

**BID FOR
RECREATION GYM RESTROOM REMODEL
FEDERALLY FUNDED**

BID # 22/23-016

PWP # WA-2023-109

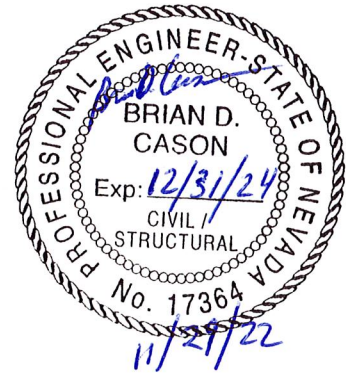
BIDS DUE NOT LATER THAN: 1:45 PM ON DECEMBER 22, 2022

PUBLIC BID OPENING: 2:00 PM ON DECEMBER 22, 2022

[NOTE: TIME BIDS ARE DUE IS DIFFERENT FROM BID OPENING TIME]



431 PRATER WAY
P.O. BOX 857
SPARKS, NV 89432-0857



Company Name: _____

**CITY OF SPARKS
NOTICE TO BIDDERS
RECREATION GYM RESTROOM REMODEL-FEDERALLY FUNDED
BID # 22/23-016 / PWP # WA-2023-109**

NOTICE IS HEREBY GIVEN that the City of Sparks, Nevada, will receive written sealed bids only, for the project listed above. Said bids must be in the hands of the Contracts and Risk Manager at 431 Prater Way, Sparks, Nevada, **NO LATER THAN 1:45 PM ON DECEMBER 22, 2022**. Bids postmarked prior to, but not received until after this deadline will not be accepted. Vendor bid response submittals may not be sent to the City of Sparks via the Internet/e-mail and will not be entertained for award by the City of Sparks. The right is reserved to reject any Bid/Proposal or to accept the Bid/Proposal which is deemed by the City of Sparks to be in the best interest of the City of Sparks. The City of Sparks reserves the right to waive any irregularities and/or informalities in the bid process.

All Bids are to be marked clearly on the outside. Due to hybrid schedules and staff reductions, in-person staff availability is limited. Bidders wishing to physically deliver their bids on the bid due date shall note that the Purchasing Office will receive bids in the lobby of City Hall beginning at 1PM on December 22nd. Bids are due no later than 1:45PM. Bids may also be delivered to the Purchasing Department physical dropbox/mailbox, also located in the lobby of City Hall.

Bids will be opened and publicly read at **2:00 PM ON DECEMBER 22, 2022** via Zoom video/audio conferencing. Meeting # 831 4082 5949. Meeting Passcode: 664933 with a direct link of:
<https://us02web.zoom.us/j/83140825949?pwd=dHN6UVlKa0U0OUdNakFhazdULzQ4Zz09>

PROJECT DESCRIPTION: Remodel of two (2) existing restrooms at the north end of the Recreation Gymnasium. The work includes ceiling demo, new ceiling, plumbing modifications, electrical modifications, mechanical modifications, partitions, painting, and flooring work, along with any other miscellaneous associated work activities necessary to complete the project

PRE-BID MEETING: There will be a **NON-MANDATORY** pre-bid meeting held at 10AM on December 6, 2022 at the job site: 98 Richards Way, Sparks NV 89431.

BONDING/LICENSING: A Bid Bond in the amount of 5% of bid amount is required. This bid bond will function as a penalty in the event the successful bidder fails to enter into a written contract with the City in accordance with the bid documents. Additionally, the City will be entitled to actual damages, if any. Prospective bidders will be required to have a current Contractor's License under the Nevada State Law for the type of work specified herein.

The work to be performed under this Contract shall be commenced by the successful Bidder after all executed Contract documents have been submitted, and after being notified to proceed by the City of Sparks.

Bid documents and specifications may be obtained from the City of Sparks website. Please visit <http://portal.cityofsparks.us/bids> to obtain complete bid documents. There is no cost to use the system or obtain plans, but registration at the site is required. It is the responsibility of all potential bidders/responders to monitor the Purchasing Division's website for any changing information prior to submitting their bid/proposal. The City of Sparks will not be responsible for the timeliness or completeness of information provided by any 3rd party bid listing or re-selling service. For further information, contact the Purchasing Division at dmarran@cityofsparks.us or at (775) 353-2273. The individual responsible for coordinating this bid is: Dan Marran, CPPO, C.P.M. – Contracts and Risk Manager

Reno Gazette Journal Legal Notices Section
Publish Date: November 30, 2022
Proof of publication required

Bidder's Checklist

Bidders are instructed to complete and return the following forms in order for their bids to be complete. Failure to return the following items may result in your bid being declared “non-responsive.”

1. _____ Bid Item Schedule
2. _____ Bidder Information Sheets
3. _____ Subcontractor Information Form (5% list due with bid submittal)
4. _____ Acknowledgement and Execution Form
5. _____ Certification Regarding Debarment
6. _____ Bid Bond
7. _____ Signed Bid Addenda (if applicable)
8. _____ Completed Federal Forms/Disclosures

**CITY OF SPARKS
RECREATION GYM RESTROOM REMODEL-FEDERALLY FUNDED
BID # 22/23-016
PWP #WA-2023-109**

PRICES must be valid for 90 calendar days after the bid opening.

COMPLETION of this project is expected **PURSUANT TO CONTRACT DOCUMENTS.**

BIDDER acknowledges receipt of _____ Addenda.

Bidder Name

(signature)

BID ITEM SCHEDULE:

BASE BID SCHEDULE					
Item No.	Quantity	Unit	Description	Unit Price	Total Price
1	1	LS	Remodel the existing restroom in the north end of the Recreation Gym building as shown in the plans and bid specifications, complete in place, per lump sum.	\$/LS	\$ _____
2	1	FA	Force Account	\$20,000.00	\$20,000.00
TOTAL BASE BID					\$ _____

(Written amount TOTAL BASE BID):

\$ _____

Bid Schedule Notes:

1. City of Sparks reserves the right and privilege to accept or reject any or all bids or parts thereof, based solely on the judgment of representatives of the City of Sparks.
2. See Bid Item Clarifications.
3. Total base bid shall include the total of items 1 and 2.
4. **SEE SECTION 20 OF THE SPECIAL PROVISIONS FOR ASBESTOS ABATEMENT.**

Bidder Information

COMPANY INFORMATION:

Company Name:
Contact Name:
Address:
City:
State / Zip Code:
Telephone Number including area code:
Fax Number including area code:
E-mail:

COMPANY BACKGROUND

- 1) Has your company ever failed to complete any contracts awarded to it? No ___ Yes ___ (If yes, please provide details.)

- 2) Has your company filed any arbitration request or law suits on contracts awarded within the last five years? No ___ Yes ___ (If yes, please provide details.)

- 3) Does your company now have any legal suits or arbitration claims pending or outstanding against it or any officers relating to the performance of a public contract? No ___ Yes ___ (If yes, please provide details.)

- 4) Does your company now employ any officers or principals who were with another firm when that company failed to complete a contract within the last five years? No ___ Yes ___ (If yes, please provide details.)

- 5) Has your company had a contract partially or completely terminated for default (cause) within the past five years? No ___ Yes ___ (If yes, please provide details.)

- 6) Has your company been found non-responsible on a government bid within the last five years? No ___ Yes ___ (If yes, please provide details.)

Bidder Information

CONTRACTOR LICENSE INFORMATION:

Nevada State Contractor's License Number (If Applicable):
License Classification(s):
Limitation(s) of License:
Date Issued:
Date of Expiration:
Name of Licensee:
City, State, Zip Code of Licensee:
Telephone Number of Licensee:

BUSINESS LICENSING INFORMATION All vendors doing business within the City of Sparks are required to obtain and maintain a current business license from the City of Sparks prior to commencement of work (Sparks Municipal Code Section 5.08.020A). Vendor(s) awarded a contract resulting from this bid shall be required to obtain a current business license if they do not already hold one.

City of Sparks Business License Number:
Date Issued:
Date of Expiration:
Name of Licensee:
City, State, Zip Code of Licensee:
Telephone Number of Licensee:
Taxpayer Identification Number:

Bidder Information

DISCLOSURE OF PRINCIPALS:

a) Individual and/or Partnership:

Owner 1) Name:
Address:
City, State, Zip Code:
Telephone Number:
Owner 2) Name:
Address:
City, State, Zip Code:
Telephone Number:
Other 1) Title:
Name
Other 2) Title:
Name:

b) Corporation:

State in which Company is Incorporated:
Date Incorporated:
Name of Corporation:
Address
City, State, Zip Code:
Telephone Number:
President's Name:
Vice-President's Name:
Other 1) Name:
Title:

Awarded Contract Information

If your company is determined to be the awardee of the contract for this scope of work, the contract form for the work will be routed via electronic means. Therefore, please identify the authorized individual that will be signing the resulting contract. Presumably this will be the company owner or corporate officer authorized to bind the company for future work.

COMPANY INFORMATION:

Company Name:
Authorized Name:
Title:
Individual E-Mail Address:
Telephone Number including area code:
Mailing Address:

SUBCONTRACTOR DETAIL
SUBCONTRACTORS EXCEEDING FIVE PERCENT OF BID AMOUNT

INSTRUCTIONS: Per NRS 338.141, Bidder submits the following names of First-Tier Subcontractors who will provide to Bidder labor or a portion of the Work or improvements for which Subcontractor will be paid an amount exceeding five percent (5%) of the Bid Price. The Bidder shall list the name of a Subcontractor for each portion of the Work, the value of which exceeds five percent (5%) of the Bid Price. **If Bidder will perform more than 5% of the Work, BIDDER SHALL ALSO LIST HIS NAME and description of the work that the prime contractor will perform in the space provided below.**

Name of Subcontractor	Address	
Phone	Nevada Contractor License #	Limit of License
Description of Work:		
Name of Subcontractor	Address	
Phone	Nevada Contractor License #	Limit of License
Description of Work:		
Name of Subcontractor	Address	
Phone	Nevada Contractor License #	Limit of License
Description of Work:		
Name of Subcontractor	Address	
Phone	Nevada Contractor License #	Limit of License
Description of Work:		
Name of Subcontractor	Address	
Phone	Nevada Contractor License #	Limit of License
Description of Work:		
Name of Subcontractor	Address	
Phone	Nevada Contractor License #	Limit of License
Description of Work:		

Bidder Name: _____

Authorized Signature: _____

SUBCONTRACTOR DETAIL
SUBCONTRACTORS EXCEEDING ONE PERCENT OF BID AMOUNT OR \$50,000

INSTRUCTIONS: In compliance with NRS 338.141, Bidder submits the following names of First-Tier Subcontractors who will provide to Bidder labor or a portion of the Work or improvements for which Subcontractor will be paid an amount exceeding one percent (1%) of the Bid or \$50,000, whichever is greater.

Since all Subcontractors listed on the Bidder's 5% Subcontractor Information Form are over 1% of the Bid amount, those Subcontractors shall automatically be deemed incorporated into this 1% Subcontractor Information form and need not be re-listed below.

Information provided must be submitted within two (2) hours after the completion of the opening of the bids (Per NRS 338.141). Bidder shall enter "NONE" under "Name of Subcontractor" if not utilizing subcontractors exceeding this amount. This form must be complete in all respects. If, additional space is needed, attach a separate page. The bidder may elect to submit this information with the bid proposal and, in that case, the bidder will be considered as having submitted this information within the above two hours.

Name of Subcontractor	Address	
Phone	Nevada Contractor License #	Limit of License
Description of Work:		
Name of Subcontractor	Address	
Phone	Nevada Contractor License #	Limit of License
Description of Work:		
Name of Subcontractor	Address	
Phone	Nevada Contractor License #	Limit of License
Description of Work:		
Name of Subcontractor	Address	
Phone	Nevada Contractor License #	Limit of License
Description of Work:		

Bidder Name: _____ **Authorized Signature:** _____

CITY OF SPARKS ACKNOWLEDGMENT AND EXECUTION:

STATE OF _____)
) SS
County of _____)

_____(Name of Principal) being first duly sworn, deposes and says: That he/she is the Bidder, or authorized agent of the Bidder for whom the aforesaid described work is to be performed by; that he/she has read the Plans, Specifications, and related documents including but not limited to, any addenda issued and understands the terms, conditions, and requirements thereof; that if his/her bid is accepted that he/she agrees to furnish and deliver all materials except those specified to be furnished by the City of Sparks (Owner) and to do and perform all work for the **RECREATION GYM RESTROOM REMODEL-FEDERALLY FUNDED, Bid # 22/23-016**, together with incidental items necessary to complete the work to be constructed and/or services to be provided in accordance with the Specifications, Plans, and Contract Documents annexed hereto.

