1-07.11(2).

1-08.3 Progress Schedule

1-08.3(2) General Requirements

Supplement this section with the following:

Seasonal weather conditions shall be considered in the planning and scheduling of work influenced by high or low ambient temperature or precipitation to ensure the completion of the work within the Contract Time. No time extensions will be granted for the Contractor's failure to take into account such weather conditions for the location of the work and for the period of time in which the work is to be accomplished.

1-08.3(2)E Weekly Look-Ahead Schedule

Supplement this section with the following:

In addition to submitting the schedule, the Contractor shall present the weekly look-ahead schedule at a weekly construction meeting. A deduction of \$150 may be subtracted from the Progress Estimate, for every day the Contractor is late in supplying a weekly look-ahead schedule.

1-08.3(5) Payment

Delete the second and third paragraph of this section.

1-08.4 Prosecution of Work

Delete this section and replace it with the following:

1-08.4 Notice to Proceed and Prosecution of Work

(July 23, 2015 APWA GSP)

Notice to Proceed will be given after the Contract has been executed and the contract bond and evidence of insurance have been approved and filed by the Contracting Agency. The Contractor shall not commence with the work until the Notice to Proceed has been given by the Engineer. The Contractor shall commence construction activities on the project site within ten days of the Notice to Proceed Date, unless otherwise approved in writing. The Contractor shall diligently pursue the work to the physical completion date within the time specified in the Contract. Voluntary shutdown or slowing of operations by the Contractor shall not relieve the Contractor of the responsibility to complete the work within the time(s) specified in the Contract.

When shown in the Plans, the first order of work shall be the installation of high visibility fencing to delineate all areas for protection or restoration, as described in the Contract. Installation of high visibility fencing adjacent to the roadway shall occur after the placement of all necessary signs and traffic control devices in accordance with 1-10.1(2). Upon construction of the fencing, the Contractor shall request the Engineer to inspect the fence. No other work shall be performed on the site until the Contracting Agency has accepted the installation of high visibility fencing, as described in the Contract.

Supplement this section with the following:

Failure of the Contractor to begin work by the date set forth in the Notice to Proceed will be considered grounds for Termination for Default as specified under Section 1-08.10(1) of the Standard Specifications.

1-08.5 Time for Completion

Add the following to the first paragraph:

Ten (10) working days after the date set forth in the Notice to Proceed shall be allowed for completion of all Contract work. This includes actual force account work up to those original force account contract amounts. If original force account amounts are exceeded, the Engineer may consider granting additional working day(s) for force account work.

Add the following paragraph after the second paragraph:

Inclement weather shall not be a prima facie reason for the granting of an extension of time, and the Contractor shall make every effort to continue work under prevailing conditions. The Owner may, however, grant an extension of time if an unavoidable delay as a result of inclement weather in fact occurs, and such shall then be classified as a "delay". An "inclement" weather delay day is defined as a day on which the Contractor is prevented by inclement weather or conditions resulting immediately therefrom adverse to the current controlling operation or critical path activity, as determined by the Resident Engineer, from proceeding with at least 75 percent of the normal labor and equipment force engaged on such operation for at least 60 percent of the total daily time being currently spent on the controlling operation or critical path activity.

(December 30, 2022 APWA GSP, Option A)

Revise the third and fourth paragraphs to read:

Contract time shall begin on the first working day following the Notice to Proceed Date.

Each working day shall be charged to the contract as it occurs, until the contract work is physically complete. If substantial completion has been granted and all the authorized working days have been used, charging of working days will cease. Each week the Engineer will provide the Contractor a statement that shows the number of working days: (1) charged to the contract the week before; (2) specified for the physical completion of the contract; and (3) remaining for the physical completion of the contract. The statement will also show the nonworking days and any partial or whole day the Engineer declares as unworkable. The statement will be identified as a Written Determination by the Engineer. If the Contractor does not agree with the Written Determination of working days, the Contractor shall pursue the protest procedures in accordance with Section 1-04.5. By failing to follow the procedures of Section 1-04.5, the Contractor shall be deemed as having accepted the statement as correct. If the Contractor is approved to work 10 hours a day and 4 days a week (a 4-10 schedule) and the fifth day of the week in which a 4-10 shift is worked would ordinarily be charged as a working day then the fifth day of that week will be charged as a working day whether or not the Contractor works on that day.

Revise the sixth paragraph to read:

The Engineer will give the Contractor written notice of the completion date of the contract after all the Contractor's obligations under the contract have been performed by the Contractor. The following events must occur before the Completion Date can be established:

1. The physical work on the project must be complete; and

2. The Contractor must furnish all documentation required by the contract and required by law, to allow the Contracting Agency to process final acceptance of the contract. The following documents must be received by the Project Engineer prior to establishing a completion date:
 - a. Material Acceptance Certification Documents
 - b. Final Contract Voucher Certification
 - c. Copies of the approved "Affidavit of Prevailing Wages Paid" for the Contractor and all Subcontractors
 - d. A copy of the Notice of Termination sent to the Washington State Department of Ecology (Ecology); the elapse of 30 calendar days from the date of receipt of the Notice of Termination by Ecology; and no rejection of the Notice of Termination by Ecology. This requirement will not apply if the Construction Stormwater General Permit is transferred back to the Contracting Agency in accordance with Section 8-01.3(16).
 - e. Property owner releases per Section 1-07.24

1-08.9 Liquidated Damages

Replace Section 1-08.9 with the following:

Time is of the essence of the Contract. Delays inconvenience the public, interfere with public works staff operations and maintenance activities and increase risk to public infrastructure and utility users. Delays also cost taxpayers undue sums of money, adding time needed for administration, engineering, inspection, and supervision.

Accordingly, the Contractor agrees:

1. To pay liquidated damages in the amount of \$2,600 for each working day beyond the number of working days established for Physical Completion.
2. To authorize the Engineer to deduct these liquidated damages from any money due or coming due to the Contractor.

When the Contract Work has progressed to Substantial Completion as defined in the Contract, the Engineer may determine the Contract Work is Substantially Complete. The Engineer will notify the Contractor in writing of the Substantial Completion Date. For overruns in Contract time occurring after the date so established, liquidated damages identified above will not apply. For overruns in Contract time occurring after the Substantial Completion Date, liquidated damages shall be assessed on the basis of direct engineering and related costs assignable to the project until the actual Physical Completion Date of all the Contract Work. The Contractor shall complete the remaining Work as promptly as possible. Upon request by the Project Engineer, the Contractor shall furnish a written schedule for completing the physical Work on the Contract.

Liquidated damages will not be assessed for any days for which an extension of time is granted. No deduction or payment of liquidated damages will, in any degree, release the Contractor from further obligations and liabilities to complete the entire Contract.

1-09 MEASUREMENT AND PAYMENT

1-09.2 Weighing Equipment

1-09.2(1) General Requirements for Weighing Equipment (January 4, 2024 APWA GSP, Option B)

Revise item 4 of the fifth paragraph to read:

4. Test results and scale weight records for each day's hauling operations are provided to the Engineer daily. Reporting shall utilize [WSDOT form 422-027A](#), Scaleman's Daily Report, unless

the printed ticket contains the same information that is on the Scaleman's Daily Report Form.
The scale operator must provide AM and/or PM tare weights for each truck on the printed ticket.

Supplement this section with the following:

In lieu of E-tickets, the Contractor shall provide certified printed tickets. Certified weight tickets accompanying each truckload of material will be required to be delivered to the Resident Engineer at the site. Should the Resident Engineer or Material Receiver be unavailable, it shall be the responsibility of the Contractor's project superintendent to collect all said certified tickets for the day and deliver them to the Resident Engineer the morning following the day's construction. The certified tickets shall include the same information as required for E-tickets. Any certified weight tickets submitted later than the morning following the day materials are delivered to the site will not be considered for measurement and payment.

1-09.2(3) Specific Requirements for Platform Scales

Supplement this section with the following:

The Contractor will furnish a person, at no cost to the Contracting Agency, who will operate the certified scales while the loading and hauling of materials is in progress. The Contractor shall provide the platform scales and any tickets required for self-printing scales.

1-09.2(5) Measurement

(December 30, 2022 APWA GSP)

Revise the first paragraph to read:

Scale Verification Checks – At the Engineer's discretion, the Engineer may perform verification checks on the accuracy of each batch, hopper, or platform scale used in weighing contract items of Work.

1-09.3 Scope of Payment

Supplement this section with the following:

Payment for work performed under this Contract will be based on the items listed in the Unit Price Bid Proposal. Should a conflict exist between the item descriptions or the units of measurement and payment listed in the Unit Price Bid Proposal and the "Payment" clauses found in each section of the Standard Specifications, the Unit Price Bid Proposal items will prevail. If work is required to complete the project according to the intent of the Plans and Specifications, but no bid item is provided in the Unit Price Bid Proposal, then the Contractor shall include the cost for providing the necessary work in the unit or lump sum price for the bid item most closely related to the work.

1-09.4 Equitable Adjustment

Replace Item 2.b. with the following:

2.b. Per Section 1-09.6, Force Account.

1-09.6 Force Account

(December 30, 2022 APWA GSP)

Supplement this section with the following:

The Contracting Agency has estimated and included in the Proposal, dollar amounts for all items to be paid per force account, only to provide a common proposal for Bidders. All such dollar amounts are to become a part of Contractor's total bid. However, the Contracting Agency does not warrant expressly or by implication, that the actual amount of work will correspond with those estimates. Payment will be made on the basis of the amount of work actually authorized by the Engineer.

Add the following clarification:

The term "project overhead" shall include "jobsite overhead." The term "general company overhead" shall include "home office overhead."

Supplement paragraph one of Subsection 2 with the following:

Sales tax will be applied to payment made to the Contractor and shall not be included in the cost of materials provided to the Engineer.

1-09.9 Payments

(December 30, 2022 APWA GSP)

Section 1-09.9 is revised to read:

The basis of payment will be the actual quantities of Work performed according to the Contract and as specified for payment.

The Contractor shall submit a breakdown of the cost of lump sum bid items at the Preconstruction Conference, to enable the Project Engineer to determine the Work performed on a monthly basis. A breakdown is not required for lump sum items that include a basis for incremental payments as part of the respective Specification. Absent a lump sum breakdown, the Project Engineer will make a determination based on information available. The Project Engineer's determination of the cost of work shall be final.

Progress payments for completed work and material on hand will be based upon progress estimates prepared by the Engineer. A progress estimate cutoff date will be established at the preconstruction conference.

The initial progress estimate will be made not later than 30 days after the Contractor commences the work, and successive progress estimates will be made every month thereafter until the Completion Date. Progress estimates made during progress of the work are tentative, and made only for the purpose of determining progress payments. The progress estimates are subject to change at any time prior to the calculation of the final payment.

The value of the progress estimate will be the sum of the following:

1. Unit Price Items in the Bid Form — the approximate quantity of acceptable units of work completed multiplied by the unit price.
2. Lump Sum Items in the Bid Form — based on the approved Contractor's lump sum breakdown for that item, or absent such a breakdown, based on the Engineer's determination.
3. Materials on Hand — 100 percent of invoiced cost of material delivered to Job site or other storage area approved by the Engineer.
4. Change Orders — entitlement for approved extra cost or completed extra work as determined by the Engineer.

Progress payments will be made in accordance with the progress estimate less:

1. Retainage per Section 1-09.9(1), on non FHWA-funded projects;
2. The amount of progress payments previously made; and
3. Funds withheld by the Contracting Agency for disbursement in accordance with the Contract Documents.

Progress payments for work performed shall not be evidence of acceptable performance or an admission by the Contracting Agency that any work has been satisfactorily completed. The determination of payments under the contract will be final in accordance with Section 1-05.1.

Failure to perform any of the obligations under the Contract by the Contractor may be decreed by the Contracting Agency to be adequate reason for withholding any payments until compliance is achieved.

Upon completion of all Work and after final inspection (Section 1-05.11), the amount due the Contractor under the Contract will be paid based upon the final estimate made by the Engineer and presentation of a Final Contract Voucher Certification to be signed by the Contractor. The Contractor's signature on such voucher shall be deemed a release of all claims of the Contractor unless a Certified Claim is filed in accordance with the requirements of Section 1-09.11 and is expressly excepted from the Contractor's certification on the Final Contract Voucher Certification. The date the Contracting Agency signs the Final Contract Voucher Certification constitutes the final acceptance date (Section 1-05.12).

If the Contractor fails, refuses, or is unable to sign and return the Final Contract Voucher Certification or any other documentation required for completion and final acceptance of the Contract, the Contracting Agency reserves the right to establish a Completion Date (for the purpose of meeting the requirements of RCW 60.28) and unilaterally accept the Contract. Unilateral final acceptance will occur only after the Contractor has been provided the opportunity, by written request from the Engineer, to voluntarily submit such documents. If voluntary compliance is not achieved, formal notification of the impending establishment of a Completion Date and unilateral final acceptance will be provided by email with delivery confirmation from the Contracting Agency to the Contractor, which will provide 30 calendar days for the Contractor to submit the necessary documents. The 30 calendar day period will begin on the date the email with delivery confirmation is received by the Contractor. The date the Contracting Agency unilaterally signs the Final Contract Voucher Certification shall constitute the Completion Date and the final acceptance date (Section 1-05.12). The reservation by the Contracting Agency to unilaterally accept the Contract will apply to Contracts that are Physically Completed in accordance with Section 1-08.5, or for Contracts that are terminated in accordance with Section 1-08.10. Unilateral final acceptance of the Contract by the Contracting Agency does not in any way relieve the Contractor of their responsibility to comply with all Federal, State, tribal, or local laws, ordinances, and regulations that affect the Work under the Contract.

Payment to the Contractor of partial estimates, final estimates, and retained percentages shall be subject to controlling laws.

Supplement this section with the following:

The progress estimate cutoff date established at the preconstruction conference shall be a minimum of ten (10) working days prior to a regularly scheduled meeting of the Contracting Agency governing body where payments may be authorized. Revisions to the agreed upon progress estimate cutoff date will only be made by written approval of the Contracting Agency. The Contractor shall submit a signed Application for Payment within three (3) working days after the progress estimate cutoff date. The Engineer shall have a minimum of five (5) working days to review the Contractor's Application for Payment. The Contractor shall supply any outstanding material and labor documentation within five (5) working days of the cutoff date, or partial payments may be withheld from applicable bid items. After the application for payment is reviewed by the Engineer, the Engineer will make a recommendation to the Contracting Agency for payment. When payment approval is required by the governing body, the payment recommendation will be reviewed for approval consideration at the next available regular meeting of the governing body. Payment to the Contractor will be made within 30 calendar days from the Contracting Agency's acceptance date of the properly completed progress estimate, as recommended by the Engineer. If a contract is funded by grant, state, or federal money, the public body shall pay the prime contractor for satisfactory performance within thirty calendar days of the date the public body receives a payment request that complies with the contract or within thirty calendar days of the date the public body actually receives the grant or federal money, whichever is later. Failure to submit an Application for Payment within the required time may delay action by the Contracting Agency and further delay payment to the Contractor.