TO THE CONTRACTS AND RISK MANAGER OF THE CITY OF SPARKS:

The undersigned, as Bidder, declares that the only persons or parties interested in this proposal, as principals, are those named herein, the Bidder is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid: that this proposal is made without collusion with any other person, firm or corporation; that he/she has carefully examined the location of the proposed work; the proposed form of Contract, the Contract Provisions, Plans, Specifications and Contract Documents incorporated therein referred to and made part thereof; that he/she proposes and agrees if this proposal is accepted, that he/she will contract with the City of Sparks in the form of the Contract prescribed, to provide all necessary machinery, tools, apparatus and other means of construction, and to do all the work and furnish all the materials specified in the Contract and annexed Contract Provisions, Plans and Specifications, in the manner and time prescribed and according to the requirements of the Project Representative as therein set forth, it being understood and agreed that the quantities shown herein are approximate only and are subject to increase or decrease, and that he/she will accept, in full, payment therefore the indicated prices.

(Printed Name of Contractor/Bidder) Contractor/Bidder: _____
BY: _____
Firm: _____
Address: _____
City: _____
State / Zip Code: _____
Telephone Number: _____
Fax Number: _____
E-mail Address: _____
(Signature of Principal) Signature: _____
DATED this _____ day of _____, 2022.

State of Nevada)
) SS.
County of _____)

On this _____ day of _____, in the year 2022, before me,

_____/Notary Public, personally appeared _____ Personally known to me (or proved
to me on the basis of satisfactory evidence) to be the person whose name is subscribed to this instrument, and acknowledged that he (she) executed it. WITNESS my hand and official seal.

Notary's Signature: _____ My commission Expires: _____

**CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER
RESPONSIBILITY MATTERS
(This form to be signed and returned at the time of bid)**

This certification is required by the Federal Regulations Implementing Executive Order 12549, Debarment and Suspension, 45 CFR Part 93, Government-wide Debarment and Suspension, for the Department of Agriculture (7 CFR Part 3017), Department of Labor (29 CFR Part 98), Department of Education (34 CFR Parts 85, 668, 682), Department of Health and Human Services (45 CFR Part 76).

The prospective bidder, _____ certifies to the best of its knowledge and belief that it and its principals:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- (b) Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and
- (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. Any exceptions provided will not necessarily result in denial of award, but will be considered in determining bidder responsibility and whether or not the City will enter into contract with the party. For any exception noted, indicate on an attached sheet to whom it applies, initiating agency, and dates of action. Providing false information may result in criminal prosecution or administrative sanctions.

Typed Name & Title of Authorized Representative

Signature of Authorized Representative _____ Date _____

I am unable to certify to the above statement. My explanation is attached.

Signature _____ Date _____

CITY OF SPARKS, NEVADA – 5% Bid Bond

KNOW ALL MEN BY THESE PRESENTS: That we the undersigned _____, as “Principal,” and _____, as “Surety,” are hereby held and firmly bound unto the City of Sparks, Nevada, as “Obligee,” in the penal sum of _____ dollars (\$_____) for the payment of which, well and truly to be made, the Principal and Surety bind themselves, their heirs, executors, and administrators, successors and assigns, jointly and severally, by this instrument. The condition of the obligation of this bid bond is as follows:

WHEREAS, NRS 332.105 authorizes local governments to require bid bonds to insure execution and proper performance of the Contract and the Bonding Company has an “A” or better rating with Moody’s or A.M. Best and T-Listed with the U.S. Treasury Department;

AND, WHEREAS, the Principal has submitted a bid for Bid # **22/23-016**, PWP # **WA-2023-109**, for the **RECREATION GYM RESTROOM REMODEL-FEDERALLY FUNDED**.

NOW, THEREFORE,

- (a) If said Bid shall be rejected; or
- (b) If said Bid shall be accepted and the Principal shall execute and deliver the contract in the bid documents (“Contract”) to Obligee in accordance with the terms of the bid documents, and give such bond or bonds as may be specified in the bid or contract documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or
- (c) If the Principal shall pay to the Obligee the full amount of the bid bond as a penalty irrespective of the Obligee’s actual damages in the event of the failure of the Principal to enter into such Contract and give such bond or bonds,

then, this obligation shall be null and void. Otherwise it shall remain in full force and effect, it being expressly understood and agreed that the liability of the Surety (but not of the Principal) for any and all claims hereunder shall, in no event, exceed the penal amount of the obligation as herein stated.

The Surety, for the consideration for which this bond was executed, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the Obligee may accept such bid, and hereby waives notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and the Surety has caused their seal to be hereto affixed and these present to be signed by their proper officers.

Signed, Sealed and dated: _____

Principal
By: _____

Surety
By: _____

GENERAL CONDITIONS

General Conditions



GENERAL CONDITIONS

*Please Read Carefully
These Provisions Are a Part of Your Bid and any Contract Awarded*

Scope of Bid/Proposal: Bids/Proposals are hereby requested for **RECREATION GYM RESTROOM REMODEL-FEDERALLY FUNDED**, as per specifications herein.

The bidder agrees that:

- A. Bidder has carefully examined the specifications, and all provisions relating to the item(s) to be furnished or the work to be done; understands the meaning, intent, and requirements; and
- B. Bidder will enter into a written contract and furnish the item(s) or complete the work in the time specified, and in strict conformity with the City of Sparks specifications for the prices quoted.

Note: Bidder is defined as any individual, partnership, or corporation submitting a bid, proposal, or quotation in response to a request for bid (RFB), request for proposal (RFP), request for information (RFI) or request for quotation (RFQ). A bidder may also be referred to as a bidder, contractor, supplier or vendor.

The use of the title "Bidder," "Vendor", "Contractor" or "Consultant" within this solicitation document and any resulting contract shall be deemed interchangeable and shall refer to the person or entity with whom the City of Sparks is soliciting and/or contracting for the service or product referenced within the bid document.

1. Prices:

All prices and notations must be in ink or typewritten. Mistakes may be crossed out and corrections typed or written with ink adjacent to the error. Bids shall indicate the unit price extended to indicate the total price for each item bid. Any difference between the unit price correctly extended and the total price shown for all items bid shall be resolved in favor of the unit prices. Bidders are encouraged to review all prices prior to bid submittal, as withdrawal or correction may not be permitted after the bid has been opened.

2. Firm Prices:

Prices on bid shall be firm prices not subject to escalation unless otherwise provided for in the specifications. In the event the specifications provide for escalation, the maximum limit shall be shown, or the bid shall not be considered. In the event of a decline in market price below a price bid, the City of Sparks shall receive the benefit of such decline.

3. Items Offered:

If the item offered by the bidder has a trade name, brand and/or catalog number, such shall be stated in the bid. If the bidder proposes to furnish an item of a manufacturer or vendor other than that mentioned on the face hereof, bidder must specify maker, brand, quality, catalog number, or other trade designation. Unless such is noted on the bid form, it will be deemed that the item offered is that designated even though the bid may state "or equal".

4. Brand Names:

Whenever reference to a specific brand name is made by the City, it is intended to describe a component that has been determined to best meet operational, performance, or reliability standards of the City, thereby incorporating these standards by reference within the specifications. These specifications are not meant to limit the vendor; they are guidelines to minimum qualifications. The bidder shall indicate their compliance or non-compliance for each line of the specification. Any deviations from the specifications or where submitted literature does not fully support the meaning of the specifications must be clearly cited in writing by the bidder.

General Conditions



An equivalent (“or equal”) may be offered by the bidder, subject to evaluation and acceptance by the City. It is the bidder’s responsibility to provide, at bidder’s expense, samples, test data, or other documentation the City may require to fully evaluate and determine acceptability of an offered substitute. The City reserves the sole right to reject a substituted component that will not meet or exceed City standards.

5. Samples:

Samples may be required for bid evaluation and testing purposes. Bidders shall agree to provide samples upon request and at no additional cost to the City.

6. Withdrawal of Bids:

Bids may be withdrawn by written or facsimile notice received prior to the exact hour and date specified for receipt of bid. A bid may also be withdrawn in person by a bidder, or bidder’s authorized representative, prior to the exact hour and date set for receipt of bids. Telephone withdrawals are not permitted.

7. Late Bids, Modifications, or Withdrawals:

Bids, modifications of bids, or bid withdrawals received after the exact time and date specified for receipt will not be considered.

8. Mistake in Bid:

- (a) If the bidder discovers a mistake in bid prior to the hour and date specified for receipt of bid, bidder may correct the mistake by withdrawing the bid in accordance with Item 7 above and resubmit prior to the stated bid deadline.
- (b) If within seventy-two hours of the bid closing and prior to the issuance of a purchase order or a contract, the apparent low bidder discovers a mistake in bid of a serious and significant nature, bidder may request consideration be given to withdrawing the bid. The mistake must be evident and provable. The right is reserved by the City to reject any and all requests for withdrawal of bids. The decision of the Purchasing Manager is final as regards acceptance or rejection of requests for withdrawal after closing of bids.
- (c) A mistake in bid cannot be considered once a purchase order or contract is issued.

9. Signature:

All bids shall be signed and the title and firm name indicated. A bid by a corporation shall be signed by an authorized officer, employee or agent with his or her title.

10. Exceptions:

A bidder deviating from specifications must specify any and all deviation(s). Failure to note said exceptions shall be interpreted to convey that the bidder shall propose to perform in the manner described and/or specified in this bid solicitation. If exception(s) are taken or alternatives offered, complete descriptions must be shown separately.

11. Confidential Information:

Any information deemed confidential or proprietary should be clearly identified by the bidder as such. It may then be protected and treated with confidentiality only to the extent permitted by state law. Otherwise the information shall be considered a public record. Information or data submitted with a bid will not be returned.

12. Quality:

Unless otherwise required in the specifications, all goods furnished shall be new and unused.



13. Litigation Warranty:

The bidder, by bidding, warrants that bidder is not currently involved in litigation or arbitration concerning the materials or bidder's performance concerning the same or similar material or service to be supplied pursuant to this contract of specification, and that no judgments or awards have been made against bidder on the basis of bidder's performance in supplying or installing the same or similar material or service, unless such fact is disclosed to the City in the bid. Disclosure may not disqualify the bidder. The City reserves the right to evaluate bids on the basis of the facts surrounding such litigation or arbitration and to require bidder to furnish the City with a surety bond executed by a surety company authorized to do business in the State of Nevada and approved by The City of Sparks in a sum equal to one hundred percent (100%) of the contract price conditional on the faithful performance by bidder of the contract in the event the bid is awarded to bidder, notwithstanding the litigation or arbitration.

14. Royalties, Licenses and Patents:

Unless otherwise specified, the bidder shall pay all royalties, license and patent fees. The bidder warrants that the materials to be supplied do not infringe any patent, trademark or copyright and further agrees to defend any and all suits, actions and claims for infringement that are brought against the City, and to defend, indemnify and hold harmless the City from all loss or damages, whether general, exemplary or punitive, as a result of any actual or claimed infringement asserted against the City, the bidder or those furnishing material to bidder pursuant to this contract.

15. Performance Standards:

Performance of work and acceptability of equipment or materials supplied pursuant to any contract or award shall be to the satisfaction and full discretion of the City.

16. Americans with Disabilities Act (ADA) Standards:

Bidders shall be required to comply with current ADA Standards in preparing their bids and executing work required under any contract resulting from this bid. Completed work must comply with current ADA Standards.

17. Warranties:

(a) Unless otherwise specified, all workmanship, material, labor or equipment provided under the contract shall be warranted by bidder and/or manufacturer for a minimum of twelve (12) months after acceptance by City. Greater warranty protection will be accepted. Lesser warranty protection must be indicated by bidder on the bid proposal as an exception.

(b) Bidder shall be considered primarily responsible to the City for all warranty service, parts and labor applicable to the goods or equipment provided by bidder under this bid or award, irrespective of whether bidder is an agent, broker, fabricator or manufacturer's dealer. Bidder shall be responsible for ensuring that warranty work is performed at a local agency or facility convenient to City and that services, parts and labor are available and provided to meet City's schedules and deadlines. If required and defined within the Scope of Work, the Bidder will post a performance bond after contract award to guarantee performance of these obligations. Bidder may establish a service contract with a local agency satisfactory to City to meet this obligation if bidder does not ordinarily provide warranty service.

18. Addenda:

The effect of all addenda to the bid documents shall be considered in the bid, and said addenda shall be made part of the bid documents and shall be returned with them. Before submitting a bid, each bidder shall ascertain

General Conditions



whether or not any addenda have been issued, and failure to acknowledge any such addenda may render the bid invalid and result in its rejection.

All potential bidders are responsible for monitoring the City website regarding the availability of new bid documents or addenda (where applicable). The City of Sparks will not be responsible for the results of any potential failures in automatic notification systems to potential bidders or plan holders with respect to these documents and will not adjust bid schedules or requirements due to any potential failures of those systems. It is the responsibility of all potential bidders/responders to monitor the Purchasing Division's website for any changing information prior to submitting their bid/proposal. The City of Sparks will not be responsible for the timeliness or completeness of information provided by any 3rd party bid listing or re-selling service.

19. Specifications to Prevail:

The detailed requirements of the Specifications, Scope of Work or Special Conditions shall supersede any conflicting reference in these General Conditions or the stated language on the City of Sparks Standard Purchase Order that are in conflict therewith.