All payments for lump sum items over \$5,000.00 or a single payment for a lump sum contract of any amount will be measured by a schedule of values established as follows:

At the Preconstruction Conference, the contractor shall furnish a breakdown for each lump sum bid item or for the total lump sum contract price showing the amount bid for each principal category of the work, in such detail as requested by the Engineer, to provide a basis for determining progress

payments. This breakdown, referred to as the "Schedule of Values," will be approved by the Engineer as described in Section 1-08 Prosecution and Progress before the first payment is made.

1-09.9(1) Retainage

Add the following to the fourth paragraph:

6. An affidavit is delivered to the Contracting Agency by the Contractor, stating that all persons performing labor or furnishing materials have been paid.

1-09.9(2) Contracting Agency's Right to Withhold and Disburse Certain Amounts (New Section)

The following new section shall be added to the Standard Specifications:

In addition to monies retained pursuant to RCW 60.28 and subject to RCW 39.04.250, RCW 39.12, and RCW 39.76, the Contractor authorizes the Engineer to withhold progress payments due or deduct an amount from any payment or payments due the Contractor which, in the Engineer's opinion, may be necessary to cover the Contracting Agency's costs for or to remedy the following situations:

1. Damage to another contractor when there is evidence thereof and a claim has been filed.
2. Where the Contractor has not paid fees or charges to public authorities or municipalities which the Contractor is obligated to pay.
3. Utilizing material, tested and inspected by the Engineer, for purposes not connected with the work (Section 1-05.6).
4. Landscape damage assessments per Section 1-07.16.
5. For overtime work performed by Contracting Agency personnel or its representative, per Section 1-08.0(3).
6. Anticipated or actual failure of the Contractor to complete the work on time:
 - a. Per Section 1-08.9 Liquidated Damages; or
 - b. Lack of construction progress based upon the Engineer's review of the Contractor's approved progress schedule which indicates the work will not be completed within the Contract Time. When calculating an anticipated time overrun, the Engineer will make allowances for weather delays, approved unavoidable delays, and suspensions of the work. The amount withheld under this subparagraph will be based upon the liquidated damages amount per day set forth in Contract Documents multiplied by the number of days the Contractor's approved progress schedule, in the opinion of the Engineer, indicates the Contract may exceed the Contract time.
7. Failure of the Contractor to perform any of the Contractor's other obligations under the Contract, including but not limited to:
 - a. Failure of the Contractor to provide the Engineer with a field office when required by the Contract Provisions.
 - b. Failure of the Contractor to protect survey stakes, markers, etc., or to provide adequate survey work as required by Section 1-05.4.
 - c. Failure of the Contractor to correct defective or unauthorized work (Section 1-05.7).
 - d. Failure of the Contractor to furnish a Manufacturer's Certificate of Compliance in lieu of material testing and inspection as required by Section 1-06.3.

- e. Failure to submit Intent to Pay Prevailing Wage forms, or correct underpayment to employees of the Contractor or subcontractor of any tier as required by Section 1-07.9.
- f. Failure of the Contractor to pay workers' benefits (Title 50 and Title 51 RCW) as required by Section 1-07.10.
- g. Failure of the Contractor to submit and obtain approval of a progress schedule per Section 1-08.3.

The Contractor authorizes the Engineer to act as agent for the Contractor disbursing such funds as have been withheld pursuant to this section to a party or parties who are entitled to payment. Disbursement of such funds, if the Engineer elects to do so, will be made only after giving the Contractor 15 calendar days prior written notice of the Contracting Agency's intent to do so, and if prior to the expiration of the 15-calendar day period:

- 1. No legal action has commenced to resolve the validity of the claims, and
- 2. The Contractor has not protested such disbursement.

A proper accounting of all funds disbursed on behalf of the Contractor in accordance with this section will be made. A payment made pursuant to this section shall be considered as payment made under the terms and conditions of the Contract. The Contracting Agency shall not be liable to the Contractor for such payment made in good faith.

If legal action is instituted to determine the validity of the claims prior to expiration of the 15-day period mentioned above, the Engineer will hold the funds until determination of the action or written settlement agreement of the parties.

When the conditions 1-7 are resolved or the Contractor provides a Surety Bond satisfactory to the Contracting Agency which will protect the Contracting Agency in the amount withheld, payment shall be made for amounts withheld because of them.

1-09.9(3) Final Payment (New Section)

The following new section shall be added to the Standard Specifications:

Upon completion of all work under this Contract, the Contractor shall notify the Engineer, in writing, that he has completed his part of the Contract and shall request final payment. Upon receipt of such request, the Engineer will inspect and, if acceptable, submit to the Owner his recommendation as to acceptance of the completed work and as to the final estimate of the amount due the Contractor. Upon approval of this final estimate and upon final acceptance of the work under this Contract, the Owner will notify the Department of Revenue of the completion of said Contract. Provided the Department of Revenue certifies there are no taxes or penalties due and owing from the Contractor, and there are no other known claims or liens against the retained funds, and further provided the terms of Section 1-09.9(1) are in compliance, the Owner will pay to the Contractor the balance of monies due under this Contract in accordance with RCW Title 60.28. In the event unsatisfied claims or liens for taxes, material, labor, and other services are known to exist, an amount will be further withheld from the retainage sufficient to satisfy the settlement of such claims and liens, including attorney's fees incurred, and the remainder will be released from escrow, or released from the retained funds and paid to the Contractor.

On contracts for public works, final payment of the retained percentage will not be made until after the Contractor has filed with the Owner the Affidavit of Wages Paid forms required by RCW 39.12.040 certifying that the Contractor and subcontractors have paid not less than the prevailing rate of wages.

The parties further agree that the Owner may, without liability, withhold final payment to the Contractor until such time as the Contractor has completed all forms required by the Owner.

If a contract is funded by grant, state, or federal money, the public body shall pay the prime contractor for satisfactory performance within thirty calendar days of the date the public body receives a

payment request that complies with the contract or within thirty calendar days of the date the public body actually receives the grant or federal money, whichever is later.

1-09.11 Disputes and Claims

1-09.11(3) Time Limitation and Jurisdiction

(December 30, 2022 APWA GSP)

Revise this section to read:

For the convenience of the parties to the Contract it is mutually agreed by the parties that all claims or causes of action which the Contractor has against the Contracting Agency arising from the Contract shall be brought within 180 calendar days from the date of final acceptance (Section 1-05.12) of the Contract by the Contracting Agency; and it is further agreed that any such claims or causes of action shall be brought only in the Superior Court of the county where the Contracting Agency headquarters is located, provided that where an action is asserted against a county, RCW 36.01.050 shall control venue and jurisdiction. The parties understand and agree that the Contractor's failure to bring suit within the time period provided, shall be a complete bar to all such claims or causes of action. It is further mutually agreed by the parties that when claims or causes of action which the Contractor asserts against the Contracting Agency arising from the Contract are filed with the Contracting Agency or initiated in court, the Contractor shall permit the Contracting Agency to have timely access to all records deemed necessary by the Contracting Agency to assist in evaluating the claims or action.

1-09.13 Claims Resolution

1-09.13(1)A General

(December 30, 2022 APWA GSP)

Revise this section to read:

Prior to seeking claims resolution through arbitration or litigation, the Contractor shall proceed in accordance with Sections 1-04.5 and 1-09.11. The provisions of Sections 1-04.5 and 1-09.11 must be complied with in full as a condition precedent to the Contractor's right to seek claim resolution through binding arbitration or litigation.

Any claims or causes of action which the Contractor has against the Contracting Agency arising from the Contract shall be resolved, as prescribed herein, through binding arbitration or litigation.

The Contractor and the Contracting Agency mutually agree that those claims or causes of action which total \$1,000,000 or less, which are not resolved by mediation, shall be resolved through litigation unless the parties mutually agree in writing to resolve the claim through binding arbitration.

The Contractor and the Contracting Agency mutually agree that those claims or causes of action in excess of \$1,000,000, which are not resolved by mediation, shall be resolved through litigation unless the parties mutually agree in writing to resolve the claim through binding arbitration.

1-09.13(3)A Arbitration General

(January 19, 2022 APWA GSP)

Revise the third paragraph to read:

The Contracting Agency and the Contractor mutually agree to be bound by the decision of the arbitrator, and judgment upon the award rendered by the arbitrator may be entered in the Superior Court of the county in which the Contracting Agency's headquarters is located, provided that where claims subject to arbitration are asserted against a county, RCW 36.01.050 shall control venue and jurisdiction of the Superior Court. The decision of the arbitrator and the specific basis for the decision shall be in writing. The arbitrator shall use the Contract as a basis for decisions.

1-09.13(4) Venue for Litigation
(December 30, 2022 APWA GSP)

Revise this section to read:

Litigation shall be brought in the Superior Court of the county in which the Contracting Agency's headquarters is located, provided that where claims are asserted against a county, RCW 36.01.050 shall control venue and jurisdiction of the Superior Court. It is mutually agreed by the parties that when litigation occurs, the Contractor shall permit the Contracting Agency to have timely access to all records deemed necessary by the Contracting Agency to assist in evaluating the claims or action.

8-20 ILLUMINATION, TRAFFIC SIGNAL SYSTEMS, INTELLIGENT TRANSPORTATION SYSTEMS, AND ELECTRICAL

Replace this section with the following:

All work of this section shall be completed in accordance with the plans, special provisions, and electrical technical specifications provided in Appendix A of the Contract Documents.

8-20.5 Payment

The lump sum price bid for "Control Panel Upgrades, Complete" shall be full compensation for all labor, materials, tools, equipment, and incidentals necessary for demolition of existing control equipment and installation of a complete and operational control system. Work shall include, but not necessarily be limited to, furnishing and installing major electrical and control equipment and components, junction boxes, conduits, wiring, wiring devices, and connecting all equipment and facilities. Also included is the cost for all required startup, testing services, training, temporary power and control systems and connections as required.

APPENDIX A

ELECTRICAL SPECIFICATIONS

SECTION 26 05 01

BASIC ELECTRICAL REQUIREMENTS

PART 1 — GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. General requirements for electrical work.
 - a. Systems Descriptions
 - b. Area classifications
 - c. Submittals
 - d. Records
 - e. Coordination
- B. Related Sections include but are not necessarily limited to:
 - 1. General Conditions.
 - 2. Division 0 – Contract Requirements.
 - 3. Division 1 - General Requirements.
 - 4. Division 40 – Process Integration.
- C. Installation of systems and equipment is subject to clarification as indicated in reviewed shop drawings and field coordination drawings.

1.3 WORK DESCRIPTION

- A. Provide the labor, materials, and equipment necessary to furnish, install, and place into operation the power, lighting, instrumentation, control, alarm, and associated electrical systems of this Contract.
- B. Provide functioning systems in compliance with manufacturer's instructions, performance requirements specified or indicated, and modifications resulting from reviewed shop drawings and field coordinated drawings.
- C. Provide electrical connections to motors, instrumentation, controls, meters, and any other electrical device installed or provided as part of the project.
- D. Test, adjust and calibrate equipment and start-up all electrical equipment, instrumentation equipment, and its associated mechanical attachments as necessary to place the project into operation.
- E. Mark and identify circuits, equipment, and enclosures with wire numbers, nameplates, and warning signs.

1.4 SYSTEMS DESCRIPTIONS

- A. Provide complete 480Y/277-volt, 208Y/120-volt, and/or 240/120-volt power distribution systems including raceways, wiring, and power supply to equipment:
- B. Provide complete process control systems including programmable logic controllers (PLCs), individual controllers, monitoring and/or metering equipment, instrumentation equipment, and associated raceways, wiring, control panels, enclosures, and similar items.

1.5 AREA CLASSIFICATIONS

- A. Areas of the project are classified as “damp” or “wet” as defined in Article 100 - Definitions of the NEC. For the purposes of this specification, areas considered as damp under the NEC shall be considered wet. Areas are also classified as wet as listed below:
 - 1. Areas outdoors or underground.
 - 2. Areas in below grade vaults, manholes, or pullholes.
 - 3. Areas in buildings or structures that are below grade.
- B. Hazardous (Classified) Areas: Areas of the project may be classified as hazardous in accordance with NFPA standards. Hazardous (Classified) locations are generally indicated on the plans and/or noted in these specifications. Refer to Appendix for area classification letter giving details of each classification area.
 - 1. Hazardous areas may also be considered corrosive.
- C. Corrosive Areas: Corrosive areas are those areas where equipment or devices will be exposed to gases, fumes, vapors, liquids, or other agents that have a deteriorating effect on the device or equipment. Corrosive areas are generally indicated on the drawings and/or noted in these specifications. The following shall be considered Corrosive Locations:
 - a. Pump Station Wet Well and surrounding areas
 - 1. In ground handhole connected to the wet well Corrosive areas may also be considered hazardous.
- D. Process Areas:
 - 1. None
- E. Finished Areas: Areas that will require concealed construction in walls and ceilings. Finished areas are generally indicated on the drawings and/or noted in these specifications. The following shall be considered Finished Areas:
 - 1. None

1.6 DEFINITIONS

- A. Outdoor Areas:

1. Those locations on the Project site where the equipment is normally exposed to wind, dust, rain, snow, or similar natural environmental conditions.
- B. Indoor Areas:
 1. Those locations on the Project site where the equipment is normally protected from wind, dust, rain, snow, and similar natural environmental conditions by a building or structure with a complete floor-wall-roof/ceiling enclosure.
- C. Shop Fabricated:
 1. Manufactured or assembled equipment for which a NRTL test procedure has not been established.
- D. NRTL: Nationally Recognized Testing Laboratory.
- E. NEC: National Electrical Code
- F. NFPA: National Fire Protection Association
- G. NECA: National Electrical Contractors Association

1.7

QUALITY ASSURANCE

- A. Testing Agency Qualifications: A "Nationally Recognized Testing Laboratory" (NRTL) as defined in OSHA Regulation 1910.7, or a full member company of the InterNational Electrical Testing Association (NETA).
 1. Testing Agency Field Supervision: Use persons currently certified by NETA or the National Institute for Certification in Engineering Technologies, or equal, to supervise on-site testing specified in Part 3.
 2. Comply with NEC for components and installation.
 3. Comply with WAC and RCW requirements.
- B. Listing and Labeling: Provide products specified in these specifications that are listed and labeled.
 1. The Terms "Listed and Labeled": As defined in the NEC, Article 100.
 2. Listing and Labeling Agency Qualifications: A "Nationally Recognized Testing Laboratory" (NRTL) as defined in OSHA Regulation 1910.7.
 3. Comply with WAC and RCW requirements.
- C. Electrical Component Standard: Provide components that comply with NFPA 70.
- D. When a specific code or standard has not been cited, the applicable codes and standards of the following code-making authorities and standards organizations apply:
 1. American Association of State Highway and Transportation Officials (AASHTO).
 2. American Iron and Steel Institute (AISI).

3. American National Standard Institute (ANSI).
 4. American Society for Testing and Materials (ASTM).
 5. ETL Testing Laboratories, Inc (ETL).
 6. Insulated Cable Engineers Association (ICEA).
 7. Institute of Electrical and Electronic Engineers (IEEE).
 8. Illuminating Engineering Society of North America (IES).
 9. Instrument Society of America (ISA).
 10. Joint Industrial Council (JIC).
 11. Lightning Protection Institute (LPI).
 12. National Electrical Manufacturers Association (NEMA).
 13. National Fire Protection Association (NFPA).
 14. Occupational, Health and Safety Administration (OSHA).
 15. Underwriters Laboratories, Inc. (UL).
- E. In case of conflict or disagreement between codes, standards, laws, ordinances, rules, regulations, plans and specifications, or within either document itself, the more stringent condition governs.

1.8 SUBMITTALS

- A. See Section 01 33 00.
- B. Make submittals as soon as practical after the date of notice to proceed, but prior to purchase, fabrication, or installation of materials or equipment. Make submittals as a single package for each specification section or group related sections in one submittal, with proposed products and materials grouped according to the sections specified in Division 26. Do not split submittals having a common bill of materials. Group Division 26 submittals with other Division submittals where submittals have related items.
- C. Submit only one manufacturer for each product type. Multiple manufacturers for the same product will be rejected.
- D. Submit Electrical System Study Report (ESSR) with or before the submittal information for switchboards, motor control centers, panelboards, variable frequency drives and circuit breakers and similar items that may affect or be affected by each study. Equipment that is submitted prior to ESSR will not be reviewed and will be returned as "Not Reviewed". Equipment shall not be ordered until the ESSR has been reviewed and approved.
- E. Product Data:
1. Provide manufacturer's product technical data, including, but not limited to:
 - a. Identification of the manufacturer.
 - b. Manufacturer's product descriptive bulletin.
 - c. Current, voltage, nameplate, load, impedance, and other electrical data pertinent to the Project and necessary to assure compliance with the Specifications and Plans.

- d. Equipment weights and dimensions.
 - 2. Clearly indicate by using arrows or brackets precisely what is being submitted on. Designate optional accessories, which are being included and those which are excluded in the submittal.
- F. Shop Drawings: Submit Shop Drawings containing detailed drawings, diagrams and instructions for installing, operating and maintaining the material and equipment proposed for installation in the electrical work.
- 1. See individual Division 26 sections for specific additional requirements.
 - 2. Prior to submittal, coordinate the electrical equipment (particularly switchgear, motor control equipment, switchboards, control panels, and instrumentation) and materials, with other applicable equipment and systems of the contract documents, particularly process equipment and systems. Any modifications to the electrical equipment or other equipment, due to the use or submittal of process or other equipment which is different from that specified, shall be reflected in the submittal of the electrical equipment so affected. (Refer also to section 01 33 00 , 1.1 SCOPE and Section 01 33 00 , 3.5 PREQUALIFICATION AND SUBSTITUTION.)
 - a. Where electrical equipment submitted by the Contractor is a different size than the scaled dimensions shown on the plan, section or elevation drawings of the Contract Documents or requires clearance (for Code compliance, ventilation or other reasons), the Contractor shall mark and submit copies of the Contract Documents (or provide a modified AutoCAD drawing) showing the actual size of the proposed equipment, its placement drawn to scale in red pencil on the copies and any necessary clearances which demonstrate the suitability of the proposed equipment for the conditions of installation i.e. adequate space, clearance etc.. Submittals which do not meet this requirement will be rejected as incomplete.
 - b. Where equipment dimensions, layout, conduit connection routing, or conductor and conduit quantities, sizes or types are required to be different than indicated on the Contract Plans to accommodate the submitted equipment, the submittal shall clearly indicate the required changes (increased sizes, ratings of equipment or devices) and shall note that they are being provided to accommodate the submitted equipment without additional cost. The submittal shall indicate increased ratings, sizes. Submittals which do not meet this requirement will be rejected as incomplete.
 - c. Enclosures for equipment submitted by the Contractor shall be able to accept the quantities and sizes of conduits as shown on

the Contract Plans. Submittals which do not meet this requirement will be rejected.

- d. Lugs or connections for equipment submitted by the Contractor shall be able to accept the quantities and sizes of conductors as shown on the Contract Plans. Submittals which do not meet this requirement will be rejected.

3. Provide technical drawings as follows:

- a. Provide diagrams and drawings similar to the Contract Plans and named in a similar fashion for all technical drawings submittals.
- b. Use diagrams and symbols for shop drawings that conform to Joint Industry Conference (JIC) Electrical Standards for Industrial Equipment and/or NEMA, Industrial Control Systems, ANSI and IEEE standards, latest revisions. Prepare drawings on size A, B or D sheets in a format similar to the Contract Plans or other nationally recognized drawing standard.
- c. Provide electrical elementary wiring diagrams for the electrical control systems showing the interconnecting wiring of electrical control items, such as motor starters and controllers, control systems, interlocks, switches, programmable controllers, microprocessor controllers, and relays. Use equipment manufacturer's approved submittal drawings as a reference for motor control centers, variable frequency drives, control panels, field instruments etc.
- d. Provide scaled and dimensioned panel or enclosure face layout drawing; panel/subpanel material of construction, dimensions, and weight; conduit and wiring access locations; and material wiring and terminal block drawings for each control panel.
- e. Provide schematic interconnection diagrams and/or Process Instrumentation Drawings (PID) diagrams for each separate control system or control panel. Each control diagram shall show a schematic representation of process equipment and locations of switches, meters, automatic valves, and indicators, controllers and recorders. Correct operating settings and ranges for each control instrument shall be marked on these diagrams.

- G. Clearly indicate on submittals that equipment or material is NRTL listed or is constructed utilizing listed or recognized components. Where a NRTL standard has not been established clearly identify that no NRTL standard exists for that equipment.

H. Operation and Maintenance Manuals:

- 1. See specific sections for information specific to each type of equipment which is to be included in O&M manuals.

2. Provide preliminary manuals of each equipment item to the Owner for review no later than when the electrical equipment is submitted for approval and accepted.
3. Provide final manual copies before the equipment is shipped to the job site. For equipment which also requires third part (NETA) testing, provide reports with O&M manuals after installation but before equipment is put into use. Equipment installation will not be accepted without O&M manuals and third-party testing reports.
4. Drawings and Bill of Materials included in final manuals shall show "as shipped" wiring and components. Provide updates to the final manuals with Record Drawings of the work upon completion of the work, folded and punched for insertion into the manual after they are reviewed by the Owner.
5. Clearly indicate by using arrows or brackets precisely what has been provided. Designate optional accessories, which are being included and those which are excluded in the manual.
6. Final manuals for the electrical system shall consist of 3-post, expandable metal hinge binders labeled with the job name and the Contractor's name with tab dividers for each major type of equipment.
 - a. Provide manufacturer's installation, operation, maintenance, and service information for each item of equipment furnished under Division 26.
 - b. Assemble and index each section listing the contents individually on the tab divider for that section.
 - c. Compile a spare parts list and a supplier's index for each section and assemble in the section provided.
 - d. Assemble records of tests, measurements, and calibration settings made for each device. Provide Record Drawings of the work upon completion of the work. Fold, punch, and insert these records into the manual after they are reviewed by the Owner.

1.9 RECORDS

- A. Maintain and annotate on the job at all times a separate set of Record Drawings in accordance with the General Conditions. Show changes from the Contract Documents plan drawings including: routing of raceways, stubups, actual equipment and fixture locations, equipment sizes and dimensions and building or structure outline changes. Review the drawings with the Owner as the work progresses whenever requested and provide color copies of record drawings when requested. At the end of the project, forward to the Owner a complete set of drawings marked in red pencil in a manner consistent with the Contract Plans, indicating the changes made on the job.
- B. Equipment furnished under this Contract for use on future work and all concealed materials, including conduits, shall be dimensioned from visible and

permanent building/structure features or drawn to scale on the record drawings.

- C. Record voltage, current, and megohmmeter and ground ohmer resistance test measurements made on the electrical work, the size, type and settings of trip units, fuses, and overload relay elements installed in the equipment. Record the setting of all pressure, temperature, level, and similar instrumentation and control devices. When the project is operating, turn over these records to the Owner.
- D. Digital Record Photographs
 - 1. Requirements for the Photographs
 - a. Digital photographs shall be at the native resolution of the camera or smart phone. The file format of the photographs shall be JPEG using the modest compression. (Where the compression levels are described, the typical description of the compression level might be “good”.)
 - b. JPEG files shall be stored so that the EXIF (Exchangeable Image File Format) data is maintained. Prior to taking any photographs, the camera time should be set so that EXIF data includes the time and date of the photograph. The JPEG files shall be stored so that the creation (or modification) time and date of the file also reflect the time and date of the photograph. (The EXIF data should be viewable under Windows 10.)
 - c. The camera shall have a native resolution of at least 8.0 megapixels.
 - d. Photographs of signs, nameplates, or labels shall be taken using macro modes. The photographs shall be taken so that settings, serial numbers, catalog numbers, order numbers, etc. are legible. The photographs of reflective items shall be taken at an angle to the item to reduce glare.
 - 2. Take photographs of electrical equipment possibly requiring coordination when the equipment arrives on site. The photographs shall include nameplates and labels if available. The equipment shall include but not necessarily be limited to, the following:
 - a. Motors
 - b. HVAC equipment
 - c. Motorized actuators
 - d. Control Panels
 - 3. Take photographs of conduits prior to concealing them. The photograph files shall be labeled with location or shall contain adequate context to determine location such as a tape measure showing distance from a wall or depth below grade. The photographs shall include the following:

- a. Conduit placement prior to pouring concrete or backfilling
 - b. Conduit placement prior to covering walls
 - c. Stub up locations prior to placing equipment such as Switchgear, Switchboards or Motor Control Centers.
- 4. Take photographs of electrical equipment following installation or modification. The photographs shall include nameplates, labels, and similar identifiers. The equipment shall include but not necessarily be limited to, the following:
 - a. Motors and motor drive equipment.
 - b. Control Stations
 - c. Control Panels
 - d. Instrumentation providing electrical signals including transmitters, sensors, and switches.
 - e. Panelboards
 - f. Safety Disconnect Switches
 - g. Circuit Protective Devices showing catalog number, serial number and adjustable trip settings.
 - h. Motor Overload showing catalog number, serial number and adjustable trip settings.
 - i. Interiors of handhole and all seal offs.
- 5. Photographs shall be supplied to the Owner at least once every day. Photographs shall be supplied to the Owner no later than one day after they are taken. Photographs shall be supplied via cloud storage shared folder (OneDrive, Google Drive, etc.) or by another method prior approved by the Engineer.

1.10 COORDINATION

- A. Coordinate and schedule connecting electrical systems with exterior underground and overhead utilities and services. Comply with requirements of governing regulations, franchised service companies, and controlling agencies.
- B. Coordinate the interruption of electrical systems to any part of the facility in use by the Owner at least 48 hours before interruption of the system.
- C. Coordinate the cutting of existing structures with the new and existing electrical systems. Identify, locate, and protect existing and underground, underslab or embedded conduits/cables where excavation or cutting of existing structures is to be performed.
- D. Coordinate installing electrical identifying devices and markings prior to installing acoustical ceilings and similar finishes that conceal such items.
- E. Coordinate installing electrical identification after completion of finishing where identification is applied to field-finished surfaces.

- F. Coordinate requirements for access panels and doors where electrical items requiring access are concealed by finished surfaces.
- G. Coordinate the electrical work with the requirements of equipment provided under other Divisions. Portions of the electrical design are based upon the equipment specified in other Divisions. Where modifications to the specified electrical systems or equipment devices or materials are required to accommodate actual electrical requirements of equipment which is specified under other Divisions of the Contract but which has electrical requirements different from those specified under those Divisions for the equipment, make modifications to the electrical system or systems required to accommodate the equipment, and pay for all such changes. No additional payment, "extras", or additive change orders are allowed for changes required to accommodate substitutions or changes proposed by the Contractor.
- H. Where changes in the work, or substitutions in material or equipment specified under this Division are proposed, ensure that sizes, weights, openings, etc., are provided that do not require changes in the work outside this Division. If changes to work outside this Division are required to accommodate substitutions or changes proposed by the Contractor, submit complete descriptions of these changes for approval by the Owner, and pay for all such changes. No additional payment or "extras" are allowed for changes required to accommodate substitutions or changes proposed by the Contractor.
- I. Coordinate the installation of electrical equipment with other trades:
 - 1. Arrange for the building-in of equipment and materials during structure construction. Arrange for the building in of anchors, supports, sleeves, or other equipment and materials during concrete placement, framing, precasting or other structure construction. Coordinate installing required supporting devices and set sleeves in poured-in-place concrete and other structural components as they are constructed. Install sleeves for cable and raceway penetrations of concrete slabs and walls, except where core-drilled holes are used. Install for cable and raceway penetrations of masonry and gypsum walls and of all other fire-rated floor and wall assemblies. Install sleeves during erection of concrete and masonry walls. Gypsum wall sleeves may be cut-in after erection if desired.
 - 2. Where equipment or materials cannot be built-in during construction, arrange for chases, slots, box-outs or other openings in the structure, as required to allow installation of equipment after structure construction is complete.
 - 3. Where penetration of completed or permanent construction elements such as walls, beams, ceilings, floors, etc. is required, obtain approval from Owner for penetration (drilling, cutting, shooting, punching) of structural components prior to penetrating the element or component.

- 4. Accurately locate panelboards, outlets, switches, control stations and similar devices with respect to equipment and the finished work of others. Verify dimensions and locations with the general, civil, structural, mechanical, process, architectural and other Contract plans as well as shop drawings/supplier's drawings and trades.
- 5. Coordinate installing large equipment requiring special access openings or positioning prior to closing in the building.
- J. Coordinate electrical work with work under other Divisions. Sequence, coordinate, and integrate installing electrical materials and equipment for efficient flow of the Work. Cooperate in locating equipment to avoid interference with work of others, and plan this work to harmonize with the work of other trades so that all work may proceed as expeditiously as possible. No extras are allowed because of moving work required to avoid interference with work of other trades or contractors.
- K. Coordinate connecting electrical circuits to components furnished under other Divisions. Coordinate the location of motors, switches, panel connections and other points of connection with the equipment manufacturers or vendors prior to conduit installation, and route circuits to the actual connection point. Remove and reinstall conduit, outlet boxes and other electrical connections, even if removal and reinstallation of building materials is necessary, where electrical connections are not made to the appropriate equipment location.

1.11 DELIVERY, STORAGE, AND HANDLING

- A. See Section 01 66 00 .
- B. Receive, handle, and store electrical materials and equipment in accordance with the manufacturer's instructions.
- C. Protect materials and equipment from damage, corrosion, or disfiguring; protect nameplates on electrical equipment from defacing. Deliver equipment to their final locations in protective wrappings, containers, and other protection that will exclude dirt and moisture and prevent damage from construction operations. Remove protection only after equipment is safe from such hazards. Field repair of material or equipment made defective by improper storage or site construction damage by other trades is not acceptable.
- D. Repair, restore, or replace damaged, corroded and rejected items at no additional cost to the Owner.
- E. Provide dry, heated storage for materials and equipment intended to be installed indoors which is not protected by packaging suitable for outdoor storage by the manufacturer and for equipment that requires an electrical connection or heater to mitigate water condensation and like hazards.