20. Taxes:

The City is exempt from State, City and County Sales Taxes per NRS 372.325. The City will furnish Exemption Certificates for Federal Excise Tax when applicable. The successful bidder shall pay all taxes, levies, duties and assessments of every nature, which may be applicable to any work or materials under this Contract. The Contract Sum and any agreed variations thereof shall include all taxes imposed by law. The successful bidder shall make any and all payroll deductions required by law. The successful bidder herein indemnifies and holds the City harmless from any liability on account of any and all such taxes, levies, duties, assessments and deductions.

21. Prevailing Wages:

Bidder is responsible for complying with all applicable local, State and Federal wage laws, whether or not specifically cited in this bid document.

Per NRS Sections 338.020 through 338.090, certain projects defined as "public works" require the payment of the prevailing wage as determined by the Labor Commissioner. Generally speaking, projects/contracts for construction of a public work valued at less than \$100,000 are exempt from the prevailing wage requirement (NRS 338.080). Bidder shall be fully aware of the prevailing wage requirements of the State of Nevada as detailed in NRS Chapter 338 and price their bid response accordingly. Further information concerning Prevailing Wage rates can be found at:

https://labor.nv.gov/PrevailingWage/Public_Works_Prevailing_Wages/

Federal "Davis Bacon" wages may be applicable if the funding for the project includes Federal funds. These requirements are detailed in the "Special Conditions – Federal Requirements" section that will be included in this bid document when such conditions apply. Contractor shall compare the applicable wage rate for each classification used on the project and pay the higher of the two rates (Nevada State Prevailing Wage or Davis Bacon Wage) in each case.

General Conditions



22. Apprenticeship Utilization Act (This Section IS IS NOT Applicable to this bid):

Senate Bill 207 (Apprenticeship Utilization Act) passed during the 2019 Legislative Session added sections 338.0116 and 338.01165 to the NRS. These new provisions apply to bids for public works where the value exceeds \$100,000.00. In passing SB 207, The Legislature hereby finds and declares that: (1) A skilled workforce in construction is essential to the economic well-being of the State; (2) Apprenticeship programs are a proven method of training a skilled workforce in construction; and (3) Requiring the use of apprentices on the construction of public works will ensure the availability of a skilled workforce in construction in the future for this State

A contractor or subcontractor engaged in **horizontal construction** who employs a worker on a public work pursuant to NRS 338.040 shall use one or more apprentices for at least 3 percent of the total hours of labor worked for each apprenticed craft or type of work to be performed on the public work for which more than three workers are employed.

“Horizontal Construction” means any construction, alteration, repair, renovation, demolition or remodeling necessary to complete a public work, including, without limitation, any irrigation, drainage, water supply, flood control, harbor, railroad, highway, tunnel, airport or airway, sewer, sewage disposal plant or water treatment facility and any ancillary vertical components thereof, bridge, inland waterway, pipeline for the transmission of petroleum or any other liquid or gaseous substance, pier, and any other work incidental thereto. The term does not include vertical construction, the construction of any terminal or other building of an airport or airway, or the construction of any other building.

A contractor or subcontractor engaged in **vertical construction** who employs a worker on a public work pursuant to NRS 338.040 shall use one or more apprentices for at least 10 percent of the total hours of labor worked for each apprenticed craft or type of work to be performed on the public work for which more than three workers are employed.

“Vertical Construction” means any construction, alteration, repair, renovation, demolition or remodeling necessary to complete a public work for any building, structure or other improvement that is predominantly vertical, including, without limitation, a building, structure or improvement for the support, shelter and enclosure of persons, animals, chattels or movable property of any kind, and any other work or improvement appurtenant thereto.

A Public Body/Awarding Body, upon the request of a contractor or subcontractor, **MAY** submit a request for a modification or waiver of the percentage of hours of labor of one or more apprentices prior to (1) the bid advertisement; (2) the bid opening; or (3) the award of the contract if, “Good Cause” exists. The Labor Commissioner may also grant a modification or waiver from the requirements of NRS 338.01165 after work on the public work has commenced.

More information regarding these requirements and forms associated with this act may be found in the section following these General Conditions, labeled “Apprenticeship Requirements.”

23. Conflict of Interest:

No City employee or elected or appointed member of City government, or member of the employee’s immediate family, may participate directly or indirectly in the procurement process pertaining to this bid if they:

General Conditions



- (a) Have a financial interest or other personal interest that is incompatible with the proper discharge of their official duties in the public interest or would tend to impair their independence, judgment or action in the performance of their official duties.
- (b) Are negotiating for or have an arrangement concerning prospective employment with bidder. The bidder warrants to the best of his knowledge that the submission of the bid will not create such conflict of interest. In the event such a conflict occurs, the bidder is to report it immediately to the Purchasing Manager. For breach or violation of this warranty, the City shall have the right to annul this contract without liability at its discretion, and bidder may be subject to damages and/or debarment or suspension.

24. Disqualification of Bidder:

Any one or more of the following may be considered as sufficient for the disqualification of a prospective Bidder and the rejection of the Bid:

- (a) The Bidder is not responsive or responsible.
- (b) The quality of services, materials, equipment or labor offered does not conform to the approved plans and specifications.
- (c) There is evidence of collusion among prospective Bidders (Participants in such collusion will receive no recognition as Bidders).
- (d) The Bidder lacks the correct contractor's license classification required for the defined scope of work.
- (e) Lack of competency, understanding of the scope of work, adequate machinery, plant and/or equipment as revealed in routine due diligence associated with bid evaluation.
- (f) Unsatisfactory performance record as shown by past work for the City of Sparks, judged from the standpoint of workmanship, progress, and quality of services/goods provided.
- (g) Uncompleted work which, in the judgment of the City of Sparks, might hinder or prevent the prompt completion of additional work, if awarded.
- (h) Failure to pay or satisfactorily settle all bills due for labor and/or material on any contract(s).
- (i) Failure to comply with any requirements of the City of Sparks.
- (j) Failure to list, as required, all subcontractors who will be employed by the Bidder.
- (k) Any other reason determined, in good faith, to be in the best interest of the City of Sparks.

25. Gratuities:

The City may rescind the right of the bidder to proceed under this agreement if it is found that gratuities in the form of entertainment, gifts, cash or otherwise are offered or given by the bidder, or any agent or representative of the bidder, to any officer or employee of the City with the intent of influencing award of this agreement or securing favorable treatment with respect to performance of this agreement.

26. Bidder's Security (This Section IS IS NOT Applicable to this bid):

A bid deposit in an amount equal to at least 5% of the bid may be required as a bid security by the City. The bid security may only be in cash, a cashier's or certified check made payable to the City of Sparks, or a bid bond. If the bid security is a bond, it shall be executed by a surety insurer authorized to issue surety bonds in the State of Nevada. All Bonding Companies must have an "A" rating or better with Moody's or A.M. Best Company, and be included on the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bond and as Acceptable Reinsuring Companies" as published in circular 570 (as amended) by the audit staff, Bureau of Accounts, U.S. Treasury Department. (In other words, the company is T-listed.) The bid security must be executed by the bidder and enclosed with the bid proposal in the sealed bid envelope.



27. Performance and Payment Bonds:

Per NRS 339.025, before any contract, except one subject to the provisions of chapter 408 of NRS, exceeding \$100,000 for any project for the new construction, repair or reconstruction of any public building or other public work or public improvement of any contracting body is awarded to any contractor, he shall furnish to the contracting body the following bonds which become binding upon the award of the contract to the contractor (All Bonding Companies must have an “A” rating or better with Moody’s or A.M. Best Company, and be included on the current list of “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bond and as Acceptable Reinsuring Companies” as published in circular 570 (as amended) by the audit staff, Bureau of Accounts, U.S. Treasury Department. (In other words, the company is T-listed.)):

Performance Bond (This Section IS IS NOT Applicable to this bid):

The Contractor awarded this bid will be required to furnish the City with a surety bond conditioned upon the faithful performance of the contract. This may take the form of a bond executed by a surety company authorized to do business in the State of Nevada and approved by the City of Sparks. The bond shall be in a sum equal to one hundred percent (100%) of the amount of the contract price. Such bond shall be forfeited to the City in the event that bidder receiving the contract shall fail or refuse to fulfill the requirements and all terms and conditions of the contract.

Payment Bond (This Section IS IS NOT Applicable to this bid):

The Contractor awarded this bid will be required to furnish the City with a payment bond. This may take the form of a bond executed by a surety company authorized to do business in the State of Nevada and approved by the City of Sparks. The bond shall be in a sum equal to one hundred percent (100%) of the amount of the contract price. The bond must be solely for the protection of claimants supplying labor or materials to the contractor to whom the contract was awarded, or to any of his subcontractors, in the prosecution of the work provided for in such contract.

28. Indemnification:

To the fullest extent permitted by law, upon award, Contractor shall hold harmless, indemnify, defend and protect City, its affiliates, officers, agents, employees, volunteers, successors and assigns (“Indemnified Parties”), and each of them from and against any and all claims, demands, causes of action, damages, costs, expenses, actual attorney’s fees, losses or liabilities, in law or in equity, of every kind and nature whatsoever (“Claims”) arising out of or related to any act or omission of Contractor, its employees, agents, representatives, or Subcontractors in any way related to the performance of work under this Agreement by Contractor, or to work performed by others under the direction or supervision of Contractor, including but not limited to:

1. Personal injury, including but not limited to bodily injury, emotional injury, sickness or disease, or death to persons;
2. Damage to property of anyone, including loss of use thereof;
3. Penalties from violation of any law or regulation caused by Contractor’s action or inaction;
4. Failure of Contractor to comply with the Insurance requirements established under this Agreement;
5. Any violation by Contractor of any law or regulation in any way related to the occupational safety and health of employees.

In determining the nature of the claim against City, the incident underlying the claim shall determine the nature of the claim, notwithstanding the form of the allegations against City.

General Conditions



If City's personnel are involved in defending such actions, Contractor shall reimburse City for the time and costs spent by such personnel at the rate charged City for such services by private professionals.

In cases of professional service agreements, requiring professional liability coverage:

If the insurer by which a Consultant is insured against professional liability does not so defend the City and applicable agents and/or staff, and the Consultant is adjudicated to be liable by a trier of fact, the City shall be entitled to reasonable attorney's fees and costs to be paid to the City by the Consultant in an amount which is proportionate to the liability of the of the Consultant.

Nothing in this contract shall be interpreted to waive nor does the City, by entering into this contract, waive any of the provisions found in Chapter 41 of the Nevada Revised Statutes.

29. Insurance:

BIDDERS' ATTENTION IS DIRECTED TO THE INSURANCE REQUIREMENTS BELOW. IT IS HIGHLY RECOMMENDED THAT BIDDERS CONFER WITH THEIR RESPECTIVE INSURANCE CARRIERS OR BROKERS TO DETERMINE IN ADVANCE OF BID SUBMISSION THE AVAILABILITY OF INSURANCE CERTIFICATES AND ENDORSEMENTS AS PRESCRIBED AND PROVIDED HEREIN. IF THE APPARENT LOW BIDDER FAILS TO COMPLY STRICTLY WITH THE INSURANCE REQUIREMENTS, THAT BIDDER MAY BE DISQUALIFIED FROM AWARD OF THE CONTRACT.

The City may, unless otherwise required by law, waive or reduce the insurance requirements itemized here, at the discretion of the city's Contracts and Risk Manager.

Should work be required on City premises or within the public right-of-way, upon award of the contract, the bidder shall provide proof of insurance for the types of coverage, limits of insurance and other terms specified herein, prior to initiation of any services under City, Bid, Proposal or Contract. Coverage shall be from a company authorized to transact business in the State of Nevada and the City of Sparks and shall meet the following minimum specifications:

Contractor shall at its own expense carry and maintain at all times the following insurance coverage and limits of insurance no less than the following or the amount customarily carried by Contractor or any of its subcontractors, whichever is greater. Contractor shall also cause each subcontractor employed by Contractor to purchase and maintain insurance of the type specified herein. All insurers must have AM Best rating not less than A-VII, and be acceptable to the City. Contractor shall furnish copies of certificates of insurance evidencing coverage for itself and for each subcontractor. Failure to maintain the required insurance may result in termination of this contract at City's option. If Contractor fails to maintain the insurance as set forth herein, City shall have the right, but not the obligation, to purchase said insurance at Contractor's expense.

Contractor shall provide proof of insurance for the lines of coverage, limits of insurance and other terms specified below prior to initiation of any services. Coverage shall be from a company authorized to transact business in the State of Nevada and the City of Sparks. Contractor and any of its subcontractors shall carry and maintain coverage and limits no less than the following or the amount customarily carried by Contractor or any of its subcontractors, whichever is greater.