- F. Keep electrical equipment rooms clean and vacuumed after each day when work is performed in the area. Do not place electrical equipment rated for indoor installation into its final location until this location is weathertight and heated with openings to the outside closed with temporary weather barriers or with the installation of permanent doors, fans, and ducts. (The final location shall be the electrical equipment location shown on the Contract Plans or otherwise described in the Contract Documents.)
- G. Ensure that equipment is not used as steps, ladders, scaffolds, platforms, or for storage - either inside or on top of enclosures.
- H. Protect nameplates on electrical equipment from defacing.
- I. Repair, restore, or replace damaged, corroded and rejected items at no additional cost to the Owner.

1.12 EXTRA MATERIALS

- A. Provide extra materials including spare parts where noted in individual specification sections.
- B. Extra materials including spare parts shall be provided with the equipment or like materials at the time the equipment or materials arrive on site. It is not acceptable to provide extra materials after the equipment or materials are delivered to the site or house equipment in a storage area not accessible to the Owner. Provide an inventory and listing of the spare parts to the Owner when the parts (and spares) arrive onsite.

PART 2 — PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Refer to individual Division 26 sections.
 - 1. Provide equipment, which is of a similar type, made by one manufacturer throughout the project unless otherwise noted in the Specifications.
- B. Submit requests for substitution in accordance with Specification Section 01 33 00

2.2 MATERIALS

- A. Except as otherwise indicated, provide new materials and equipment which are standard products of manufacturers regularly engaged in production of such equipment. Provide similar items of equipment of the same manufacturer and quality. Where systems are specified, provide components of the system from one manufacturer.
- B. Trade names and catalog numbers may be used in the Plans or Specifications to establish quality standards and basis of design:

1. Other listed manufacturers in the applicable specification sections with equal equipment may be acceptable.
 2. If no other manufacturer is listed then any manufacturer of equal equipment may be acceptable.
- C. Provide material or equipment approved and labeled for the purpose for which it is to be used by a nationally recognized electrical testing laboratory (NRTL) or other organization acceptable to the State of Washington Department of Labor and Industries.
1. Where NRTL test procedures have been established for the product type, provide electrical equipment approved under that procedure and bearing the NRTL label.
- D. Where voltage, current, power, temperature or other ratings are specified that do not correspond to standard ratings of the manufacturer selected by the Contractor, furnish the next rating level which increases the capacity of the device or material in question.
- E. Furnish materials, devices, equipment or supplies of materials that are inherently non-corrosive or are coated or covered in a manner, acceptable to the Owner, which renders them non-corrosive. Do not provide materials which contain polychlorinated biphenyls, asbestos or other hazardous or detrimental materials. Do not install materials in a manner, location or construction that produces galvanic action or any other materials corroding or eroding action. Material that may cause rusting or streaking on a building/structure surface shall not be used.
- F. Fabricate equipment or devices in the field equivalent in every respect to manufactured items used for the same purpose. Where cutting, drilling, grinding, or similar actions are performed on galvanized or painted metal, regalvanize or repaint, respectively, to match original finish.
- G. When equipment is shop fabricated for the Project, use electrical devices and enclosures which are NRTL listed and labeled or recognized.

2.3 ELECTRICAL SYSTEM STUDY REPORT (ESSR)

- A. The short circuit calculation and withstand evaluation report, circuit protective device coordination studies, harmonic analysis studies, and arc flash studies shall comprise the Electrical System Study Report (ESSR).
- B. Create reports for existing, new and modified electrical distribution equipment including the Utility Point of Service and submit reports of equipment submittals for approval. Distribution equipment shall include switchboards, panelboards, motor control centers, dry type transformers, etc.
- C. short circuit calculation and withstand evaluation report, circuit protective device coordination studies, harmonic analysis studies, and arc flash studies

shall be stamped and signed by an electrical engineer registered in the State of Washington.

- D. short circuit calculation and withstand evaluation report, circuit protective device coordination studies, harmonic analysis studies, or arc flash studies shall be submitted with or before the distribution and control equipment being provided on the project (switchboards, motor control centers, variable frequency drives, panelboards, etc.). It is not acceptable to submit the ESSR after the distribution equipment has been submitted. As a minimum, include the following in the report:
 - 1. Utility source information including primary system & service transformer impedance, X/R ratio, symmetrical and asymmetrical fault currents for 3 phase, line-to-line and line-to-neutral faults.
 - 2. Equipment manufacturer's information used to prepare the study.
 - 3. Assumptions made during the study.
 - 4. Short circuit calculations listing short circuit levels at each bus.
 - 5. Evaluation of the electrical power system and the model numbers and settings of the protective devices associated with the system.
 - 6. Time-current curves including the instrument transformer ratios, model numbers of the protective relays or trip devices, and the relay or trip device settings associated with each breaker.
 - 7. Comparison of short circuit duties of each bus to the bracing and interrupting capacity of the equipment connected to that bus.
- E. Elements of short circuit calculation and withstand evaluation report
 - 1. One-line Diagram:
 - a. Location and function of each protective device in the system, such as relays, direct-acting trips, fuses, etc.
 - b. Type designation, current rating, range or adjustment manufacturer's style and catalog transformers.
 - c. Power, voltage ratings, impedance, primary and secondary connections of all transformers.
 - d. Nameplate ratings of all motors and generator with their subtransient reactances.
 - e. Transient reactances of generator and synchronous reactances of generator.
 - f. Sources of short circuit elements such as utility ties, generators, and induction motors.
 - g. All significant circuit elements such as transformers, cables, breakers, fuses, reactors, etc.
 - h. Standby as well as normal switching conditions.
 - 2. Impedance Diagram
 - a. Available MVA or impedance from the utility company.

- b. Bus impedance.
 - c. Transformer and/or reactor impedances.
 - d. Cable impedances.
 - e. Equipment impedances.
 - f. System voltages.
 - g. Grounding scheme (solid grounding, resistance grounding, or no grounding).
3. Calculations:
- a. Determine the paths and situations where short circuit currents are the greatest. Assume bolted faults and calculate the 3-phase and line-to-ground short circuits of each case.
 - b. Calculate the maximum and minimum ground-fault currents.

F. Circuit Protective Device Coordination Study

1. Provide the model numbers and recommended settings of the protective devices associated with the system to achieve full circuit coordination. Unless noted otherwise, full circuit coordination shall include amperages up to the maximum instantaneous fault current available from the standby power source (e.g., engine generator) from 0.1 seconds and longer.
- a. Zone Selective Interlocking is acceptable for circuit breaker coordination for circuit breakers located within the same electrical or adjacent enclosures where each breaker is provided by the same manufacturer.
 - b. Full coordination is not required for circuit breakers during the timeframe a reduced (electric arc flash) energy level maintenance bypass switch is activated.
 - c. Series rating of equipment is not acceptable.
2. As a minimum, include the following on 5-cycle, log-log graph paper:
- a. Time-current curve for each protective relay or fuse showing graphically that the settings will allow protection and selectively within Industry standards. Identify each curve and specify the tap and time dial setting.
 - b. Time-current curves for each device to be positioned for maximum selectivity to minimize system disturbances during fault clearing. Where selectivity cannot be achieved, notify the Project Representative as to the cause.
 - c. Time-current curves and points for cable and equipment damage.
 - d. Time-current curves and points for standby power generation equipment (e.g., engine generator) protective relays
 - e. Circuit interrupting device operating and interrupting times.
 - f. Indicate maximum fault values on the graph.

- g. Sketch of bus and breaker arrangement.
- 3. The circuit breaker sizes shown on the contract drawings are for a basis of design power distribution system from a single Manufacturer. The Contractor is free to select breakers and enclosures that achieve selective coordination, have sufficient fault current interrupting capacity from any generator or utility services, and all the required breakers are enclosed in distribution equipment of the same size or smaller in each dimension than shown on the Contract Drawings.

G. Harmonic Analysis

- 1. Prepare a report summarizing the power system total harmonic distortion at the Utility Service Point (Meter, Switchboard or Panelboard) and at each Motor Control Center or Building Main Disconnect if not within a Motor Control Center.
- 2. For each building equipment or location, evaluate total harmonic distortion assuming the IEEE 519 point of common coupling is at the normal service entrance disconnect equipment. Analyze the effect of the line reactors and 18 pulse front ends supplied with the VFDs at each location and the effect of the active harmonic filter (if provided).
- 3. Provide recommendations for the sizing of the harmonic filter in the Equipment Building.

H. Arc Flash Study

- 1. Prepare a report summarizing the arc flash study and conclusions or recommendations which may affect the integrity of the electric power distribution system.
- 2. Determine the incident energy, arc flash boundary, and minimum PPE requirements for locations throughout the studied portions of the power system. Arc flash warning labels are to be produced and attached to the electrical equipment. These labels must indicate approach boundaries, incident energy level, and the minimum PPE that is required when servicing the equipment within the arc flash boundary.
- 3. As a minimum, include the following in the report:
 - a. Assumptions made during the study.
 - 1) Estimated available fault current for each bus.
 - 2) Estimated arc fault current for each bus.
 - 3) Trip settings for all circuit protective devices (protective relays, circuit breaker and fuses) upstream of any bus evaluated.
 - 4) Material, quantity, size, and length of each conductor of feeder and raceway material of each feeder.
 - b. Reduced copy of the one-line drawing.
 - c. Arc flash evaluations summary spreadsheet

- 1) Bus name.
 - 2) Upstream protective device name, type, settings.
 - 3) Bus line to line voltage.
 - 4) Bus bolted fault.
 - 5) Protective device bolted fault current.
 - 6) Arcing fault current.
 - 7) Protective device trip/delay time.
 - 8) Breaker opening time.
 - 9) Solidly grounded column.
 - 10) Equipment type.
 - 11) Gap.
 - 12) Arc flash boundary.
 - 13) Working distance.
 - 14) Incident energy.
 - 15) Suggested electric arc rated PPE rating.
- d. Arc flash warning labels printed in color on adhesive backed labels.
4. Provide the arc flash warning labels containing information suggested by NFPA 70E and affix warning labels to each piece of electrical equipment evaluated in the Arc Flash Study. In addition to the information suggested by NFPA 70E, the arc flash warning labels shall also indicate the report date and date of circuit protective device testing (as of the time of the arc flash study). Arc Flash Warning labels shall be installed prior to the Contractor energizing the equipment. The third-party testing agency shall confirm the circuit protective devices (protective relays, circuit breakers and fuses) match as recommended in the arc flash study prior to equipment energization.
5. The Contractor shall provide four hours (minimum) of arc flash training to the Owner at an Owner's designated facility prior to the Contractor energizing the electrical equipment. Arc Flash training shall include consultation with facility manager regarding plant safety plan based on NFPA 70E, Handbook for Electrical Safety in the Workplace.
- a. Arc Flash training shall be based on the latest edition of NFPA 70E, Handbook for Electrical Safety in the Workplace.
 - b. Training shall include site specific features, such as arc flash mitigation procedures, electrically safe procedures, Owner provided personal protective equipment (PPE) use and care procedures.

PART 3 — EXECUTION

3.1 INSTALLATION

- A. Make arrangements for and pay for necessary permits, licenses, and inspections.
- B. Equipment shall be installed in accordance with the requirements of the National Electrical Code, National Electrical Safety Code, and applicable state and local regulations and ordinances.
- C. Install equipment in accordance with the manufacturer's instructions and the NECA "NEIS" (National Electric Installation Standards).
- D. Provide on-site testing as listed in individual specification sections. Test results shall be in writing.
- E. Equipment Dimensions and Clearances:
 - 1. Dimensions indicated for electrical equipment and dimensions indicated for the installation of electrical equipment are restrictive dimensions. Verify that equipment will fit within the indicated locations and spaces. Do not use equipment that impinges upon the required clearance, reduces actual clearance, or exceeds the indicated dimensions:
 - a. Except as approved in writing by the Owner.
 - 2. Do not use arrangements of equipment that impinge upon the required clearance, reduce actual clearances or exceed the space allocation.
- F. Equipment Access:
 - 1. Install equipment so it is readily accessible for operation and maintenance.
 - 2. Access to equipment shall not be blocked or concealed by conduits, supporting devices, boxes, or other items.
 - 3. Do not install electrical equipment such that it interferes with normal maintenance requirements of other equipment.
- G. Install materials and equipment in a manner, location and construction that does not produce galvanic action or any other materials corroding or eroding action. Equipment fabricated from aluminum shall not be placed in direct contact with earth or concrete.
- H. Screen openings and seal all raceways into equipment to prevent the entrance of moisture, rodents and insects.
- I. Plans indicate the approximate location and arrangement of electrical equipment and the approximate location of other equipment requiring electrical work. The general arrangement of panelboards, outlets and other equipment is diagrammatic and approximate as to locations. To avoid interference with structural members and equipment of other trades, it may

be necessary to adjust the intended location of electrical equipment. Where minor changes are required because of structural or finish conditions or for the convenience of the Owner, provide such changes without additional expense to the Owner. Unless specifically dimensioned or detailed, the Contractor may, at his discretion, make minor adjustments in equipment location without obtaining the Owner's approval. Minor adjustments are defined as a distance not to exceed:

1. 1 FT at grade, floor and roof level in any direction in the horizontal plane.
2. 1 FT for equipment other than lighting at ceiling level in any direction in the horizontal plane.
3. 1 FT for lighting fixtures at ceiling level in any direction in the horizontal plane.
4. 1 FT on walls in a horizontal direction within the vertical plane.
5. Changes in equipment location exceeding those defined above require the Owner's approval.
6. Particular attention shall be paid to door swings, piping, radiation, ductwork, and structural steel:
 - a. In general, waste and vent lines and large pipe mains and ductwork shall be given priority for the locations and space shown.
 - b. Electrical lighting fixtures shall, in general, be given priority for ceiling space.
 - c. No additional compensation will be allowed for the moving of misplaced outlets, wiring, or equipment.

3.2 DEMONSTRATION

- A. Demonstrate equipment in accordance with Division 1.
- B. Demonstrate to the Owner that the electrical installation is working by operating all electrical systems and equipment. Simulate control and emergency conditions, artificially where necessary, for complete system tests. Adjust installed equipment for proper operation of all electrical and mechanical components.

3.3 ASSISTANCE

- A. Provide assistance to the Owner during the demonstration or testing of equipment by operating devices and equipment, during construction observation by opening enclosures for inspection, checking record drawing information, and similar tasks, as necessary, in the Owner's judgment to verify all work provided.

END OF SECTION

SECTION 26 05 02

BASIC ELECTRICAL MATERIALS AND METHODS

PART 1 — GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Supporting devices.
 - 2. Electrical identification.
 - 3. Electrical demolition.
 - 4. Cutting and patching
 - 5. Cleaning and finish touchup painting.
 - 6. Testing

1.3 SUBMITTALS

- A. General: Submit each item in this Article as described in Section 26 05 01 and Division 1 Specification Sections.
- B. Product Data: For each type of material specified.
 - 1. In addition to the requirements of 26 05 01 and Division 1 Specification sections, submit only one manufacturer for each product type. Multiple manufacturers for the same product will be rejected.
- C. Field Test Reports: Indicate and interpret test results for compliance with performance requirements.
 - 1. Testing Reports. (See section 3.8 for further information)

1.4 QUALITY ASSURANCE

- A. Refer to Section 26 05 01 paragraph 1.7.

PART 2 — PRODUCTS

2.1 SUPPORTING DEVICES

- A. Provide tubing, channel and angle support systems, hangers, sleeves, brackets, fabricated items, and fasteners for secure support of electrical equipment, devices, components and materials:
 - 1. Material:

- a. Wet locations (including outdoors and in below-grade structures): Stainless steel or hot-dipped galvanized.
 - b. Class I Hazardous locations and/or Corrosive areas: 304 stainless steel or 40 mil PVC coated galvanized steel.
 - c. Other locations: Steel, except as otherwise indicated, protected from corrosion with zinc coating, cadmium plating, or with treatment of equivalent corrosion resistance using approved alternative finish or inherent material characteristics.
- B. Conduit clamps: one hole or beam clamps
 - 1. Rigid Steel Conduit: cast iron hot dipped galvanized clamps with cast iron hot dipped galvanized clamp back (AKA foot or spacer).
 - 2. PRMC: cast iron PVC coated or stainless-steel clamps with cast iron PVC coated or stainless steel clamp back (AKA foot or spacer).
 - 3. EMT: stamped steel clamps – cad plated or galvanized.
- C. Anchors: stainless steel in wet, hazardous or corrosive areas; cadmium plated or galvanized steel in dry areas.
 - 1. lag screws or Type A tapping screws for wood.
 - 2. Toggle bolts with springhead for light loads in masonry.
 - 3. thru-bolt with fender washers for loads in masonry.
 - 4. toggle bolts with springhead for hollow partitions.
 - 5. epoxy set or self-drilling anchors with threaded studs for concrete.
 - 6. clamps or U-bolts for structural steel.
 - 7. Epoxy set or self-drilling anchors with extension rods for hollow tile over concrete.
 - 8. hanger rods: 1/4-inch diameter or larger threaded steel, except as otherwise indicated.
- D. Sleeves:
 - 1. Wet, hazardous or corrosive areas:
 - a. ASTM A 53, Type E, Grade A, Schedule 40, hot dipped galvanized steel, plain ends.
 - b. Hot dipped galvanized cast iron, with weep rings.
 - 2. Dry Areas:
 - a. PVC, schedule 40.
 - b. 0.0276-inch or heavier galvanized sheet steel, round tube, closed with welded longitudinal joint.

2.2 ELECTRICAL ENCLOSURES

- A. Enclosures for use with Electrical Equipment:
 - 1. Standards:
 - a. NEMA ICS-6, Enclosures for Industrial Controls and Systems.

- b. UL 508, Industrial Control Equipment.
 - c. UL 698, Industrial Control Equipment for Use in Hazardous Locations.
- 2. Provide NEMA enclosure types as indicated on the Contract Documents. Where the enclosure type is not indicated by the Contract Documents provide enclosures as follows:
 - a. NEMA 1: Use in electrical rooms and in dry indoor finished areas.
 - b. NEMA 12: Use in unclassified (non-hazardous and non-corrosive) indoor locations which are neither wet nor damp.
 - c. NEMA 4X: Use in all non-hazardous wet or corrosive locations.
 - d. NEMA 7: Use in all hazardous locations.
- B. Shop or Factory Finishes:
 - 1. Exteriors of painted enclosures shall be ANSI gray.
 - 2. Interiors of painted enclosures shall be either white or light gray.

2.3 ELECTRICAL IDENTIFICATION

- A. Manufacturer's Standard Products: Where more than one type is listed for a specified application, selection is Contractor's option, but provide single type for each application category. Use colors prescribed by ANSI A13.1, NEC, and these Specifications.
- B. Colored Adhesive Marking Tape for Raceways, Wires, and Cables: Self-adhesive vinyl tape not less than 3 mils thick by 1 inch wide.
- C. Underground Line Warning Tape: Permanent, bright-colored, continuous-printed, vinyl tape with the following features:
 - 1. Size: Not less than 4 mils thick by 6 inches wide.
 - 2. Compounded for permanent direct-burial service.
- D. Color-Coding Cable Ties: Type 6/6 nylon, self-locking type. Colors to suit coding scheme.
- E. Engraved, Plastic-Laminated Labels, Signs, and Instruction Plates: Engraving stock, melamine plastic laminate punched for mechanical fasteners 1/16 inch minimum thick for signs up to 20 sq. in., 1/8 inch thick for larger sizes. Engraved legend in white letters on black face.
- F. Fasteners for Plastic-Laminated and Metal Signs: Self-tapping stainless-steel screws or stainless-steel No. 10/32 machine screws with nuts and flat and lock washers.
- G. Wire markers: machine printed, black ink, alpha-numerical identifiers on yellow polyolefin shrink tubing. Kroy K4350 Shrink Tube, or approved equal.
 - 1. Where it is not possible to use shrink tubing (i.e. on pre-terminated cables) it is acceptable to use the following:

- a. Tape Markers: Vinyl or vinyl-cloth, self-adhesive, wraparound type with preprinted numbers and letters.

2.4 TOUCHUP PAINT

- A. For Equipment: Provided by equipment manufacturer and selected to match equipment finish.
- B. For Non-equipment Surfaces: Matching type and color of undamaged, adjacent finish.
- C. For Galvanized Surfaces: Zinc-rich paint recommended by item manufacturer.

PART 3 — EXECUTION

3.1 INSTALLATION

- A. Comply with NECA's "Standard of Installation."
- B. Install the equipment and materials in a neat and workmanlike manner employing workmen skilled in the particular trade and in accordance with the manufacturer's instructions and industry standards. Maintain adequate supervision of the work by a person in charge at the site during any time that work under this division is in process or when necessary for coordination with other work.
- C. Install components and equipment to provide the maximum possible headroom where mounting heights or other location criteria are not indicated. Mount enclosures for individual units at fifty-four inches above floors to centerline of controls.
- D. Install items level, plumb, parallel and perpendicular to other building systems and components, except where otherwise indicated.
- E. Install equipment to facilitate service, maintenance, and repair or replacement of components. Connect for ease of disconnecting, with minimum interference with other installations.
- F. Give right of way to raceways and piping systems installed at a required slope.
- G. Make all penetrations of electrical work through floors, walls and roofs water, rodent, insect and weather-tight.

3.2 ELECTRICAL SUPPORTING METHODS

- A. Support electrical equipment, devices and materials from framing members or structure with sufficient clearance for maintaining and servicing.
 - 1. Provide backing plates, and/or framing material to support equipment, devices and materials which are located between the framing members which are part of the building or facility structure.
 - 2. Provide metal structure fabricated of structural shapes such as C-channel or square tubing (not strut channels, unistrut, b-line, etc.) for

mounting cabinets, panelboards, disconnects, control enclosures, pull boxes, junction boxes, transformers, and other equipment and devices except where components are mounted directly to structural features of adequate strength.

B. Fastening and Supports: Unless otherwise indicated, securely fasten electrical items and their supporting hardware to the building/structure/support.

1. Use supports as detailed on the Plans and as specified:
 - a. Where not detailed on the Plans or specified, use supports and anchoring devices rated for the equipment load and as recommended by the manufacturer.
2. Attach enclosures mounted on equipment with machine screws or clamps as required. Do not drill equipment frames or sheets without permission of the equipment supplier/manufacturer and the Owner. Do not mount safety switches or external equipment to other equipment enclosures, unless enclosure mounting surface is adequately reinforced structurally to accept mounting of external equipment.
3. Base rating and size of supports and anchoring devices on dimensions and weights verified from approved equipment submittals. Attach wall mounted enclosures with a minimum of three fasteners, and more if the manufacturer so recommends.
4. Standoff outdoor wall-mounted equipment and indoor equipment mounted on earth or water bearing walls a minimum of one-quarter inch where enclosures are mounted on walls in wet areas (outdoors, below grades, etc.). Use corrosion resistant spacers such as neoprene, or fiberglass or plastic shim washers to maintain ¼ IN separation between the equipment and the wall.
5. Do not cut, or weld to, building structural members without permission of the owner. Welding to steel structure may be used only for threaded studs, not for conduits, pipe straps, or any other items.
6. Select fasteners so the load applied to any fastener does not exceed 25 percent of the proof-test load.

C. Raceway Supports: Comply with NEC and the following requirements:

1. Conform to manufacturer's recommendations for selecting and installing supports.
2. Install individual and multiple raceway hangers and riser clamps to support raceways. Provide U bolts, clamps, attachments and other hardware necessary for hanger assembly and for securing hanger rods and conduits.
3. Support parallel runs of horizontal raceways together on trapeze- or bracket-type hangers.
4. Spare Capacity: Size supports for multiple conduits so capacity can be increased by a 25 percent minimum in the future.

5. Support individual horizontal raceways with separate, malleable iron pipe hangers or clamps.
 6. In vertical runs, arrange support so the load produced by the weight of the raceway and the enclosed conductors is carried entirely by the conduit supports, with no weight load on raceway terminals.
 7. Use double nuts or jam nuts with regular nuts on threaded rods and bolts.
 8. Trim rod ends to within ¼ inch after installation of last nut, clamp or similar hardware; smooth cut ends or install cap nut.
- D. Provide concrete foundations or pads required for electrical equipment:
1. Floor-mounted equipment shall be mounted on a concrete base except the concrete base shall be shortened in height by the thickness of the channel base when the equipment is provided with channel bases such as can be provided with control panels, motor control centers and switchboards. Pad shall be poured on top of the finished floor or slab.
 2. Install concrete pads and bases according to requirements of Division 3 and per structural plans and specifications.
- E. Install hangers, inserts, supports, and anchors prior to installation of fireproofing.
- F. Cable supports - provide cable ties and straps for clamping, tying, securing and banding wires and cables in all junction boxes, panelboards and terminal cabinets. Support each circuit independently; group phases of three phase circuits.

3.3 IDENTIFICATION

- A. Install labels where indicated and at locations for best convenience of viewing without interference with operation and maintenance of equipment.
- B. Coordinate names, abbreviations, colors, and other designations used for electrical identification with corresponding designations indicated on the Plans or required by codes and standards. Use consistent designations throughout the Project.
- C. Self-Adhesive Identification Products: Clean surfaces of dust, loose material, and oily films before applying.
- D. Tag or label power circuits in enclosures using tags or adhesive marking tape. Identify source and circuit numbers in each cabinet, pull box, pull hole, vault, maintenance hole, junction box, and outlet box. Color coding may be used for voltage and phase indication.
- E. Identify Paths of Underground Electrical Lines: During trench backfilling, for exterior underground power, control, signal, and communication lines, install continuous underground plastic line marker located directly above power and communication lines. Where multiple lines installed in a common trench or

concrete envelope do not exceed an overall width of 16 inches, use a single line marker.

- F. Provide engraved phenolic name plates (white with black background) on equipment enclosures giving the name and circuit identification (Panel/MCC/Enclosure served from and circuit location or ID) of the enclosed device/equipment in one-quarter inch letters.
- G. Provide electrical danger, caution, warning or safety instruction signs including arc flash signs in accordance with WAC/RCW, WISHA/OSHA and other applicable state/federal safety requirements.

3.4 DEMOLITION

- A. Demolish all existing electrical devices and circuits which are noted for demolition. Demolition includes, but is not limited to:
 - 1. Remove all conduit, conductors, fittings, device boxes, hangers, panels, devices, etc., which are not concealed in the building structure or below grade/slab.
- B. Do not remove or damage fireproofing materials. Repair or replace fireproofing removed or damaged.
- C. Locate, identify, and protect electrical equipment and materials to remain. Where existing work to remain is damaged in the course of the work, remove damaged portions and install new products of equal capacity, quality, and functionality at no additional cost to the Owner.
- D. Remove existing conductors from conduits or other enclosures, unless otherwise indicated, where existing work is to be abandoned in place. Cut and remove buried cable or raceway indicated to be abandoned in place at the point where it stubs up or emerges from burial 12 inches below the surface of adjacent grade or construction; cap and patch surface to match existing finish.
- E. Remove demolished material from the Project site and legally dispose of demolished material by wastehaul to approved landfill or recycling facility.
- F. Remove, store, clean, reinstall, reconnect, and make operational components indicated for relocation and/or reconnection. Coordinate the process, mechanical, HVAC, and other equipment scheduled to be relocated and/or reused with other Divisions and disconnect the equipment from and reconnect the equipment to the electrical systems.

3.5 TEMPORARY POWER

- A. Obtain approval by all appropriate code authorities, including the Department of Labor & Industries Electrical Inspection Department, for any temporary connections provided.

3.6 CUTTING AND PATCHING

- A. Cut, channel, chase, and drill floors, walls, partitions, ceilings, and other surfaces necessary for electrical installations. Perform cutting by skilled mechanics of the trades involved.
- B. Repair disturbed surfaces to match adjacent undisturbed surfaces.

3.7 CLEANING AND TOUCHUP PAINTING

- A. Clean dirt and debris from all surfaces. Thoroughly vacuum the interior of enclosures to remove dirt and debris.
- B. Replace nameplates damaged during installation.
- C. Apply touch-up paint as required to repair scratches, etc. Field paint in accordance with Section 09 09 91 00. Thoroughly clean damaged areas and provide primer, intermediate, and finish coats to suit the degree of damage at each location. Follow paint manufacturer's written instructions for surface preparation and for timing and application of successive coats.

3.8 TESTING

- A. Testing shall be performed by a person currently certified by the InterNational Electrical Testing Association.
- B. Additional testing requirements specific to other sections are specified in those sections.
- C. Test electrical equipment as described in individual specification sections after installation but before it is energized and placed in service. All equipment shall be tested as recommended by the manufacturer. Report all test results in writing. Where tests disclose a defect in the work, rework or repair equipment which performs unsatisfactorily during or as a result of system testing at no additional expense to the Owner and retest to confirm the rework or repair until retesting confirms that the defect has been corrected. Test in accordance with the manufacturer's installation and testing instructions and the applicable electrical standards (i.e., NEMA, IEEE, ISA, ANSI, or other) for the class of equipment. If equipment or system fails retest, replace it with products which conform with Contract Documents. Continue remedial measures and retests until satisfactory results are obtained. Remedial measures and retests will be done at no cost to the Owner.
- D. Test motor driven equipment motors before energization. Insulation test shall consist of megohmmeter check phase-to-ground, per IEEE Standard 43, and polarization index test per the manufacturer's recommendations.
 - 1. Perform load tests of each motor and prepare a written report of the findings showing the following:
 - a. Nameplate Ratings (horsepower), (speed), (voltage), (phase), (ampere rating of motor at full load).

- b. Measured Load in amperes on each phase at full speed.
- 2. For load tests for each pump/blower/ process equipment motor:
 - a. Note the operating conditions at the time of the test.
 - b. Note the suction and discharge conditions (pressure, water level, temperature, humidity, where such conditions affect load).

3.9 DEMONSTRATION

- A. Demonstrate equipment in accordance with Section 26 05 01 .