General Conditions



Applicable to this Contract	Insurance Type	Minimum Limit	Insurance Certificate	Additional Insured	Waiver of Subrogation
Yes	General Liability/Umbrella (Excess) Liability	\$2,000,000	✓	✓	✓
Yes	Automobile Liability	\$1,000,000	✓	✓	
Yes	Workers' Compensation	Statutory	✓	N/A	✓
Yes	Employer's Liability	\$1,000,000	✓	N/A	
No	Professional Liability	\$1,000,000	✓	N/A	N/A
No	Pollution Legal Liability	\$1,000,000	✓	N/A	N/A

Commercial General Liability

Contractor shall carry and maintain Commercial General Liability (CGL) and, if necessary to meet required limits of insurance, commercial umbrella/excess liability insurance with a total limit of not less than the limits specified herein.

For contracts that are for the construction or improvement of public facilities, the Contractor shall obtain and maintain products and completed operations liability coverage through the statute of repose after completion of the project. Continuing commercial umbrella coverage, if any, shall include liability coverage for damage to the insured's completed work equivalent to that provided under ISO form CG 00 01.

There shall be no endorsement or modification of the CGL limiting the scope of coverage for liability arising from pollution, explosion, collapse, underground property damage, or damage to the named insured's work unless Subcontractor carries and maintains separate policies providing such coverage and provides Contractor evidence of insurance confirming the coverage.

Minimum Limits of Insurance

\$2,000,000 Each Occurrence Limit for bodily injury and property damage

\$2,000,000 General Aggregate Limit

\$2,000,000 Products and Completed Operations Aggregate Limit

\$10,000 Medical Expense Limit

If Commercial General Liability Insurance or other form with a general aggregate limit is used, it shall be revised to apply separately to this PROJECT or LOCATION.

Coverage Form

Coverage shall be at least as broad as the unmodified Insurance Services Office (ISO) Commercial General Liability (CGL) "Occurrence" form CG 00 01 04/13 or substitute form providing equivalent coverage and shall cover liability arising from premises, operations, independent contractors, products-completed operations, personal and advertising injury, and liability assumed under an insured contract (including the tort liability of another assumed in a business contract).



Additional Insured

City, its officers, agents, employees, and volunteers are to be included as insureds using the applicable ISO additional insured endorsement(s) or substitute forms providing equivalent coverage, in respects to damages and defense arising from: activities performed by or on behalf of Contractor, including the insured's general supervision of Contractor; products and completed operations of Contractor; premises owned, occupied, or used by Contractor. The coverage shall contain no special limitations on the scope of protection afforded to City, its officers, employees, or volunteers. Additional insured status for City shall apply until the expiration of time within which a claimant can bring suit per applicable state law.

Primary and Non-Contributory

Contractor's insurance coverage shall apply as primary insurance with respect to any other insurance or self-insurance programs afforded to City, its officers, agents, employees, and volunteers. There shall be no endorsement or modification of the CGL to make it excess over other available insurance; alternatively, if the CGL states that it is excess or pro rata, the policy shall be endorsed to be primary with respect to the additional insured. Any insurance or self-insurance maintained by City, its officers, employees, or volunteers shall be excess of Contractor's insurance and shall not contribute with it in any way.

Waiver of Subrogation

Contractor waives all rights against City and its agents, officers, directors and employees for recovery of damages to the extent these damages are covered by the commercial general liability or commercial umbrella liability insurance maintained pursuant to this agreement. Insurer shall endorse CGL policy as required to waive subrogation against the City with respect to any loss paid under the policy.

Endorsements

Policy forms or endorsements are required confirming coverage for all required additional insureds. The forms or endorsements for CGL shall be at least as broad as the unmodified ISO additional insured endorsement CGO 20 10 07/04 and CG 20 37 07/04 or substitute forms providing additional insured coverage for products and completed operations.

A waiver of subrogation in favor of City shall be endorsed to the policy using an unmodified Waiver of Transfer of Rights of Recovery of Others to Us ISO CG 24 04 05 09, or a substitute form providing equivalent coverage.

Electronic Data Liability

If any underground work will be performed, Contractor shall maintain electronic data liability insurance applicable to the Project and insuring against liability arising out of the loss of, loss of use of, damage to, corruption of, inability to access, or inability to manipulate electronic data. This coverage shall be maintained with a limit of liability of not less than \$1,000,000 and provide coverage at least as broad as electronic data liability coverage form CG 04 37 (or substitute form providing equivalent coverage).

Railroad Protective Liability

For any construction or demolition work within fifty (50) feet of a railroad, Contractor shall maintain Railroad Protective Liability insurance on behalf of and in the name of the railroad, as named insured, with a limit of \$6,000,000 per occurrence or higher limit if required by the railroad. Contractor shall also ensure that any exclusions pertaining to the indemnification of a railroad are removed from its CGL policy or that ISO form CG 24 17 (Contractual Liability-Railroads Endorsements) is included in the coverage.

General Conditions



Business Automobile Liability

Minimum Limits of Insurance

\$1,000,000 Combined Single Limit per accident for bodily injury and property damage or the limit customarily carried by Contractor, whichever is greater. No aggregate limit may apply. Coverage may be combined with Excess/Umbrella Liability coverage to meet the required limit.

Coverage Form

Coverage shall be at least as broad as the unmodified Insurance Services Office (ISO) Business Automobile Coverage form CA 00 01 10/13, CA 00 25 10/13, CA 00 20 10/13 or substitute form providing equivalent coverage. Such insurance shall cover liability arising out of any auto (including owned, hired, and non-owned autos).

Pollution liability coverage at least as broad as that provided under the ISO pollution liability—broadened coverage for covered autos endorsement (CA 99 48) shall be provided, and the Motor Carrier Act endorsement (MCS 90) shall be attached for all contracts involving transportation of “hazardous material” as this term is defined by applicable law, including, but not limited to, waste, asbestos, fungi, bacteria and mold.

Additional Insured

City, its officers, agents, employees, and volunteers are to be included as insureds with respect to damages and defense arising from the ownership, maintenance or use of automobiles owned, leased, hired, or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to City, its officers, employees, or volunteers. Additional insured status for City shall apply until the expiration of time within which a claimant can bring suit per applicable state law.

Endorsements

A policy endorsement is required listing all required additional insureds. The endorsement for Business Automobile Liability shall be at least as broad as the unmodified ISO CA 20 48 10/13 or a substitute form confirming City’s insured status for Liability Coverage under the Who Is An Insured Provision contained in Section II of the coverage form ISO CA 00 01 10/13.

Waiver of Subrogation.

Contractor waives all rights against City, its officers, agents, employees, and volunteers for recovery of damages to the extent these damages are covered by the commercial general liability or commercial umbrella liability insurance maintained pursuant to this agreement. Contractor’s insurer shall endorse policy to waive subrogation against City with respect to any loss paid under the policy.

Workers’ Compensation and Employer’s Liability

Contractor shall carry and maintain workers’ compensation and employer’s liability insurance meeting the statutory requirements of the State of Nevada, including but not limited to NRS 616B.627 and NRS 617.210 or provide proof that compliance with the provisions of Nevada Revised Statutes Chapters 616A-D and all other related chapters is not required. It is understood and agreed that there shall be no coverage provided for Contractor or any Subcontractor of the Contractor by the City. Contractor agrees, as a precondition to the performance of any work under this Agreement and as a precondition to any obligation of the City to make any payment under this Agreement to provide City with a certificate issued by an insurer in accordance with NRS 616B.627 and with a certificate of an insurer showing coverage pursuant to NRS 617.210.

It is further understood and agreed by and between City and Contractor that Contractor shall procure, pay for and maintain the above-mentioned coverage at Contractor's sole cost and expense.

General Conditions



Should Contractor be self-funded for workers’ compensation and employer’s liability insurance, Contractor shall so notify City in writing prior to the signing of this Contract. City reserves the right to approve said retentions, and may request additional documentation, financial or otherwise, for review prior to the signing of this Contract.

Upon completion of the project, Contractor shall, if requested by City, provide a Final Certificate for itself and each Subcontractor showing that Contractor and each Subcontractor had maintained the required Workers Compensation and Employer’s Liability by paying all premiums due throughout the entire course of the project.

Nevada law allows the following to reject workers’ compensation coverage if they do not use employees or subcontractors in the performance of work under the contract:

- Sole proprietors (NRS 616B.627 and NRS 617.210)
- Unpaid officers of quasi-public, private or nonprofit corporations (NRS 616B.624 and NRS 617.207)
- Unpaid managers of limited liability companies (NRS 616B.624 and NRS 617.207)
- An officer or manager of a corporation or limited liability company who owns the corporation or company (NRS 616B.624 and NRS617.207)

If a contractor has rejected workers’ compensation coverage under applicable Nevada law, the contractor must indicate the basis for the rejection of coverage and complete, sign and have notarized an Affidavit of Rejection of Coverage. The Affidavit must be completed, signed and notarized prior to performance of any work.

Minimum Limits of Insurance

Workers’ Compensation:	Statutory Limits
Employer’s Liability:	\$1,000,000 Bodily Injury by Accident – Each Accident
	\$1,000,000 Bodily Injury by Disease – Each Employee
	\$1,000,000 Bodily Injury by Disease – Policy Limit

Coverage Form

Coverage shall be at least as broad as the unmodified National Council on Compensation Insurance (NCCI) Workers Compensation and Employer’s Liability coverage form WC 00 00 07/11 or substitute form providing equivalent coverage.

OTHER INSURANCE COVERAGES (IF APPLICABLE)

Professional Liability Insurance (if Applicable) \$1,000,000 each claim limits of liability or whatever limit is customarily carried by the Contractor, whichever is greater, for design, design-build or any type of professional services. If coverage is required on a claims-made or claims-made and reported basis, any applicable retroactive or pending & prior litigation dates must precede the effective date of this contract. Continuous coverage shall be maintained, or an extended reporting period shall be obtained for a period of at least three (3) years following completion of the project.

Contractors Pollution Liability Insurance (If Applicable)- \$1,000,000 per occurrence and \$2,000,000 aggregate or whatever amount is acceptable to the City for any exposure to “hazardous materials” as this term is defined in applicable law, including but not limited to waste, asbestos, fungi, bacterial or mold.

General Conditions



Coverage shall apply to bodily injury; property damage, including loss of use of damaged property or of property that has not been physically injured; cleanup costs; and defense, including costs and expenses incurred in the investigation, defense, or settlement of claims.

City shall be included as an insured under Contractor's pollution liability insurance.

If coverage is required on a claims-made or claims-made and reported basis, any applicable retroactive or pending & prior litigation dates must precede the effective date of this contract. Continuous coverage shall be maintained, or an extended reporting period shall be obtained for a period of at least three (3) years following completion of the project.

If the scope of services as defined in this contract includes the disposal of any hazardous materials from the job site, Contractor must furnish to City evidence of pollution liability insurance maintained by the disposal site operator for losses arising from the insured facility accepting waste under this contract. Coverage certified to the City under this section must be maintained in minimum amounts of \$1,000,000 per loss, with an annual aggregate of at least \$2,000,000.

Lower tier sub-subcontractors, Truckers, Suppliers: Evidence confirming lower tier subcontractors, truckers and suppliers are maintaining valid insurance prior to beginning work on the project to meet the requirements set forth herein on Subcontractor, including but not limited to all additional insured requirements of Subcontractor.

ALL COVERAGES

Coverage shall not be suspended, voided, canceled, or non-renewed by either CONTRACTOR or by the insurer, reduced in coverage or in limits except after thirty (30) days' prior written notice has been given to CITY except for ten (10) days' notice for nonpayment of premium.

DEDUCTIBLES AND RETENTIONS

Any deductibles or self-insured retentions that exceed \$100,000.00 per occurrence or claim must be declared to and approved by the City's Contracts and Risk Manager and prior to signing this Contract. City is entitled to request and receive additional documentation, financial or otherwise, prior to giving its approval of the deductibles and self-insured retentions. Any changes to the deductibles or self-insured retentions made during the term of this Contract or during the term of any policy must be approved by City's Contracts and Purchasing Manager prior to the change taking effect. Contractor is responsible for any losses within deductibles or self-insured retentions.

OTHER INSURANCE PROVISIONS

Should City and Contractor agree that higher coverage limits are needed warranting a project policy, project coverage shall be purchased and the premium for limits exceeding the above amount may be borne by City. City retains the option to purchase project insurance through Contractor's insurer or its own source.

Any failure to comply with reporting provisions of the policies shall not affect coverage provided to City, its officers, agents, employees, or volunteers.

ACCEPTABILITY OF INSURERS

Insurance is to be placed with insurers with a Best's rating of no less than A-VII and acceptable to the City. City, with the approval of the Risk Manager, may accept coverage with carriers having lower Best's ratings upon review of financial information concerning Contractor and insurance carrier. City reserves the right to

General Conditions



require that Contractor's insurer be a licensed and admitted insurer in the State of Nevada, or meet any applicable state and federal laws and regulations for non-admitted insurance placement.

VERIFICATION OF COVERAGE

Contractor shall furnish City with certificates of insurance and with original endorsements affecting coverage required by this contract. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf.