END OF SECTION

SECTION 26 43 13

SURGE PROTECTIVE DEVICES

PART 1 — GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This section includes Surge Protective Device (SPD) equipment having the electrical characteristics, ratings and modifications as specified herein and as shown on the Contract Plans. To maximize performance and reliability, the AC surge protection shall be integrated into electrical distribution equipment such as switchboards, panelboards and/or motor control centers.
- B. Related Sections include the following:
 - 1. Section 26 05 02 for materials and installation.
 - 2. Section 26 24 13 for switchboards containing SPDs.
 - 3. Section 26 24 16 for panelboards containing SPDs.

1.3 REFERENCES

- A. SPD units and all components shall be designed, manufactured and tested in accordance with the latest applicable UL Listed standards (UL 1449, 3rd Edition), UL 1283.

1.4 SUBMITTALS

- A. General: Submit each item in this Article as described in Section 26 05 01 and Division 1 Specification Sections.
- B. Product Data: For surge protective devices and accessories specified in this Section. This includes, but is not limited to:
 - 1. Specification sheets (cut sheets) of all proposed equipment (indicate the exact devices that are to be supplied).
 - 2. Verification that the SPD complies with the required UL 1449 3rd Edition.
 - 3. Actual let through voltage test data in the form of oscillograph results for the ANSI/IEEE C62.41 Category C3 & C1 (combination wave) and B3 (ring wave) tested in accordance with ANSI/IEEE C62.45.
 - 4. Spectrum analysis of each unit based on MIL-STD-220A test procedures between 50 kHz and 200 kHz verifying the devices noise attenuation equals or exceeds 50 dB at 100 kHz.
 - 5. Test report in compliance with NEMA LS1 from a recognized independent testing laboratory verifying the suppressor components can survive published surge current rating on both a per mode and per

phase basis using the IEEE C62.41, 8 x 20 microsecond current wave.
Note that test data on individual module is not accepted.

- C. Interconnecting and wiring diagrams specific to this project.
- D. Operations and Maintenance Manual: Shall include the following:
 - 1. Maintenance Data (as specified in Division 1)
 - 2. Interconnecting and Wiring Diagrams
 - 3. Initial settings and parameters
 - 4. Product Data

1.5 QUALITY ASSURANCE

- A. Refer to Section 26 05 01 Basic Electrical Requirements 1.7 Quality Assurance.
- B. Comply with UL 1449, "Standard for Surge Protective Devices".

1.6 QUALIFICATIONS

- A. The manufacturer must have a 24-hour response capability with nationwide field engineering personnel. The field service organization must have fully accredited, Power System Engineers located across the North America who are capable of performing complete grounding, Power Quality analysis, and coordination studies. Factory trained SPD sales personnel do not qualify as Power System Engineers.
- B. The manufacturer of the surge protective equipment shall be the same manufacturer as the manufacturer of the low voltage distribution equipment in which the SPD units are installed.
- C. The following minimum mounting and installation guidelines shall be met, unless specifically modified by the above referenced standards.
 - 1. The equipment manufacturer shall certify that the equipment can withstand, that is, function following the seismic event, including both vertical and lateral required response spectra as specified in above codes.
 - 2. The equipment manufacturer shall document the requirements necessary for proper seismic mounting of the equipment. Seismic qualification shall be considered achieved when the capability of the equipment, meets or exceeds the specified response spectra.
 - 3. If integrated into a switchboard, panelboard or MCC, the seismic qualification of the enclosing equipment shall not be reduced because of the integration.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Equipment shall be handled and stored in accordance with manufacturer's instructions. One (1) copy of manufacturer's instructions shall be included with the equipment at time of shipment.

1.8 OPERATION AND MAINTENANCE MANUALS

- A. Equipment operation and maintenance manuals shall be provided with each assembly shipped, and shall include instruction leaflets and instruction bulletins for the complete assembly and each major component.

PART 2 — PRODUCTS

2.1 MANUFACTURERS

- A. General Electric Co., Electrical Distribution & Control Div.
- B. Siemens Energy & Automation
- C. Square D / Schneider Electric
- D. Cutler Hammer/Eaton

2.2 VOLTAGE SURGE SUPPRESSION – GENERAL

- A. Electrical Requirements
 - 1. Unit Operating Voltage – Refer to the Plans for operating voltage and unit configuration.
 - 2. Maximum Continuous Operating Voltage (MCOV) – The MCOV shall be greater than 115% of the nominal system operating voltage.
 - 3. The suppression system Surge Protection shall incorporate a hybrid designed Metal-Oxide Varistors (MOV) surge suppressor for the service entrance and other distribution level. The system shall not utilize silicon avalanche diodes, selenium cell, air gaps or other components that may crowbar the system voltage leading to system upset or create any environmental hazards.
 - 4. Protection Modes – For a wye configured system, the device must have directly connected suppression elements between line-neutral (L-N), line-ground (L-G), and neutral-ground (N-G). For a delta-configured system, the device must have suppression elements between line to line (L-L) and line to ground (L-G).
 - 5. UL 1449 3rd Edition Suppressed Voltage Rating (SVR) – The maximum UL 1449 3rd Edition SVR for the device must not exceed the following:

Modes	208Y/120	480Y/277
L-N; L-G; N-G	400V	800V
L-L	800V	1800V

- 6. ANSI/IEEE Cat. C3 Let Through Voltage – The let through voltage based on IEEE C62.41 and C62.45 recommended procedures for Category C3 surges (20 kV, 10 kA) shall be less than:

Mode	208Y/120	480Y/277
L-N	560V	960V

7. ANSI/IEEE Cat. B3 Let Through Voltage – Let through voltage based on IEEE C62.41 and C62.45 recommended procedures for the ANSI/IEEE Cat. B3 ringwave (6 kV, 500 amps) shall be less than:

Mode	208Y/120	480Y/277
L-N	160V	165V

B. SPD Design

1. Electrical Noise Filter – Each unit shall include a high-performance EMI/RFI noise rejection filter. Noise attenuation for electric line noise shall be 50 dB at 100 kHz using the MIL-STD-220A insertion loss test method. Products not able to demonstrate noise attenuation of 50 dB at 100 kHz shall be rejected.
2. Extended Range Filter –The Surge Protective Device shall have a High Frequency Extended Range Tracking filter in each Line to Neutral mode with compliance to UL 1283 and NEMA LS1. The filter shall have published high frequency attenuation rating in the attenuation frequencies.

Attenuation Frequency	50k Hz	100 kHz	500 kHz	1 MHz	10 MHz	100 MHz
Insertion Loss (ratio)	40	316	316	89	200	79
Insertion Loss (dB)	32	50	50	39	46	38

3. Internal Connections – No plug-in component modules or printed circuit boards shall be used as surge current conductors. All internal components shall be hardwired with connections utilizing low impedance conductors and compression fittings.
4. Standard Monitoring Diagnostics – Each SPD shall provide integral monitoring options:
 - a. Each unit shall provide a solid-state indicator light for each phase. The indicator light shall indicate which phase(s) have been damaged.
 - b. Remote Status Monitor – The SPD must include form C dry contacts (one NO and one NC) for remote annunciation of unit status. The remote alarm shall change state if any of the three phases detect a fault condition.
 - c. Event Counter – The SPD shall be equipped with an LCD display system designed to indicate to the user how many surges, sags, swells and outages have occurred at the location. The event counter triggers each time under each respective categories after

- significant event occurs. A reset pushbutton shall also be standard allowing all counters to be zeroed.
- d. Push to Test – The SPD shall be equipped with push-to-test feature is designed to provide users with real time testing of the suppressor’s monitoring and diagnostic system. By depressing the test button, the diagnostic system initiates a self test procedure. If the system is fully operational, the self test will activate all indicator lights.
5. Overcurrent Protection Fusing: In order to isolate the SPD under any fault condition, the manufacturer shall provide:
 - a. Individual Fusing: MOV’s shall be individually fused via Copper Fuse Trace. The Copper Fuse shall allow protection during high surge (kA) events.
 - b. Thermal Protection: MOV’s shall be equipped with Thermal Fuse Spring (TFS) Technology which allows disconnection of the suppression component at the overheated stage common during temporary over voltage condition. For small fault currents between 100mA to 30Amp, or if the occurrence is over a longer period of time, the TFS will disconnect first.
 - c. All overcurrent protection components shall be tested in compliance with UL 1449-Limited Current Test and AIC rating test.
- C. Minimum Repetitive Surge Current Capability as per ANSI/IEEE C62.41 and ANSI/IEEE C62.45 – 1992
1. The suppression filter system shall be repetitive surge tested in every mode utilizing a 1.2 x 50µsec, 20kV open circuit voltage. 8 x 20µsec, 10kA short circuit current Category C3 bi-wave at one minute intervals without suffering either performance degradation or more than 10% deviation of clamping voltage at a specified surge current. The minimum repetitive surge current capability as per ANSI/IEEE C62.41 and ANSI/IEEE C62.45 – 1992 shall be:
 - a. Service Entrance: 12000 impulse per mode.
 - b. Distribution Panelboard: 10000 impulse per mode.
 - c. Branch Location Panelboard: 9000 impulse per mode.

2.3 SYSTEM APPLICATION

- A. Surge Current Capacity – The minimum total surge current 8 x 20 microsecond waveform that the device is capable of withstanding shall be as shown in the following table:

Minimum total surge current and withstand Capability with compliance to ANSI/IEEE C62.41 AND NEMA LS1			
Application	Per Phase	Per Mode	Surge Withstand Capabilities ANSI/IEEE C3 Wave (10 kA)
Service Entrance Locations (Switchboards, Switchgear, MCC Main Entrance)	240 kA	120 kA	12000
High Exposure Roof Top Locations (Distribution Panelboards)	160 kA	80 kA	10000
Branch Locations (Panelboards, MCCs, Busway)	120 kA	60 kA	9000

- B. Switchgear, Switchboard, MCC and Panelboard Requirements
1. The SPD application covered under this section is for switchgear, switchboard, MCC and panelboard locations. Service entrance located SPD shall be tested and suitable for ANSI/IEEE C62.41 Category C3 environments.
 2. The SPD shall be of the same manufacturer as the switchboard, MCC or panelboard.
 3. The SPD shall be factory installed inside the switchboard, MCC and panelboard at the assembly point by the original equipment manufacturer.
 4. Locate Type II SPD on load side of main disconnect device, as close as possible to the phase conductors and ground/neutral bar.
 5. Provide a disconnect for type II SPDs. The disconnect shall be directly integrated to the SPD and assembly bus using bolted bus bar connections.
 6. The SPD shall be integral to switchboard, MCC and panelboards as factory standardized design.
 7. All monitoring diagnostics features shall be visible from the front of the equipment.

2.4 ENCLOSURES

- A. All enclosed equipment shall have NEMA 1 general purpose enclosures, unless otherwise noted on the Plans or in Section 26 05 02 .

PART 3 — EXECUTION

3.1 FACTORY TESTING

- A. Standard factory tests shall be performed on the equipment under this section. All tests shall be in accordance with the latest version of NEMA and UL standards.

3.2 INSTALLATION

- A. The Contractors shall install all equipment per the manufacturer's recommendations and the Plans.

3.3 WARRANTY

- A. The manufacturer shall provide a full five (5) year warranty from the date of shipment against any SPD part failure when installed in compliance with manufacturer's written instructions and any applicable national or local code.

END OF SECTION

SECTION 40 63 43

PROGRAMMABLE LOGIC CONTROLLERS

PART 1 — GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Programmable logic controller (PLC) control system(s), including:
 - a. Hardware, installation, field testing, and training.
- B. Related Sections include the following:
 - 1. Section 40 67 16 for control panels housing PLC equipment.
- C. PLC Programming will be provided by others.

1.3 REFERENCES

- A. Referenced Standards:
 - 1. National Electrical Manufacturers Association (NEMA):
 - a. ICS 1, General Standards for Industrial Control and Systems.
 - b. ICS 1.1, Safety Guidelines for the Application, Installation and Maintenance of Solid State Control.
 - c. ICS 4, Terminal Blocks for Industrial Use.
 - d. ICS 6, Enclosures for Industrial Controls and Systems.
 - e. Publication No.250, Enclosures for Electrical Equipment (1000 V maximum).
 - 2. National Fire Protection Association (NFPA):
 - a. National Electric Code (NEC).

1.4 SYSTEM DESCRIPTION

- A. Design Requirements
 - 1. The system includes racks, central processing units (CPUs), input/output (I/O) modules, communication modules, power supplies, and associated accessory items to provide a complete and functional control system.
- B. The PLCs will function to monitor and control site operation and communicate with other locations via Ethernet or a serial spread spectrum radio link.
- C. Performance Requirements

1. The installed system performs the functional and operational algorithms required for control of the process.

1.5 SUBMITTALS

- A. General: Submit each item in this Article as described in Section 26 05 01 and Division 1 Specification Sections.
- B. Product Data
 1. Manufacturer's data sheets for each hardware component including specific model numbers for each device, and size of memory provided in each CPU.
 2. Manufacturer's installation manual, operation and maintenance manual(s) for each component and/or device.
- C. Shop Drawings:
 1. Drawings
 - a. See Section 40 67 16 for requirements.
 2. Schedule of system I/O including the following data:
 - a. I/O point, with name, tag number, and indication of type and the characteristics of the I/O signal.
 3. Listing of spare parts provided with the system.
- D. Operation and Maintenance Manuals:
 1. See Division 01 Specifications.
 2. Provide specific information including:
 - a. Manufacturer's published operation and maintenance manual, and troubleshooting guide.
 - b. Information for obtaining assistance and troubleshooting, parts ordering information, and field service personnel requests.
 3. Include final system drawings, and final I/O lists.
 4. Include testing reports. (see Section 3.1 for further information)

1.6 QUALITY ASSURANCE

- A. Refer to Section 26 05 01 paragraph 1.7.

PART 2 — PRODUCTS

2.1 MANUFACTURERS

- A. For compliance with the existing telemetry system, the PLC equipment is limited to:
 1. Allen–Bradley: CompactLogix family of controllers

2.2 MATERIALS

- A. Conform to NEMA ICS 1.1 for installation and application of the PLC system.
- B. The equipment consists of fully integrated microprocessor units specifically designed for operation in unconditioned audible noise and high vibration areas.
 - 1. Includes analog, digital, and communications interfaces for interface directly with ISA or other industry standard transducers, actuators, and communications equipment without the need for intervening conditioning devices.
- C. Equipment operates in 32 to 140 Degrees F temperature and 0 to 95 percent relative humidity. Equipment does not require cooling fans or other heating or conditioning equipment to operate within this environmental range.
- D. Include the following minimum safety measures:
 - 1. Safe wiring:
 - a. Equipment failure mode is such that the loss of power or control signal to the equipment results in the equipment either shutting down or operating safely.
 - b. Stopping of equipment results from the de-energization of control circuits, rather than the energization of control circuits.
- E. Firmware
 - 1. All programmable components shall use the latest, stable firmware and software versions.