Prior to the start of any Work, Contractor must provide the following documents to City of Sparks, Attention: Purchasing Division, P.O. Box 857, Sparks, NV 89432-0857:

- A. Certificate of Insurance.** Contractor must provide a Certificate of Insurance form to the City of Sparks to evidence the insurance policies and coverage required of Contractor.
- B. Additional Insured Endorsements.** An original Additional Insured Endorsement, signed by an authorized insurance company representative, must be submitted to the City of Sparks, by attachment to the Certificate of Insurance, to evidence the endorsement of the City of Sparks as additional insured.
- C. Policy Cancellation Endorsement.** Except for ten (10) days' notice for non-payment of premium, each insurance policy shall be endorsed to specify that without thirty (30) days prior written notice to the City of Sparks, the policy shall not be suspended, voided, cancelled or non-renewed, and shall provide that notices required by this paragraph shall be sent by certified mailed to the address specified above. A copy of this signed endorsement must be attached to the Certificate of Insurance. If endorsements are not available, Contractor shall be responsible to provide prior written notice to City as soon as practicable upon receipt of any notice of cancellation, non-renewal, reduction in required limits or other material change in the insurance required under this Agreement.
- D. Bonds (as Applicable).** Bonds as required and/or defined in the original bid documents.

All certificates and endorsements are to be addressed to the City of Sparks, Purchasing Division and be received and approved by City before work commences. The City reserves the right to require complete certified copies of all required insurance policies at any time.

SUBCONTRACTORS

Contractor shall include all Subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each Subcontractor. All coverages for Subcontractors shall be subject to all the requirements stated herein.

MISCELLANEOUS CONDITIONS

1. Contractor shall be responsible for and remedy all damage or loss to any property, including property of City, caused in whole or in part by Contractor, any Subcontractor, or anyone employed, directed, or supervised by Contractor.
2. Nothing herein contained shall be construed as limiting in any way the extent to which Contractor may be held responsible for payment of damages to persons or property resulting from its operations or the operations of any Subcontractors under it, and such coverage and limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to City in this contract.

General Conditions



3. In addition to any other remedies City may have if Contractor fails to provide or maintain any insurance policies or policy endorsements to the extent and within the time herein required, City may, at its sole option:
 - a. Purchase such insurance to cover any risk for which City may be liable through the operations of Contractor under this Agreement and deduct or retain the amount of the premiums for such insurance from any sums due under the Agreement;
 - b. Order Contractor to stop work under this Agreement and/or withhold any payments which become due Contractor here under until Contractor demonstrates compliance with the requirements hereof; or,
 - c. Terminate the Agreement.
4. If Contractor's liability policies do not contain the standard ISO separation of insureds condition, or a substantially similar clause, they shall be endorsed to provide cross-liability coverage.

30. Safety Program:

Upon award, the Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work. The Contractor shall take all necessary precautions for the safety of, and shall provide all necessary protection to prevent damage, injury, or loss to:

1. All employees on the work site and all other persons who may be affected thereby.
2. All the work, materials, and equipment to be incorporated therein, whether in storage on or off the site.
3. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

Contractor shall comply with all applicable laws, ordinances, rules, regulations, and others of any public authority having jurisdiction for the safety of persons or property or to protect them from damage, injury, or loss. He shall erect and maintain, as required by existing conditions and progress on the work, all necessary safeguards for safety and protection, including posting danger signs, other warnings against hazards, promulgating safety regulations, and notifying owners and users of adjacent utilities. Contractor shall comply with OSHA'S Hazard Communication Standards.

Contractor shall designate a responsible member of its organization at the site whose duty shall be the prevention of accidents. This person shall be Contractor's superintendent unless otherwise designated in writing by Contractor to the Owner and the Engineer.

31. Award of Contract:

- (a) Bids/Proposals will be analyzed and award will be made to the lowest, responsive and responsible bidder whose bid conforms to the solicitation and whose bid is considered to be most advantageous to the City, price and other factors considered. Factors to be considered may include, but are not limited to: bidder's past performance, total unit cost, economic cost analysis, life cycle costs, warranty and quality, maintenance cost, durability, the operational requirements of the City and any other factors which will result in the optimum economic benefit to the City.
- (b) The City reserves the right to reject any item or items, to waive informalities, technical defects and minor irregularities in bids/proposals received; and to select the bid(s) or proposal(s) deemed most advantageous to the City. Should the City elect to waive a right it will not constitute an automatic waiver of that right in the future nor will it impact any other right or remedy. The City may consider bids/proposals submitted on an "all or nothing" basis if the bid/proposal is clearly designated as such.

General Conditions



- (c) The City reserves the right to award one or more contracts on the bids/proposals submitted, either by award of all items to one bidder or by award of separate items or groups of items to various bidders as the interests of the City may require, unless the bidder clearly specifies otherwise in his bid.
- (d) Upon acceptance by the City of Sparks, the solicitation, bid, proposal, or price quotation and issuance of a purchase order issued to the successful bidder shall be deemed to result in a binding contract incorporating those terms and these General Conditions without further action required by either party. Items are to be furnished as described in the bid and in strict conformity with all instructions, conditions, specifications, and provisions in the complete contract, as defined by this clause or any related integrated agreement.

32. Request for Proposal (RFP) Submittals:

In the case of Request for Proposals (RFP's), it should be noted that the documents submitted by prospective bidders are competitive sealed proposals and not competitive sealed bids. When proposals are opened, prices and other information will not be made public until the proposal is awarded. There shall be no disclosure of any bidder's information to competing bidders prior to the award of the proposal.

By their nature, proposals will include a number of variables that will vary based on the complexity of the product or service addressed within the proposal. Therefore, the evaluation of RFP's and the recommendation for award will not be based on price alone. Selection criteria will be better defined for each scope of work in the Special Conditions section of this bid.

Upon award of the contract, the executed contract and proposals will become public information. Accordingly, each proposal should be submitted on the vendor's most favorable terms from a price and technical standpoint.

33. Bidder Preference Law (This Section IS IS NOT Applicable to this bid):

This project will be bid and awarded under the Provisions(s) of NRS 338.147, which restricts preference given to certain contractors on Public Works Projects. The NRS cited in this section is meant to be a reference only. Each bidder shall acquaint himself with the latest provisions of NRS 338.147.

If the Contract for any Public Works Construction Project is expected to cost \$250,000 or more, then all Contractors wishing to receive benefit of their preference status in the evaluation of bids must submit a copy of their Certificate of Bidder Preference issued by the State Contractor's Board. (Call 775-688-1141 or 775-486-1100 to obtain certification information from the State Contractors Board). Contractors who do not submit a preference certificate at the time of their bid are presumed to have wished not to exercise the benefit of their preference, or do not possess the certificate of eligibility.

To the extent Contractor has sought, qualified and receives a bidding preference on this project, pursuant to Nevada Revised Statutes Chapter 338, Contractor acknowledges and agrees that the following requirements will be adhered to, documented and attained for the duration of the Project:

1. At least 50 percent of the workers employed on the Project (including subcontractors) hold a valid driver's license or identification card issued by the Nevada Department of Motor Vehicles;
2. All vehicles used primarily for the public work will be (a) registered and (where applicable) partially apportioned to Nevada; or (b) registered in Nevada; and
3. The Contractor shall maintain and make available for inspection within Nevada all payroll records

General Conditions



related to the Project.

Contractor recognizes and accepts that failure to comply with any requirements herein shall be a material breach of the contract and entitle the City of Sparks to liquidated damages in the amount set by statute. In addition, the Contractor recognizes and accepts that failure to comply with any requirements herein may lose its certification for a preference in bidding and/or its ability to bid on any contracts for public works pursuant to NRS Chapter 338.

To the extent Contractor has sought, qualified and receives a bidding preference, and this project has a value of over \$250,000 pursuant to Nevada Revised Statutes Chapter 338, each contract between the contractor, applicant or design-build team and a subcontractor must provide for the apportionment of liquidated damages assessed pursuant to this section if a person other than the Contractor was responsible for the breach of a contract for a public work caused by a failure to comply with a requirement of Items 1-3 within this section. The apportionment of liquidated damages must be in proportion to the responsibility of each party for the breach.

This section shall not be applicable for projects in which some or all of the funding comes from Federal sources.

34. Tie Bids:

Should identical low, responsive and responsible bids be received from two bidders, the City of Sparks Purchasing Manager shall notify all parties involved in the tie and may at his option utilize a coin-flip to determine the low bidder who shall be recommended for award. Or;

Should there be three or more low, responsive and responsible tie bids the Purchasing Manager shall exercise the following tie breaking method, unless another alternative is apparent and prudent: The City of Sparks Purchasing Manager shall set a mutually agreed upon time where, in his office, he shall shuffle a new deck of playing cards and have each bidder's representative cut the cards. The tie bidder who cuts the highest card (with Ace high) shall be recommended for bid award.

35. Appeals/Protests – Bids Only (Not Applicable to Request for Proposals):

A person who submits a bid on a contract may, after the bids are opened and within 5 business days after the date the "Recommendation to Award" is issued by the City, unless otherwise stated in the Special Conditions, file a notice of protest regarding the awarding of the contract. The City's "Recommendation to Award" will be dated and posted on the City's public website within the area where bid notices and bid re-caps are posted (Currently: <http://www.cityofsparks.us/bids>).

- (a) A notice of protest must include a written statement setting forth with specificity the reasons the person filing the notice believes the applicable provisions of law were violated.
- (b) A person filing a notice of protest may be required by the governing body or its authorized representative, at the time the notice of protest is filed, to post a bond with a good and solvent surety authorized to do business in this State or submit other security, in a form approved by the governing body or its authorized representative, to the governing body or its authorized representative who shall hold the bond or other security until a determination is made on the protest. A bond posted or other security submitted with a notice of protest must be in an amount equal to the lesser of:
 - (1) Twenty-five percent of the total value of the bid submitted by the person filing the notice of protest;
 - or
 - (2) Two hundred fifty thousand dollars (\$250,000).

General Conditions



- (c) A notice of protest filed in accordance with the provisions of this section operates as a stay of action in relation to the awarding of any contract until a determination is made by the governing body or its authorized representative on the protest.
- (d) A person who submits an unsuccessful bid may not seek any type of judicial intervention until the governing body or its authorized representative has made a determination on the protest and awarded the contract.
- (e) A governing body or its authorized representative is not liable for any costs, expenses, attorney's fees, loss of income or other damages sustained by a person who submits a bid, whether or not the person files a notice of protest pursuant to this section.
- (f) If the protest is upheld, the bond posted or other security submitted with the notice of protest must be returned to the person who posted the bond or submitted the security. If the protest is rejected, a claim may be made against the bond or other security by the governing body or its authorized representative in an amount equal to the expenses incurred by the governing body or its authorized representative because of the unsuccessful protest. Any money remaining after the claim has been satisfied must be returned to the person who posted the bond or submitted the security.

36. Documentation:

Due to the time constraints that affect contract performance, all required documents, certificates of insurance and bonds shall be provided to the City within ten (10) calendar days following award or date of request by City, whichever is later. Any failure to comply may result in bid being declared non-responsive and rejected, and at City's option, the bid bond may be attached for damages suffered.

37. Discounts:

- (a) Prompt payment discounts will not be considered in evaluating bids for award. However, offered discounts will be taken if payment is made within the discount period, even though not considered in the evaluation of bids.
- (b) In connection with any discount offered, time will be computed from date of delivery and acceptance, or invoice receipt, whichever is later. Payment is deemed to be made for the purpose of earning the discount on the date of mailing of the City check.
- (c) Any discount offered other than for prompt payment should be included in the net price quoted and not included in separate terms. In the event this is not done, the City reserves the right to accept the discount offered and adjust prices accordingly on the Purchase Order.

38. Seller's Invoice:

Invoices shall be prepared and submitted in duplicate to the address shown on the Purchase Order. Separate invoices are required for each Purchase Order. Invoices shall contain the following information: Purchase Order number, item number, description of supplies or services, sizes, unit of measure, quantity, unit price and extended totals.

39. Inspection and Acceptance:

Inspection and acceptance will be at destination unless specified otherwise, and will be made by the City department shown in the shipping address or other duly authorized representative of the City. Until delivery and acceptance, and after any rejection, risk of loss will be on the bidder unless loss results from negligence of the City.



40. Lost and Damaged Shipments:

Risk of loss or damage to items prior to the time of their receipt and acceptance by the City is upon the bidder. The City has no obligation to accept damaged shipments and reserves the right to return at the bidder's expense damaged merchandise even though the damage was not apparent or discovered until after receipt of the items.

41. Late Shipments:

Bidder is responsible to notify the City department receiving the items and the Purchasing Manager of any late or delayed shipments. The City reserves the right to cancel all or any part of an order if the shipment is not made as promised.

42. Document Ownership:

All technical documents and records originated or prepared pursuant to this contract, including papers, reports, charts, and computer programs, shall be delivered to and become the exclusive property of the City and may be copyrighted by the City. Bidder assigns all copyrights to City by undertaking this agreement.

43. Advertisements, Product Endorsements:

City employees and agencies or organizations funded by the City of Sparks are prohibited from making endorsements, either implied or direct, of commercial products or services without written approval of the City Manager. No bidder may represent that the City of Sparks has endorsed their product or service without prior written approval.

44. Vendor Workplace Policies

No Vendor providing a service, program or activity to the public on behalf of the City shall discriminate against any person because of sex, race, color, creed, national origin or disability. Vendor, if providing a service, program or activity to the public on behalf of the City, shall comply with the Americans with Disability Act and City's policies pursuant thereto when providing said service, program or activity.

The City of Sparks is an Affirmative Action/Equal Opportunity Employer. Bidders shall be cognizant of the requirements for compliance with Executive Order 11246, entitled "Equal Employment Opportunity" as amended by Executive Order 11375 and as supplemented in regulations of the U.S. Department of Labor (41 CFR part 60).

45. Business License Requirement:

All companies doing business with, or within, the City of Sparks are required to obtain and maintain a current business license from the City of Sparks prior to the commencement of work per Sparks Municipal Code Section 5.08.020A. Bidder(s) awarded a contract resulting from this bid shall be required to obtain a current business license if they do not already possess one.

46. City Provisions to Prevail:

Except as indicated in the specifications, the City's standard General Conditions shall govern any contract award. Any standard terms and conditions of bidder submitted by bidder shall not be acceptable to City unless expressly agreed to by the City. The City reserves the right to reject bidder's bid as non-responsive, to consider the bid without bidder's standard terms and conditions, or to require bidder to delete reference to such, as a condition of evaluation or award of the bid. If, after award of contract, bidder (contract vendor) provides materials or services accompanied by new or additional standard terms or conditions, they too shall be considered void and City may require deletion as a further condition of performance by vendor.

General Conditions



47. Invalid Provisions:

In the event that any one or more of the provisions of this agreement shall be found to be invalid, illegal or unenforceable, the remaining provisions shall remain in effect and be enforceable.

48. Amendments and Modifications:

The Purchasing Manager may at any time, by written order, and without notice to the sureties, make a modification to the contract or an amendment to the Purchase Order, within the general scope of this contract, in (1) quantity of materials or service, whether more or less; (2) drawings, designs, or specifications, where the supplies to be furnished are to be specially manufactured for the City; (3) method of shipment or packing; and (4) place of delivery. If any such change causes an increase or decrease in the cost or the time required for the performance of this contract, an equitable adjustment shall be made by written modification of the contract or amendment to the Purchase Order. Any claim by the bidder for adjustment under this clause must be asserted within 30 calendar days from the notification date.

49. Assignment:

Vendor shall not assign or delegate duties or responsibilities under this agreement, in whole or in part, without prior written approval of the City.

50. Disputes After Award:

Except as otherwise provided in these provisions, any dispute concerning a question of fact arising under this contract which is not disposed of by agreement shall be decided by the Purchasing Manager, who shall reduce this decision to writing and mail a copy to the bidder. The decision of the Purchasing Manager shall be final and conclusive, unless bidder requests arbitration within ten (10) calendar days. Pending final decision of a dispute, the bidder shall proceed diligently with the performance of the contract and in accordance with the Purchasing Manager's decision.

51. Arbitration after Award:

Any and all disputes, controversies or claims arising under or in connection with the contract resulting from this bid, including without limitation, fraud in the inducement of this Contract, or the general validity or enforceability of this Contract, shall be governed by the laws of the State of Nevada without giving effect to conflicts of law principles, may be submitted to binding arbitration before one arbitrator, and shall be conducted in accordance with the Commercial Arbitration Rules of the American Arbitration Association in a private manner in Washoe County, Nevada. This award shall be final and judgment may be entered upon it in any court having jurisdiction thereof. In reaching this final award, the arbitrator shall have no authority to change or modify any provision of this Contract. All other expenses of arbitration shall be borne equally by the parties. All fees, including legal fees, shall be borne by the party who incurred them. All costs of enforcement shall be borne by the losing party. Each party shall have the right to discovery in accordance with the Nevada Rules of Civil Procedure.

52. Lawful Performance:

Vendor shall abide by all Federal, State and Local Laws, Ordinances, Regulations, and Statutes as may be related to the performance of duties under this agreement. In addition, all applicable permits and licenses required shall be obtained by the vendor, at vendor's sole expense.

53. Annual Appropriation of Funds:

Multi-year term supply and service contracts and leases are subject to annual appropriation of funds by the City Council. The City plans and makes appropriations to the City Budget with respect to a fiscal year that starts

General Conditions



July 1st and ends June 30th of each year. Payments made under term contracts and leases are considered items of current expense. Purchase Orders are funded when issued; therefore, they are current expense items and are not subject to any subsequent appropriation of funds.

Continuance of a multi-year contract beyond the limits of funds available shall be contingent upon appropriation of the requisite funds in the ensuing fiscal year and the termination of this contract due to lack of appropriation shall be without penalty.

54. Extension:

When in the City's best interest, this agreement may be extended on a daily, month-to-month, or annual basis by mutual agreement of both parties. Services and/or materials received under an extension shall be in accordance with pricing, terms, and conditions, as described herein.

55. Termination:

The City may terminate this agreement and be relieved of any consideration to the vendor should vendor fail to perform in the manner required. Furthermore, the City may terminate this agreement for any reason without penalty upon giving thirty (30) days written notice to the vendor. In the event of termination, the full extent of City liability shall be limited to an equitable adjustment and payment for materials and/or services authorized by and received to the satisfaction of the City prior to termination.

56. Venue:

This agreement shall be governed by and interpreted according to the laws of the State of Nevada, and venue for any proceeding shall be in Washoe County.

Special Conditions and Specifications (Specific to Project)

In instances where the Special Conditions conflict with the General Conditions, the Special Conditions will prevail with respect to that instance or item(s).

SPECIAL PROVISIONS
RECREATION GYM RESTROOM REMODEL – FEDERALLY FUNDED
BID #22/23-016 / PWP# WA-2023-109

These Special Provisions supplement and modify the "Standard Specifications for Public Works Construction" Latest Edition, and adopted by the City of Sparks, Nevada. All the requirements and provisions of said Standard Specifications shall apply except where modified by the plans and these Special Provisions. **Orange Book Section 100.12 Contract – The last paragraph “The Bidder to whom award is made, shall not subcontract more than 50 percent of the total cost of the project”, does not apply to this project.**
SEE SECTION 20 FOR ASBESTOS ABATEMENT.

SECTION 1: SCOPE OF WORK

Work Scope: This project includes, but is not limited to asbestos abatement and demolition of existing fixtures, sheetrock, plumbing, mechanical and lighting; installation of new lighting, mechanical, plumbing, fixtures, doors, sheetrock, painting, new resinous floor and associated work, along with any other miscellaneous associated work activities necessary to complete the project as stated in the plans and bid documents. The location of the work is at Sparks Recreation Gym (98 Richards Way, Sparks, NV 89431) located within the City of Sparks, Washoe County, Nevada, and is more specifically designated in the plans for this project

SECTION 2: SPECIAL PROVISIONS

The requirements set forth in these “Special Provisions” shall be used in addition to those set forth in “Standard Specifications for Public Works Construction”.

SECTION 3: PREBID CONFERENCE

A Pre-Bid conference will be held at the Sparks Recreation Gym (98 Richards Way, Sparks, NV 89431) on Tuesday, December 6, 2022 at 10:00 A.M.

SECTION 4: NOTICE TO PROCEED AND TIME SCHEDULE

An official "Notice to Proceed" specifying the date by which construction operations shall be started will be issued in writing and delivered to the CONTRACTOR by the City at the Pre-construction Meeting. Contract time will begin on the date specified in the "Notice to Proceed", unless operations begin at an earlier date, in which case the date that such operations begin will apply. The CONTRACTOR shall immediately begin and diligently prosecute the work to completion. The CONTRACTOR shall obligate himself to complete the work within the stated time limits. All work described in this document shall be completed within **sixty (60) calendar days** from the time of issuance of the Notice to Proceed.

SECTION 5: LIQUIDATED DAMAGES

In case all work called for under the contract is not completed before or upon the expiration of the time limits set forth above, it is agreed by the parties to the contract that damage will be sustained by the City and that it will be impracticable to determine accurately the actual damage the City will sustain in the event of any such delay. Therefore, the CONTRACTOR shall pay to the City:

- FIVE HUNDRED DOLLARS (\$500.00) for each and every calendar day delay after the one hundred twenty (120) calendar day completion time limit.

In finishing the work in excess of the dates prescribed and the City shall further have the right to charge to the CONTRACTOR, his heirs, assigns or sureties and to deduct from the final payment for the work, all or any part as it may deem proper of the actual cost of which are directly chargeable to the contract and

which accrue during the period of such extensions, except that the cost of the final surveys and preparation of final estimate shall not be included in such charges.

The City may deduct this amount from any money due or that may become due the CONTRACTOR under the contract. This payment shall not be considered as a penalty, but as liquidated damages suffered by the City on account of the failure of the CONTRACTOR to complete the work within the time limit of the contract.

SECTION 6: EXCUSABLE DELAYS

The CONTRACTOR shall not be assessed with liquidated damage nor the cost of the Project Manager and inspection during any delay in the completion of the work caused by acts of God, the public enemy, fire, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather, or due to such causes, provided that the CONTRACTOR shall within ten (10) days from the beginning of such delay notify the Project Manager in writing of the causes of delay. The Project Manager's findings of the facts thereon shall be final and conclusive.

SECTION 7: INTENT OF THE PLANS AND SPECIFICATIONS

The intent of the plans and specifications is to prescribe a complete outline of work, which the CONTRACTOR undertakes to do in full compliance with the contract.

The CONTRACTOR shall furnish all required materials, equipment, tools, labor and incidentals, unless otherwise provided in the contract and shall include the cost of these items in the contract unit prices for the several units of work. All items of work called for on the plans or in the specifications and not included as a separate item in the proposal shall be considered as incidental to the other items listed in the proposal and the payment for such incidental items shall be considered as included in the contract unit prices bid.

SECTION 8: AUTHORITY OF THE PROJECT MANAGER AND INSPECTOR

All work shall be done under the supervision of the Project Manager acting on behalf of the City. The Project Manager shall decide all questions that arise as to the quality and acceptability of materials furnished, work performed, manner of performance, rates of progress, interpretation of the plans and specifications, acceptable fulfillment of the contract and compensation under the specifications. He shall determine the amount of work performed and materials furnished, and his decision and estimate shall be final. The Project Managers estimate shall be "condition precedent" to the right of the CONTRACTOR to receive money due him under the contract. The Project Manager does not have authority to authorize changes in plans and specifications without prior written approval of the Engineer.

The City shall provide an inspector who will represent the City and shall make inspections of all work, sample and test materials and do such other work relative to supervision of the project as he may be assigned by the City. All instructions given by the inspector are subject to approval by the Project Manager and the Engineer. The Contractor shall take direction only from the Project Manager and Inspector.

SECTION 9: CHANGE ORDERS

The City of Sparks reserves the right to make alterations or supplements to the Contract. Change Order Forms are required for all changes in decreases and/or increases of quantities and/or dollar amount changes in accordance with the Standard Specifications and required by the City of Sparks.

SECTION 10: COOPERATION WITH OTHER CONTRACTORS

The CONTRACTOR shall coordinate with other CONTRACTOR's who may be employed by the City or private developers on construction of other work adjacent to or in the proximity of the location of the project.

SECTION 11: DISPOSAL OF EXCESS AND WASTE MATERIALS

Trash and construction debris during construction shall become the property of the CONTRACTOR and shall be removed by the CONTRACTOR and shall be legally disposed of offsite in accordance with all federal, state and local regulations.

SECTION 12: LIMITS OF CONTRACTOR'S OPERATIONS

If the CONTRACTOR's operations result in damage to any publicly or privately owned, the CONTRACTOR shall, at his expense, repair such damage or indemnify the owner of the damaged property.

At no time will the CONTRACTOR be allowed to store debris or materials on the public streets overnight. Materials will be allowed to be stored onsite with the approval and direction of the City Project Representative.

SECTION 13: MEASUREMENT FOR PAYMENT

The total amount payable under this contract shall be determined by the percentage of the work performed and determined from prices as furnished by the CONTRACTOR in the schedule of prices contained in his proposal. The percentage of work performed shall be determined by the Project Manager. Monthly billing shall be broken out to reflect each bid item as provided in this bid.

SECTION 14: PRECONSTRUCTION CONFERENCE

After the execution of the contract, but prior to the commencement of any work, a preconstruction conference between the CONTRACTOR and the city will be held at a mutually acceptable time and place.

SECTION 15: WORKING DAY, WORK HOURS, SATURDAY, SUNDAY, HOLIDAY AND OVERTIME WORK

The CONTRACTOR's normal working hours shall be from 7:00 A.M. until 7:00 P.M., Monday through Friday unless otherwise required by these specifications or approved in writing by the City Project Manager when requested in writing by the CONTRACTOR. The CONTRACTOR shall not commence Construction operations before seven o'clock (7:00 A.M. Pacific Time) each working day except as directed by the City Project Manager and as specified herein.