2.3 COMPONENTS

- A. Provide components as indicated.
- B. Provide all incidental materials and equipment required for a complete, functional, and successfully operating PLC system. These items include, but are not limited to:
 - 1. field potential distributors
 - 2. interconnecting cables
 - 3. terminating resistors (where necessary)
 - 4. other items ordinarily furnished as part of a complete system
- C. PLC System Central Processor Unit (CPU):
 - 1. PLC in Telemetry Control Panel
 - a. Rockwell Automation, model per drawing call outs.
- D. Input/output (I/O) Modules.
 - 1. Cards per drawing call outs.

2.4 ACCESSORIES

- A. Provide all accessories required, whether indicated or not, for a complete PLC control system to accomplish the requirements of the Plans and Specifications.

2.5 SOFTWARE

- A. Provide to the Owner the most recent versions of software required to program the PLC. Turn over to the Owner all licenses, software keys, activation codes, and any other digital usage rights identifier (including dongles, USB keys, etc.). The Owner shall retain these rights to the software in perpetuity.
 - 1. Arrange for the Owner to receive the software and any required licenses, software keys, activation codes, and any other digital usages rights identifiers within 60 days of notice to proceed.

2.6 EXTRA MATERIALS

- A. Provide the following extra materials:
 - 1. Provide one spare processor module for each type of processor module furnished.
 - 2. Provide one spare I/O card for every 10 cards, or fraction thereof, of each type of card installed.
 - 3. Provide one spare power supply for each type of power supply furnished.
 - 4. Provide one spare communications module for each type of module furnished.
 - 5. Provide one spare network adapter or specialty card.
 - 6. Provide one spare communication card.
 - 7. Provide two spare cables for each type of cable furnished.
 - 8. Provide a list of the manufacturer's recommended spares for maintenance purposes. Include in the list any special tools and test equipment necessary or recommended by the manufacturer for the maintenance of the complete system. Provide any recommended spares not supplied above along with the recommended special tools and test equipment.
 - 9. Provide one spare chassis for each type of chassis furnished.

PART 3 — EXECUTION

3.1 TESTING

- A. Shop test PLCs and Remote I/O units in the presence of the Owner prior to shipment to project site. Notify the Owner at least ten working days before testing. Testing shall be performed at the panel manufacturer's facility. The panel manufacturer shall conduct a rehearsal of the shop test prior the arrival

of the Owner and shall verbally certify that they believe there are no readily apparent obstacles to performance of the test. (In this case, some examples of readily apparent obstacles would be panel mounted equipment lacking power wiring or panel mounted equipment inadvertently wired to work under either primary or backup power, but not both.)

1. Provide a test plan at time of notification of testing. Coordinate the time of testing of the panels with the Construction Schedule.
2. Each assembled panel shall be meggered and tested to be free from grounds and shorts before the shop test.
3. Controllers, circuits and interlocks shall be rung out and tested to assure that they function correctly before the panel is shipped. Each device and control loop shall be tested and demonstrated to function properly in each mode (such as "hand", "local", "automatic"). Discrete input signals shall be tested in both the "on" and "off" state. Analog signals (4-20 milliamp, or similar type) shall each be tested at not less than three values (4.08 mA or 0.5%, 12 mA or 50%, and 19.92 mA or 99.5%). Test results shall be documented. Test discrete outputs by forcing the output on and off via the programming software. Measure the resistance (for relay outputs) or voltage (for active outputs) between the output terminals. Document proper operation of each output.
4. Test analog inputs by applying voltage or current to the input at not less than three values, including at or just above minimum range, at or just below maximum range, and midrange. Document actual register values for each applied input value at each input.
5. Provide signal generators, multimeters, and other test equipment as required to verify proper operation of the assembled panel. Simulate input signals, both discrete and analog, to verify operation of control and monitoring circuits.
6. Demonstrate that:
 - a. The PLC is fully operational. The Owner shall provide the PLC testing program within one week of notification of the shop test. The Contractor shall load the PLC programs into the respective PLC and demonstrate proper operation of the PLC. In no case shall testing be performed without an operating program functioning in the unit under test. Test discrete inputs by shorting across the input terminals. Document that each input performs properly.
 - b. Each I/O module is recognized by the base unit and is fully functional.
 - c. Communications ports on the base unit are fully functional.
7. Correct, replace, or repair panel wiring, and/or components until testing demonstrates proper operation. Do not ship control panels to the site until testing has demonstrated satisfactory operation of the PLC.

8. Provide updated and complete 'as shipped' drawings at the time of final testing. The Owner shall review the drawings against the panel construction at the time of final testing. Drawings which do not reflect the actual construction of the panel will need to be revised and reviewed again by the Owner against the actual construction prior to shipment of the panel to the job site. 'As shipped' drawings which require revisions shall be submitted to the Owner for review at testing notification, prior to the actual field review of these drawings against the panel construction. This process of revision and review of the drawings will be repeated as necessary to produce drawings which reflect the actual construction of the panel at the time of shipment. Do not ship control panels to the site until the 'as-shipped' drawings are updated, complete, and reflect the actual 'as-shipped' status of the panel.
9. Attention of the Contractor is directed to the fact that more than one shop test and/or review of the panel wiring/drawings may be required. If the first shop test is not satisfactory, or results in the need to make revisions to the panel and/or 'as-shipped' drawings that cannot be affected during the course of the shop test, then a repeat shop test and/or review of the drawings against the construction will be required. The presence of the Owner at up to two shop tests/reviews will be without cost to the Contractor. If more than two shop tests/reviews are required, then the Contractor shall be required to reimburse the Owner for the Owner's costs for the third and each subsequent shop test/review.
10. Submit the results of the test in a formal document within two weeks following satisfactory performance of the test. The test results shall document all problems encountered in running the test, corrective action taken, and the detailed results of each phase of the test
11. After each control panel has been installed at the jobsite:
 - a. Conduct a field test of the panel. Testing shall be conducted by physically actuating signaling devices (where possible), installing temporary jumpers, or artificially imposing signals on the field wiring. The purpose of the test is to establish proper operation of the field devices, the integrity of the field wiring, and proper connection of field devices to the panel. The Contractor shall coordinate with the Owner to provide for as complete a testing of the control and monitoring systems as is practical prior to placing the panel online for actual control and/or monitoring of the process. The Contractor shall make corrections or repairs to the wiring and/or devices as necessary to provide proper operation of the system. If testing indicates that field devices require modifications to connectors or contact action, the Contractor

shall make the wiring or connection modifications as necessary to coordinate with the PLC program and contract documentation.

- b. If testing indicates that the equipment functions properly but that changes to the PLC program are required, the Owner will revise the program(s) and provide the new program(s) for installation in the PLC. The Contractor shall be prepared to install up to 3 revised programs into each PLC during startup/commissioning without additional cost to the Owner.
- c. Submit the results of all tests in a formal document within two weeks following satisfactory performance of the test. The test results shall document all problems encountered in running the test, corrective action taken, and the detailed results of each phase of the test.

3.2 CONFIGURATION

- A. Configuration of the PLC
 - 1. Configure the IP address and network setting to allow device to be used on network. This may include configuring device in a different VLAN range than the default. IP Addresses shall be furnished by the Owner's programmer during submittal review.

3.3 INSTALLATION

- A. Install PLC control system in accordance with manufacturer's written instructions.

END OF SECTION

SECTION 40 67 16

CONTROL PANELS

PART 1 — GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Control panels (whether provided under Division 26, or provided, or specified to be provided, with equipment specified under other Divisions).
- B. Section Includes:
 - 1. Control panels specified under this Section include:
 - a. Butternut Well Telemetry Panel (BWTP)
- C. Related Sections: The following Sections contain requirements that relate to this Section
 - 1. Section 40 63 43 for PLC equipment located in control panels.

1.3 REFERENCES

- A. Referenced Standards:
 - 1. National Electrical Manufacturers Association (NEMA):
 - a. ICS 1, General Standards for Industrial Control and Systems.
 - b. ICS 4, Terminal Blocks for Industrial Use.
 - c. ICS 6, Enclosures for Industrial Controls and Systems.
 - d. Publication No.250, Enclosures for Electrical Equipment (1000 V maximum).
 - 2. National Fire Protection Association (NFPA):
 - a. National Electric Code (NEC).
 - b. Standard for Electrical Safety in the Workplace
 - 3. Joint Industrial Council
 - a. JIC-EMP-1.
 - 4. International Society of Automation

1.4 SYSTEM DESCRIPTION

- A. Control Panels

1. The system includes control panels for control and/or monitoring of the process equipment. Control panels shall meet the requirements of this Section.
- B. Configuration of supplied components
 1. Devices connected in the panel shall be configured to communicate.

1.5

SUBMITTALS

- A. General: Submit each item in this Article as described in Section 16010 and Division 1 Specification Sections.
 1. The Owner shall supply the process control portions of the PLC program based upon the configurations provided by the Contractor.
 2. Provide the configuration, as required, to allow communications to fieldbus devices using digital signaling. Field devices include digital bus enabled instruments and variable frequency drives.
- B. Product Data: For each type of system components specified in the section. This includes, but is not limited to:
 1. Specification sheets (cut sheets) of all proposed equipment (indicate the exact devices that are to be supplied). Including manufacturer name, catalog descriptions, ratings, wiring and piping diagrams, dimensional drawings, anchoring details, installation instruction, and test results.
- C. Shop Drawings:
 1. Shop Drawings shall include, but not be limited to, the following:
 - a. Panel Layout Drawings:
 - 1) Shall be dimensioned and to-scale.
 - 2) Shall include nameplate text.
 - 3) Shall indicate conduit and wiring access locations.
Enclosures which will not accept the quantities of conduits as shown on the Contract Plans will be rejected.
 - b. Materials of construction.
 - c. Elementary wiring diagrams and terminal block drawings, differentiating between panel and field wiring.
 - d. Bill of Materials including the reference name or number, quantity, complete English language description, manufacturer, model number, local supplier and wiring or piping reference.
 - e. Loop diagrams with all components connected per ISA standards.
 - f. The terminal designation (designations for terminals may be chosen by the panel builder unless noted otherwise on contract drawings) shall be shown on the elementary wiring diagrams, analog loop diagrams, and terminal block drawings.

- D. Testing Materials and Documentation:
1. Provide configuration in electronic file format suitable for directly loading into PLC, Variable Frequency Drive, Network Switch, etc. (see Section 3.5 for further information) at least ten days prior to desired Owner witnessed test date.
 - a. The configuration shall include all of the devices connected through field busses, including serial and Ethernet connections.
 - 1) Devices which receive commands from the PLC (for example, VFDs, valve actuators, motor overload relays) shall each be configured with at least two PLC-to-device, "write" command registers and at least ten device-to-PLC, "read" feedback registers.
 - 2) Devices which do not receive commands from the PLC (for example, flow meter transmitters, pH transmitters, pressure transmitters, temperature transmitter, gas detector transmitters) shall each be configured with at least four device-to-PLC, "read" feedback registers. Unless otherwise noted, it is not necessary to provide two-way communications to those devices.
 2. Supply descriptions in native electronic file format.
 - a. The native file format shall be suitable to directly load into the devices, such as Radio, Variable Frequency Drive, Network Switch, etc. without need for transcribing or other editing.
 - b. The native file format shall be able to be decoded using the manufacturer's configuration software suite to a human readable format. It is acceptable to send a PDF or similar file in addition to the native file for annotations or other notes.
 3. Provide register layouts detailing where each device stores data relevant to the protocol shown. For example, since Ethernet/IP is the field bus protocol, show the Ethernet/IP symbolic register names, units, range, etc. for each device.
 4. Provide the sequence of testing plan, including the steps noted as required and the testing steps which are a part of the control panel supplier's standard procedure.
- E. Operation and Maintenance Manual: At the completion of the project, the operating and maintenance information shall be updated to reflect any changes during the course of construction. The Operation and Maintenance Manual shall include the following:
1. Component Maintenance and Repair Manuals (specified in Division 1).
 2. Spare Parts List
 3. Product Data

4. Record Drawings: At the completion of the project, the drawings shall be updated to reflect any changes during the course of construction.

1.6

QUALITY ASSURANCE

- A. Refer to Section 26 05 01 paragraph 1.7.
- B. Control panels and work supplied under this Section shall be provided by a single manufacturer, except those provided with equipment specified under other Divisions. Control panel manufacturer shall be one of the following:
 1. Total Energy Management (Richland)
 2. TSI (Lynnwood)
 3. Quality Controls Corporation (Lynnwood)
 4. Titan Electric (Yakima)
 5. VECA Electric & Technologies (Bellingham)
- C. Comply with UL 508 "Standard for Industrial Control Equipment".
- D. Provide control panels bearing the label of a recognized testing laboratory, or otherwise acceptable to the State of Washington Department of Labor and Industries.
- E. Submit and obtain approval of shop drawings and make approved shop drawings available prior to placement of conduits in slabs to ensure placement is coordinated with panel access locations.
- F. Shop testing of the panel is required. Refer to the "Testing" section below for shop test information.
- G. Product Selection for Restricted Space: Space for installation of control panels is limited. The Plans indicate typical physical sizes or dimensions for control panels, including clearances between control panels and adjacent surfaces and items. Control panels with larger dimensions may be acceptable, but it is the responsibility of the Contractor to submit detailed drawings showing the required revisions to the structural, process, mechanical, electrical, and other plans to accommodate centers with larger dimensions in order to obtain approval before a change is accepted. The Supplier/Contractor shall coordinate the size of the control panels with the available space and shall verify that the proposed control panels are capable of being installed in the available space prior to making a submittal. Control panels of dimensions larger than the available space shall not be submitted. The decision of the Owner as to the acceptability of control panels with larger dimensions than as shown on the Plans will be final. If the larger equipment is deemed acceptable, it is the Contractor's responsibility to provide any required revisions to the structural, process, mechanical, electrical, and other designs without additional cost to the Owner.
- H. Submit and obtain approval of shop drawings and make approved shop drawings available prior to placement of conduits in slabs to ensure

placement is coordinated with control panel access locations from approved shop drawings. Do not place conduits in slabs prior to the receipt of approved shop drawings. Any relocation of conduits that are required because of incorrectly placed conduits prior to receipt of approved shop drawings shall be completed at the Contractor's expense.

1.7 STORAGE AND HANDLING

- A. Store equipment per requirements of Section 26 05 02 paragraph 1.10 and as follows:
 - 1. After completion of shop assembly and testing, enclose panels in heavy-duty polyethylene envelopes or secured sheeting to provide complete protection from dust and moisture. Place dehumidifiers inside the polyethylene covering.
 - 2. Skid-mount the equipment for final transport. Show shipping weight on shipping tags, together with instructions for unloading, transporting, storing, and handling on job site.
 - 3. Remove equipment protection only after equipment is safe from hazards such as dirt and moisture and damage from construction operations. Field repair of material or equipment made defective by improper storage or site construction damage by other trades is not acceptable.