The CONTRACTOR shall not perform any contract work on Saturday, Sunday, legal Holidays and outside of the twelve (12) hours available during a regular working day except as directed and/or approved by the city Project Manager and as specified herein.

If the CONTRACTOR plans to perform work outside of the twelve (12) hours available during a regular working day, the CONTRACTOR shall first obtain approval from the City Project Manager at least twenty-four (24) hours prior to commencing such overtime work. If the CONTRACTOR plans to perform work on Saturday or Sunday, he/she shall obtain approval by the Thursday prior to work on the Saturday or Sunday for which work is planned. If the CONTRACTOR plans to perform work on a legal Holiday, he/she shall first obtain approval from the City Project Manager at least 48 hours in advance.

The CONTRACTOR shall be charged for all of City of Sparks' employee(s) time spent for overtime, Saturday, Sunday or Holiday work, based on the employee's hourly rate, plus benefits. The

CONTRACTOR will be notified of the costs incurred and if the payment is not made, such costs will be deducted from any payment due to the CONTRACTOR.

The City of Spark recognizes the following legal Holidays:

January 1	New Year's Day
3 rd Monday in January	Martin Luther King, Jr. Birthday
3 rd Monday in February	President's Day
Last Monday in May	Memorial Day
June 19	Juneteenth Day
July 4	Independence Day
1 st Monday in September	Labor Day
Last Friday in October	Nevada Day
November 11	Veteran's Day
4 th Thursday in November	Thanksgiving Day
4 th Friday in November	Family Day (day after Thanksgiving)
December 25	Christmas Day

SECTION 16: SUBMITTALS

Submittals for the following items shall be provided at the time of the preconstruction meeting. Submittals shall be submitted by electronic pdf.

- Construction Schedule and a plan for completing the remodel in sixty (60) calendar days.
- Lighting.
- Mechanical Items.
- Resinous Flooring
- Doors.
- Hardware.
- Bathroom fixtures.

SECTION 17: CLEANUP AND DUST CONTROL

At completion of the workday, the Contractor shall clean up all waste material, excess materials, and trash.

SECTION 18: FORCE ACCOUNT

Force Account items as defined by the City of Sparks will be additions to the contract arising within the course and scope of the contract for incidental costs due to unforeseen circumstances.

Any force account items shall be adjusted daily upon report sheets, furnished to the Project Manager by the CONTRACTOR and signed by both parties. These daily reports shall thereafter be considered the true record of force account items for unforeseen circumstances. No additional incidental work shall be performed or made except upon a written order from the Project Manager.

SECTION 19: INSURANCE AND INDEMNIFICATION

The CONTRACTOR shall not commence any work nor permit a Subcontractor to commence work on this project until satisfactory proof has been presented to the City of Sparks Purchasing Division that all insurance requirements as outlined by the City have been met.

The CONTRACTOR shall provide and maintain, during the effective life of the awarded contract, Comprehensive General Liability Insurance covering the CONTRACTOR and the City of Sparks.

SECTION 20: ASBESTOS ABATEMENT

Asbestos testing has been completed in the restroom remodel area and the area does include asbestos. All areas within the restroom remodel areas and as required to complete the project shall be abated for asbestos as required by RiskNomics. All asbestos abatement required to complete the project per the plans and bid specifications, and as stated in the asbestos report shall be included in this bid and be the responsibility of the contractor.

BID ITEM CLARIFICATIONS
RECREATION GYM RESTROOM REMODEL-FEDERALLY FUNDED
BID #22/23-016 / PWP #WA-2023-109

Bid Item 1: Remodel the existing restroom in the north end of the Recreation Gym building

The lump sum unit price bid for this item shall include asbestos abatement and demolition of existing fixtures, sheetrock, plumbing, mechanical and lighting; installation of new lighting, mechanical, plumbing, fixtures, doors, sheetrock, painting, new resinous floor and associated work, as shown on the plans and bid specifications, including all labor, equipment, materials and all necessary incidentals. This item payment shall be on a per lump sum basis.

SEE SECTION 20 OF THE SPECIAL PROVISIONS FOR ASBESTOS ABATEMENT.

See Plans and Technical Specifications.

Bid Item 2: Force Account

A force account has been established for this project and shall be included in each bid. The force account will be utilized only as necessary for extra work authorized and approved in advance by the City of Sparks representative as per Special Provision Section 18. Contractor shall refer to Special Provision Section 18.



Sparks Recreation Center

Restroom Renovation

98 Richards Way
Sparks, Nevada



H+K ARCHITECTS

5485 Reno Corporate Drive, Suite 100
Reno, Nevada 89511-2262

P 775+332+6640
F 775+332+6642

hkarchitects.com

October 31, 2022

H+K Project No. 2222

Product Specifications

SECTION 000100 – PROJECT MANUAL INDEX

000100 Project Manual Index

DIVISION 06 WOOD AND PLASTICS

066400 Plastic Paneling

DIVISION 07 THERMAL AND MOISTURE PROTECTION

072100 Thermal Insulation

DIVISION 08 DOORS AND WINDOWS

081113 Steel Doors and Frames

DIVISION 09 FINISHES

092216 Non-Structural Metal Framing

092900 Gypsum Board

096723 Resinous Flooring

099600 High-Performance Coating

DIVISION 10 SPECIALTIES

102113 Metal Toilet Compartments

DIVISION 22 PLUMBING

220000 Plumbing

220500 Basic Materials and Methods for Plumbing

220520 Operation and Maintenance of Plumbing Systems

220530 Hangers and Supports for Plumbing Systems

220700 Plumbing Insulation

220800 Testing, Adjusting, and Balancing of Plumbing Systems

220900 Plumbing Fixtures and Trim

221000 Facility Water Distribution

221300 Facility Sanitary Sewerage

223600 Electric Water Heaters

DIVISION 23 HEATING, VENTILATING AND AIR CONDITIONING

230000 Heating, Ventilating, and Air Conditioning

230520 Operation and Maintenance of HVAC Systems

230530 Hangers and Supports for HVAC Systems

230800 Testing, Adjusting, and Balancing of HVAC Systems

233100 HVAC Ductwork

233110 HVAC Ductwork Accessories

233700 Air Outlets and Inlets

END OF SECTION 000100

SECTION 066400 - PLASTIC PANELING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes glass-fiber reinforced plastic (FRP) wall paneling and trim accessories.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.

1.3 QUALITY ASSURANCE

- A. Source Limitations: Obtain plastic paneling and trim accessories from single manufacturer.
- B. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - 1. Flame-Spread Index: 25 or less.
 - 2. Smoke-Developed Index: 450 or less.
 - 3. Testing Agency: UL.

1.4 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install plastic paneling until HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.

PART 2 - PRODUCTS

2.1 PLASTIC SHEET PANELING

- A. General: Gelcoat-finished, glass-fiber reinforced plastic panels complying with ASTM D 5319.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Kemlite Company Inc.
 - b. Marlite.
 - c. Nudo Products, Inc.
 - 2. Nominal Thickness: Not less than 0.09 inch (2.3 mm).
 - 3. Surface Finish: 8x4 running bond tile pattern with smooth faces.
 - 4. Color: White

2.2 ACCESSORIES

- A. Trim Accessories: Manufacturer's standard one-piece vinyl extrusions designed to retain and cover edges of panels. Provide division bars, inside corners, outside corners, and caps as needed to conceal edges.
 - 1. Color: Match panels.
- B. Exposed Fasteners: Nylon drive rivets recommended by panel manufacturer. Allowed only with Architect's approval.
- C. Concealed Mounting Splines: Continuous, H-shaped aluminum extrusions designed to fit into grooves routed in edges of factory-laminated panels and to be fastened to substrate.
- D. Adhesive: As recommended by plastic paneling manufacturer.
 - 1. Adhesive shall have a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
- E. Sealant: Latex sealant recommended by plastic paneling manufacturer and complying with requirements in Division 7 Section "Joint Sealants."
 - 1. Sealant shall have a VOC content of 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work. Verify CMU surfaces have been prepared for a smooth panel installation.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Remove materials that might interfere with adhesive bond.
- B. Prepare substrate by sanding high spots and filling low spots as needed to provide flat, even surface for panel installation.
- C. Clean substrates of substances that could impair bond of adhesive, including oil, grease, dirt, and dust.
- D. Condition panels by unpacking and placing in installation space before installation according to manufacturer's written recommendations.

- E. Lay out paneling before installing. Locate panel joints so that trimmed panels at corners are not less than 12 inches (300 mm) wide.
 - 1. Mark plumb lines on substrate at panel joint locations for accurate installation, and locate trim accessories to allow clearance at panel edges per manufacturer's instructions.

3.3 INSTALLATION

- A. Install plastic paneling according to manufacturer's written instructions.
- B. Install panels in a full spread of adhesive.
- C. Install trim accessories with adhesive and nails or staples. Do not fasten through panels.
- D. Fill grooves in trim accessories with sealant before installing panels and bed inside corner trim in a bead of sealant.
- E. Maintain uniform space between panels and wall fixtures. Fill space with sealant.
- F. Remove excess sealant and smears as paneling is installed. Clean with solvent recommended by sealant manufacturer and then wipe with clean dry cloths until no residue remains.

END OF SECTION 066400

SECTION 072100 – THERMAL INSULATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Foam-plastic board insulation.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for each product.
- C. Research/Evaluation Reports: For foam-plastic insulation, from ICC-ES.

1.3 QUALITY ASSURANCE

- A. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Protect insulation materials from physical damage and from deterioration due to moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.
- B. Protect foam-plastic board insulation as follows:
 - 1. Do not expose to sunlight except to necessary extent for period of installation and concealment.
 - 2. Protect against ignition at all times. Do not deliver foam-plastic board materials to Project site before installation time.
 - 3. Quickly complete installation and concealment of foam-plastic board insulation in each area of construction.

PART 2 - PRODUCTS

2.1 FOAM-PLASTIC BOARD INSULATION

- A. Foil-Faced, Polyisocyanurate Board Insulation: ASTM C 1289, Type I, Class 1, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, per ASTM E 84.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Atlas Roofing Corporation.
 - b. Dow Chemical Company (The).
 - c. Rmax, Inc.
 2. Thickness: 2-1/2".
 3. Thermal Resistance: R-8 minimum
 4. Fire Propagation Characteristics: Passes NFPA 285 testing as part of an approved assembly.
 5. Insulation shall meet requirements to allow for exposed use without the need for a thermal barrier where exposed in construction. Product must pass NFPA 286, FM 4880 or UL 1715.
 6. Labeling: Provide identification of mark indicating R-value of each piece of insulation 12-inches or wider in width.
- B. Adhesive for Bonding Insulation: Product with demonstrated capability to bond insulation securely to substrates without damaging insulation and substrates.

2.2 INSULATION FASTENERS

- A. Adhesively Attached, Spindle-Type Anchors: Plate welded to projecting spindle; capable of holding insulation of specified thickness securely in position indicated with self-locking washer in place.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. AGM Industries, Inc.; Series T TACTOO Insul-Hangers.
 - b. Gemco; Spindle Type.
 2. Plate: Perforated, galvanized carbon-steel sheet, 0.030-inch (0.762 mm) thick by 2 inches (50 mm) square.
 3. Spindle: Copper-coated, low-carbon steel; fully annealed; 0.105 inch (2.67 mm) in diameter; length to suit depth of insulation indicated.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Clean substrates of substances that are harmful to insulation or vapor retarders, including removing projections capable of puncturing vapor retarders, or that interfere with insulation attachment.

3.2 INSTALLATION, GENERAL

- A. Comply with insulation manufacturer's written instructions applicable to products and applications indicated.

- B. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed to ice, rain, or snow at any time.
- C. Extend insulation to envelop entire area to be insulated. Cut and fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.
- D. Provide sizes to fit applications indicated and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units to produce thickness indicated unless multiple layers are otherwise shown or required to make up total thickness.

3.3 INSTALLATION OF CAVITY-WALL INSULATION

- A. Foam-Plastic Board Insulation: Install pads of adhesive spaced approximately 24 inches (610 mm) o.c. both ways on inside face, and as recommended by manufacturer. Fit courses of insulation between wall ties and other obstructions, with edges butted tightly in both directions. Press units firmly against inside substrates.

1. Supplement adhesive attachment of insulation by securing boards with two-piece wall ties designed for this purpose and specified in Division 4 Section "Unit Masonry Assemblies."

3.4 INSTALLATION OF INSULATION FOR FRAMED CONSTRUCTION

- A. Apply insulation units to substrates by method indicated, complying with manufacturer's written instructions. If no specific method is indicated, bond units to substrate with adhesive or use mechanical anchorage to provide permanent placement and support of units.
- B. Foam-Plastic Board Insulation: Seal joints between units by applying adhesive, mastic, or sealant to edges of each unit to form a tight seal as units are shoved into place. Fill voids in completed installation with adhesive, mastic, or sealant as recommended by insulation manufacturer.