PART 2 — PRODUCTS

2.1 MATERIALS

- A. Control panel enclosures shall be factory UL labeled enclosures fabricated into a rigid, self-supporting structure unless otherwise noted. Panels shall be of NEMA type construction as required for the location indicated on the Plans. Free standing panels shall be provided with channel sills where shown on the Plans. Enclosure conduit entry locations shall be able to accept the quantities and sizes of conduits as shown on the Contract Plans.
 - 1. Welded construction
 - 2. Completely enclosed, self-supporting, and gasketed dust-tight.
 - 3. Seams and corners welded and ground smooth.
 - 4. Provide full length piano hinges rated for 1.5 times the weight of the door and door mounted instruments.
 - 5. Furnish doors with keyed alike locking handles and three-point catch.
 - 6. Provide each panel with lifting eyebolts. Furnish stainless steel base channels.
 - 7. Provide slotted bolt holes in the base, 1 1/2 inches long for field adjustment.
- B. Hinges: Stainless steel.
- C. Nameplates: Phenolic.

2.2

COMPONENTS

A. Fuses

1. Control power fuses are FRN for ratings above ten amperes and FNQ for ten amperes and below. FRN fuses are mounted in phenolic blocks with a fuse puller mounted adjacent to them. FNQ fuses are mounted in a Buss CHM1I modular fuse holder with indicator light. Label all fuse holders with fuse identification number and fuse size and type. Provide three spare fuses of each type and size in each panel. Provide box mounted on panel interior marked "SPARE FUSES" to hold the spares.
2. Control power fuses connected to non-signaling circuits (for example, solenoids, actuators, relay coils, network switches, PLC power supplies) less than 10 amperes and less than 250 volts shall be 13/32" x 1-1/2" (10.3 x 38.1 mm) midget or CC type, dual element time delay, supplementary protection fuses. Cooper-Bussmann LP-CC dual element series or Littlefuse CCMR series unless otherwise noted or required by Manufacturer of connected equipment.
Provide finger-safe modular, lever style fuse holder with blown fuse indicators, Allen-Bradley 1492-FB, Cooper Bussman EH series or equal. Plug-in fuse holders mounted to terminal blocks or lever style fuse holders are not acceptable.
3. Signal power for reference voltage (for example, PLC Input Signals, VFD control circuits, and similar) shall be fast acting fuses 1/4" x 1-1/4" AGC or 13/32" x 1-1/2" Midget MCL or CC type fuses. The 1/4" x 1-1/4" AGC type fuses shall be rated at a minimum of 1 amperes and meet MIL-STD-202, Method 207 (Hi Shock) standard. Fuses shall be manufactured by Cooper Bussmann or Littlefuse.
Provide finger-safe terminal block, lever style fuse holder with blown fuse indicators, or Allen-Bradley 1492-H4 or-H5 series.
4. 5mm x 20mm fuses (for example, Cooper Bussmann GAS) are not acceptable for any application.
5. Provide three spare fuses of each type and size in each panel. Provide box secured to panel door interior for signal power fuses marked "SPARE FUSES".
Provide specialty fuse holder for fuses, Cooper Bussmann 5TPM or similar for control power fuses. Mount to panel door interior. Label above each position the ampere rating of the fuse.

B. Pilot devices (control units and stations): heavy duty, oil-tight type per NEMA ICS-1; pilot lights push-to-test universal voltage, LED type.

1. Allen-Bradley
2. Cutler-Hammer
3. General Electric
4. Square D

C. Relays

1. Control relays for switching 120 VAC power circuits or motor starting circuits shall be electro-mechanical machine tool, heavy-duty type per NEMA ICS Standard with 120 VAC coils and a minimum of SPDT contacts rated B-300 by NEMA standards: Allen-Bradley 700 N, General Electric CR 120, Square D Company Class 8501, Type G or equal, Eaton. Equip relays with surge suppressers. IEC rated relays are not permitted. Provide SPDT, DPDT, or 4PDT sets of contacts as required to install circuits as shown on drawings.
2. Control relays for logic control circuits shall be permitted to be mini-ice cube style type relays. Coils shall be rated 120 VAC or 24 VDC (as required). Relays shall provide minimum SPDT contacts which shall be rated B300 by NEMA standards. The coil terminals and contact terminals shall be on opposite sides of the relay base. Relays shall have indicator flags, screw clamp terminals and surge suppressors or Zener diodes across the coil. Provide Allen-Bradley 700-HK series, or equal. Provide SPDT, DPDT, or 4PDT sets of contacts as required to install circuits as shown on drawings.
3. Time delay relays shall be as called out on drawings.
 - a. If a specific relay is not called out on drawings, then time delay relays shall be electronic type Allen Bradley 700 Series or equal.
4. Intrinsically safe relays shall be fixed sensitivity type U/L approved for use with a remote pilot device (dry contact) located in Class I, Division 1, Group C and D area. ISR units shall be as manufactured by GEMS, Stahl, or equal.
5. Relay bases shall have all terminals for relay coils located on opposite side of the base as all terminals for contacts.

D. Terminals:

1. Provide DIN rail mounted terminal blocks with screw clamp connections. The terminal blocks shall be Entrelec MA 2.5/5 or equal.
2. Provide all accessories such as jumper bars, end stops, and end sections needed for a complete and functional system of terminal blocks.
3. 4-20 mA analog signals shall utilize a "knife-disconnect" terminal blocks on the signal terminal connected to the PLC input card's positive input. The terminal blocks shall be Entrelec MA2.5/5.SNB or equal.

E. Uninterruptible Power Supplies (UPS) shall be as called out per drawing.

F. Conductors:

1. Class C stranded copper conductors of SIS or MTW insulation (for 120 VAC or 24 VDC power or discrete signal circuits).

2. Stranded #18 AWG copper conductor with thermoplastic insulation, foil or stranded wire shielding, and overall gray PVC jacket (for analog instrumentation circuits).
- G. Wireways
1. shall be a minimum of one inch wide and three inches deep
 2. shall have removable snap on covers and perforated walls for easy wire entrance
 3. shall be constructed of non-metallic materials with a voltage insulation in excess of the maximum voltage carried therein.
 4. shall be Panduit Type G, Panel Channel, or equal.
- H. Rack Mount Angles
1. Provide rack mount angles in each communications enclosure for mounting of 19" communications equipment. Hoffman A90RP24F5, or equal.
- I. Surge Protective Device shall be DIN rail mountable without a separate kit, shall have a listed surge current capacity of 45,000 amps, provide transient protection in all modes for a 20 ampere, 120 volt alternating current power circuit, and provide a form C relay output to signal surge arrestor problem. Surge Protective Device as called out per drawing Provide Sola/HEVI-Duty STFE Elite DIN Rail STFE200-10N or equal.
- J. 110VAC Receptacle (for UPS) shall have duplex NEMA 5-15R power receptacle and be DIN rail mountable without a separate kit. Provide Weidmuller DRAC DP 15 or equal.
- K. Miniature Circuit Breakers. Provide Rockwell Automation 1492-SPM or equal.
- L. Network Switch. Provide at least as many 10/100/1000 base TX ports with as are shown on Control Panel EWDs. Provide DIN Rail mounting adapter.
1. Provide at least 3 years of warrant with 8x5 Next Business Day response for each network switch provided.
 2. If any part, module, or service specified is listed as end of life by switch manufacturer, provide manufacturer suggested replacement product identified as current lifecycle. End of life shall mean any part after the announced end of product date for that part.
 3. Network switches shall be as called out on drawings.

2.3

ACCESSORIES

- A. Panel Nameplates and Identification:
1. Identify each item on the control panel with rectangular nameplates.
 2. Provide nameplates of rigid phenolic plastic laminate with engraved lettering or engraved metal plate with filled lettering. Use black background with white lettering.

3. Minimum letter height is ½ inch for instrument description and ¼ inch height for instrument tag number.
 4. Provide each panel with a 2" by 10" (minimum) main nameplate with 1 inch high lettering with panel identification.
 5. Abbreviations are not permitted unless approved by the Owner or specifically shown on the nameplates, schedules, or drawings.
 6. Install nameplates plumb and parallel to the lines of doors or structure to which they are attached. Attach to the sheet metal structure by a thin coat of adhesive and sheet metal screws. Make adhesive and screw application in a manner to avoid buckling or distorting nameplates due to use of excessive adhesive or over tightening of screws.
- B. Provide SELV or NEC Class 2 power supplies for devices shown mounted within or connected to the Control Panel for devices specified without a NRTL listing.

PART 3 — EXECUTION

3.1 FABRICATION

- A. General:
1. Control panels shall be factory or shop fabricated units completely assembled, wired and tested before shipment to the job site.
 2. Panel construction, in general, shall meet JIC EMP-1 standards and applicable NEMA and IEEE standards.
 3. The panels shall be constructed in accordance with electrical testing laboratory standards and shall be so labeled (the standards of a recognized electrical testing laboratory).
 4. Size panels for the enclosed equipment and the available space for mounting of the panel, but not smaller than as shown on the Contract Documents.
 5. Panels shall be descaled, cleaned and primed in preparation for painting. Painting shall consist of one coat of flat white enamel in the interior and two coats of hard finish exterior enamel, gray in color for the exterior. Paint shall be suitable for field touch-up. Spare paint (one quart) shall be provided for touch-up purposes.
- B. Component Installation.
1. Minimize welding to panel fronts and avoid distortion of panel metal.
 2. Reinforce around areas of the enclosure weakened by openings or mounting of heavy equipment/components.
 3. Accurately and cleanly cut or nibble cut-outs, and finish free of sharp edges or burrs. Make cutouts plumb, level, and on-line vertically or horizontally within 1/32 of an inch where components are in rows or columns.

4. Provide minimum 1-5/8 inches spacing between horizontal rows of externally mounted components; 1-1/2 inches minimum between vertical columns of components.
5. The distance from the bottom row of components to the floor shall be not less than 36 inches, unless specifically shown as less. In general, all indicating lights, pushbuttons, and similar control devices, shall be mounted in accordance with the sequence of operation from left to right and top to bottom.
6. Provide minimum 1/4 inch spacing between components mounted on the panel sub-plate, Provide minimum spacing between the component and the wire duct of 1-1/2 inches above and one inch below. Provide additional space if required to access terminals, adjusting screws, and similar items.
7. Components mounted in the interior shall be fastened to an interior subpanel using machine screws plus adhesive to insure vibration-free attachment.
8. Interior component mounting and wiring shall be grouped as much as possible by function and then by component type. Interiors shall be so arranged that control relays, terminal blocks, fuses, etc., can be replaced or added without disturbing adjacent components.

C. Panel Wiring:

1. Color coding of insulation shall be black for power, white for 120V neutrals, red for AC controls which derive their source from within the panel, yellow for AC controls which derive their source external to the panel, blue for low voltage DC controls, green for grounding conductors.
2. Shop or factory wire panels to identified terminal blocks equipped with screw type lugs.
3. Raceways for panel wiring.
 - a. Size raceways per the requirements of NEC.
 - b. Provide panel wireways between each row of components, and adjacent to each terminal strip.
4. Provide wire bending space per NEMA ICS 6.
5. Label wiring within the panel with wire numbers and run in wiring duct neatly tied and bundled with tie wraps or similar materials. Identify each wire termination, including all jumpers, with permanently marked, heat shrink type wire markers. Arrange wire labels to permit reading of identification when installed. Apply heat per manufacturer's instructions to create a tight fit of the label to the wire.
6. Connect wiring internal to the panel to the "inside" of the terminal strip. Connect field wiring to the "outside" of the terminal strip. Wires to enclosure door mounted components are considered as internal wires. Connect no more than two wires to any one control terminal point.

Provide terminal jumpers where more than two wires terminate at the same point.

7. Arrange wiring inside the panel to separate low voltage control signals of the milliamp, millivolt or other low energy type from inductive power circuits.
8. Connect grounds and shields of circuits which derive power internal to the panel to a panel common ground bus which shall be grounded by the electrical contractor in the field.
9. Physically separate signals entering controllers for amplification as control outputs from all line voltage wiring and shield with continuous foil shielding or enclose them in metal raceway.
10. Provide necessary power supplies for control equipment.
11. Termination requirements:
 - a. Terminate panel wiring on device or terminal block screw terminals using slip-on spade tongue insulated crimp (compression) terminators, slip-on stud insulated crimp (compression) terminators, or stripped and tinned conductor ends. Stranded conductors shall not be terminated bare to terminals or devices.
 - b. Provide terminal strips for the termination of panel wiring not directly connected to panel mounted devices.
 - c. Terminals shall facilitate wire sizes as follows:
 - 1) VAC applications: Wire size 12 AWG and smaller.
 - 2) Other: Wire size 14 AWG and smaller.
 - d. Label each I/O terminal to indicate tag number of the conductor and connected device. Locate terminals for termination of multiconductor shielded cables adjacent to each other to minimize lengths of unshielded conductor at the terminations.
 - e. Provide terminals for individual termination of each signal shield. Locate the terminal adjacent to the terminals for the signal conductors.
 - f. Provide 20 percent excess terminals for future expansion.
 - g. In general, mount terminal strips on the bottom horizontal edge of the sub-plate. Mount additional terminal strips, if required, on a thirty-degree angle bracket at the bottom of the sub-plate. Where terminal strips are mounted side-by-side, elevate one set of terminals 1-1/2 inches above the sub-plate to allow wire to pass underneath.
 - h. Provide a minimum of two inches between terminal strips and wireways or between terminal strips.
 - i. Shielded cables used for analog signals shall be terminated with not greater than 2 inch of conductor left outside the shield. This applies to field wires entering the panel for termination, and to

panel conductors. Conductor twist shall be maintained over the unshielded length to as close as possible to the point of termination. Where the overall jacket is cut back to expose the individual conductors, provide a heat shrink sleeve over the jacket, the signal, and the shield (drain) conductors. Insulate the shield (drain) conductor where not covered by the jacket or the sleeve. Where shield (drain) conductors are not terminated, cut the conductor even with the jacket so that it is covered by the sleeve to prevent inadvertent contact with other devices, terminals, or conductors in the panel.

3.2 SOURCE QUALITY CONTROL

- A. Control Panel Testing
 - 1. The entire assembled panel shall be meggered and tested to be free from grounds and shorts.
 - 2. Circuits and interlocks shall be rung out and tested to assure that they function correctly before the panel is shipped.
 - 3. Revise all drawings upon completion of the work to show "as shipped" condition of the panel.

3.3 INSTALLATION

- A. Install free-standing panels on concrete pads where shown on the Plans. Install with channel sills where shown on the Plans. Provide stainless steel shims to level units.
- B. Install wall or stanchion mounted panels level and plumb.
- C. Anchor panels rigidly in place with approved anchorage devices.

3.4 TESTING

- 1. See section 40 63 43 for testing requirements.

3.5 STARTUP

- 1. The Control Panel Fabricator shall provide a minimum of 10 man-days on site time for startup of the control system prior to, during and following the Contractor's installation and testing. On site time shall be coordinated with the Owner on site time during startup, but may include additional time when the Owner is not present.
- 2. Revise all drawings upon completion showing "as built" conditions including the labeling of field wiring connections.
 - a. Submit primary copy of these drawings for inclusion into the Operations and Maintenance Manual.

3.6

CLEANING

- A. On completion of installation, inspect interior and exterior of control panels. Vacuum interior and wipe clean all interior surfaces. Remove paint splatters and other spots, dirt, and debris. Touch up scratches and mars of finish to match original finish.

END OF SECTION