3.5 PROTECTION

- A. Protect installed insulation and vapor retarders from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

END OF SECTION 072100

SECTION 081113 - STEEL DOORS AND FRAMES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Hollow metal doors.
2. Hollow metal door frames.

B. Related Requirements:

1.2 DEFINITIONS

A. Minimum Thickness: Minimum thickness of base metal without coatings according to NAAMM-HMMA 803 or SDI A250.8.

1.3 SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, core descriptions, temperature-rise ratings, and finishes.

B. Shop Drawings: Include the following:

1. Elevations of each door type.
2. Details of doors, including vertical- and horizontal-edge details and metal thicknesses.
3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
4. Locations of reinforcement and preparations for hardware.
5. Details of each different wall opening condition.
6. Details of anchorages, joints, field splices, and connections.
7. Details of accessories.
8. Details of moldings, removable stops, and glazing.

C. Product Test Reports: For each type of hollow-metal door and frame assembly, for tests performed by a qualified testing agency.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver hollow-metal work palletized, packaged, or crated to provide protection during transit and Project-site storage. Do not use nonvented plastic.

B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.

C. Store hollow-metal work vertically under cover at Project site with head up. Place on minimum 4-inch-high wood blocking. Provide minimum 1/4-inch space between each stacked door to permit air circulation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Ceco Door Products; an Assa Abloy Group company.
 2. North American Door Corp.
 3. Premier Products, Inc.
 4. Steelcraft; an Ingersoll-Rand company.
- B. Source Limitations: Obtain hollow-metal work from single source from single manufacturer.

2.2 INTERIOR DOORS AND FRAMES

- A. Construct interior doors and frames to comply with the standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.
- B. Extra-Heavy-Duty Doors and Frames: SDI A250.8, Level 3. .
1. Physical Performance: Level A according to SDI A250.4.
 2. Doors:
 - a. Type: As indicated in the Door and Frame Schedule.
 - b. Thickness: 1-3/4 inches.
 - c. Face: Uncoated, cold-rolled steel sheet, minimum thickness of 0.053 inch. Edge Construction: Model 2, Seamless
 - d. Core: Manufacturer's standard kraft-paper honeycomb, polystyrene, polyurethane, polyisocyanurate, mineral-board, or vertical steel-stiffener core at manufacturer's discretion.
 3. Frames:
 - a. Materials: Uncoated, steel sheet, minimum thickness of 0.053 inch.
 - b. Construction: Full profile welded, ground smooth to match frame texture.
 4. Exposed Finish: Prime.

2.3 FRAME ANCHORS

- A. Jamb Anchors:
1. Postinstalled Expansion Type for In-Place Concrete or Masonry: Minimum 3/8-inch-diameter bolts with expansion shields or inserts. Provide pipe spacer from frame to wall, with throat reinforcement plate, welded to frame at each anchor location.
 2. Drill, dimple, patch and sand frame at all bolt locations prior to painting.
- B. Floor Anchors: Formed from same material as frames, minimum thickness of 0.042 inch, and as follows:
1. Monolithic Concrete Slabs: Clip-type anchors, with two holes to receive fasteners.

2.4 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.
- B. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.
- C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B.
- D. Frame Anchors: ASTM A 879/A 879M, Commercial Steel (CS), 04Z coating designation; mill phosphatized.
 - 1. For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M, hot-dip galvanized according to ASTM A 153/A 153M, Class B.
- E. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.
- F. Power-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hollow-metal frames of type indicated.
- G. Grout: ASTM C 476, except with a maximum slump of 4 inches, as measured according to ASTM C 143/C 143M.

2.5 FABRICATION

- A. Fabricate hollow-metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for metal thickness. Where practical, fit and assemble units in manufacturer's plant. To ensure proper assembly at Project site, clearly identify work that cannot be permanently factory assembled before shipment.
- B. Hollow-Metal Doors:
 - 1. Vertical Edges for Single-Acting Doors: Provide beveled or square edges at manufacturer's discretion.
 - 2. Top Edge Closures: Close top edges of doors with inverted closures, except provide flush closures at exterior doors of same material as face sheets.
 - 3. Bottom Edge Closures: Close bottom edges of doors where required for attachment of weather stripping with end closures or channels of same material as face sheets.
 - 4. Exterior Doors: Provide weep-hole openings in bottoms of exterior doors to permit moisture to escape. Seal joints in top edges of doors against water penetration.
 - 5. Astragals: Provide overlapping astragal on one leaf of pairs of doors where required by NFPA 80 for fire-performance rating or where indicated. Extend minimum 3/4 inch beyond edge of door on which astragal is mounted or as required to comply with published listing of qualified testing agency.

- C. Hollow-Metal Frames: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.
 - 1. Floor Anchors: Weld anchors to bottoms of jambs with at least four spot welds per anchor; however, for slip-on drywall frames, provide anchor clips or countersunk holes at bottoms of jambs.
 - 2. Jamb Anchors: Provide number and spacing of anchors as follows:
 - a. Postinstalled Expansion Type for In-Place Concrete or Masonry: Locate anchors not more than 6 inches from top and bottom of frame. Space anchors not more than 26 inches o.c.
 - 3. Head Anchors: Two anchors per head for frames more than 42 inches wide and mounted in metal-stud partitions.
- D. Fabricate concealed stiffeners and edge channels from either cold- or hot-rolled steel sheet.
- E. Hardware Preparation: Factory prepare hollow-metal work to receive templated mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to SDI A250.6, the Door Hardware Schedule, and templates.
 - 1. Reinforce doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.
 - 2. Comply with applicable requirements in SDI A250.6 and BHMA A156.115 for preparation of hollow-metal work for hardware.

2.6 STEEL FINISHES

- A. Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.
 - 1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with SDI A250.10; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine roughing-in for embedded and built-in anchors to verify actual locations before frame installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Install hollow-metal work plumb, rigid, properly aligned, and securely fastened in place. Comply with Drawings and manufacturer's written instructions.

- B. Hollow-Metal Frames: Install hollow-metal frames of size and profile indicated. Comply with SDI A250.11 or NAAMM-HMMA 840 as required by standards specified.
 - 1. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces, leaving surfaces smooth and undamaged.
 - a. Remove temporary braces necessary for installation only after frames have been properly set and secured.
 - b. Check plumb, square, and twist of frames as walls are constructed. Shim as necessary to comply with installation tolerances.
 - 2. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, and secure with postinstalled expansion anchors.
 - a. Floor anchors may be set with power-actuated fasteners instead of postinstalled expansion anchors if so indicated and approved on Shop Drawings.
 - 3. Installation Tolerances: Adjust hollow-metal door frames for squareness, alignment, twist, and plumb to the following tolerances:
 - a. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
 - b. Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
 - c. Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
 - d. Plumbness: Plus or minus 1/16 inch, measured at jambs at floor.

- C. Hollow-Metal Doors: Fit hollow-metal doors accurately in frames, within clearances specified below. Shim as necessary.
 - 1. Non-Fire-Rated Steel Doors:
 - a. Between Door and Frame Jambs and Head: 1/8 inch plus or minus 1/32 inch.
 - b. Between Edges of Pairs of Doors: 1/8 inch to 1/4 inch plus or minus 1/32 inch.
 - c. At Bottom of Door: 3/4 inch plus or minus 1/32 inch.
 - d. Between Door Face and Stop: 1/16 inch to 1/8 inch plus or minus 1/32 inch.

3.3 ADJUSTING AND CLEANING

- A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow-metal work that is warped, bowed, or otherwise unacceptable.
- B. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.
- C. Metallic-Coated Surface Touchup: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.
- D. Touchup Painting: Cleaning and touchup painting of abraded areas of paint are specified in painting Sections.

END OF SECTION 081113

SECTION 092216 - NON-STRUCTURAL METAL FRAMING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Non-load-bearing steel framing systems for interior gypsum board assemblies.

B. Related Requirements:

1. Division 7 Section "Building Insulation" for insulation installed with Z-shaped furring members.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.

1.3 INFORMATIONAL SUBMITTALS

- A. Evaluation Reports: For firestop tracks, from ICC-ES.

PART 2 - PRODUCTS

2.1 FRAMING SYSTEMS

- A. Framing Members, General: Comply with ASTM C 754 for conditions indicated.

1. Steel Sheet Components: Comply with ASTM C 645 requirements for metal unless otherwise indicated.
2. Protective Coating: Coating with equivalent corrosion resistance of ASTM A 653/A 653M, G40, hot-dip galvanized unless otherwise indicated.

- B. Studs and Runners: ASTM C 645. Use either steel studs and runners or dimpled steel studs and runners.

1. Steel Studs and Runners:

- a. Minimum Base-Metal Thickness: 0.0359 inch (0.9119mm) / 20 gauge.
- b. Depth: As indicated on Drawings. See "Dimpled Steel Studs and Runners" Article in the Evaluations for information about dimpled steel studs and runners.

- C. Slip-Type Head Joints: Where indicated, provide the following:
1. Deflection Track: Steel sheet top runner manufactured to prevent cracking of finishes applied to interior partition framing resulting from deflection of structure above; in thickness not less than indicated for studs and in width to accommodate depth of studs.
 - a. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - 1) Dietrich Metal Framing; SLP-TRK Slotted Deflection Track.
 - 2) MBA Building Supplies; Slotted Deflecto Track.
- D. Flat Strap and Backing Plate: Steel sheet for blocking and bracing in length and width indicated.
1. Minimum Base-Metal Thickness: 0.0598 inch / 16 gauge.

2.2 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that comply with referenced installation standards.
1. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.
- B. Isolation Strip at Exterior Walls: Provide one of the following:
1. Asphalt-Saturated Organic Felt: ASTM D 226, Type I (No. 15 asphalt felt), nonperforated.
 2. Foam Gasket: Adhesive-backed, closed-cell vinyl foam strips that allow fastener penetration without foam displacement, 1/8 inch thick, in width to suit steel stud size.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, cast-in anchors, and structural framing, for compliance with requirements and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Suspended Assemblies: Coordinate installation of suspension systems with installation of overhead structure to ensure that inserts and other provisions for anchorages to building structure have been installed to receive hangers at spacing required to support the Work and that hangers will develop their full strength.
1. Furnish concrete inserts and other devices indicated to other trades for installation in advance of time needed for coordination and construction.

3.3 INSTALLATION, GENERAL

- A. Installation Standard: ASTM C 754.
 - 1. Gypsum Board Assemblies: Also comply with requirements in ASTM C 840 that apply to framing installation.
- B. Install supplementary framing, and blocking to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.
- C. Install bracing at terminations in assemblies.
- D. Do not bridge building control and expansion joints with non-load-bearing steel framing members. Frame both sides of joints independently.

3.4 INSTALLING FRAMED ASSEMBLIES

- A. Install framing system components according to spacings indicated, but not greater than spacings required by referenced installation standards for assembly types.
- B. Where studs are installed directly against exterior masonry walls or dissimilar metals at exterior walls, install isolation strip between studs and wall.
- C. Install studs so flanges within framing system point in same direction.
- D. Install tracks (runners) at floors and overhead supports. Extend framing full height to structural supports or substrates above suspended ceilings except where partitions are indicated to terminate at suspended ceilings. Continue framing around ducts penetrating partitions above ceiling.
 - 1. Slip-Type Head Joints: Where framing extends to overhead structural supports, install to produce joints at tops of framing systems that prevent axial loading of finished assemblies.
 - 2. Door Openings: Screw vertical studs at jambs to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.
 - a. Install two studs at each jamb unless otherwise indicated.
 - b. Extend jamb studs through suspended ceilings and attach to underside of overhead structure.
 - 3. Other Framed Openings: Frame openings other than door openings the same as required for door openings unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.
- E. Direct Furring:
 - 1. Attach to concrete or masonry with stub nails, screws designed for masonry attachment, or powder-driven fasteners spaced 24 inches o.c.
- F. Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch from the plane formed by faces of adjacent framing.

END OF SECTION 092216

SECTION 092900 - GYPSUM BOARD

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Interior gypsum board.
2. Accessories for gypsum board assemblies.
3. Texture finishes.

B. Related Requirements:

1. Division 07 Section "Building Insulation" for insulation and vapor retarders installed in assemblies that incorporate gypsum board.
2. Division 09 Section "Non-Structural Metal Framing" for non-structural framing and suspension systems that support gypsum board panels.
3. Division 09 Section "High-Performance Coatings" for primers and finishes applied to interior gypsum board surfaces.

1.2 REFERENCES

- A. GA-216 "Recommended Specifications for the Application and Finishing of Gypsum Board"; Gypsum Association.
- B. Gypsum Construction Handbook; USG Corporation; latest edition.

1.3 ACTION SUBMITTALS

- A. Product Data: Manufacturer's product data for systems require, including installation instructions and data sufficient to show compliance with requirements.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Provide installation by a company specializing in work similar to that required on this project and with not less than 5 years of documented experience.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in original and unopened packages, containers, or bundles, with brand names and manufacturer's labels intact and legible.
- B. Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.

- C. Store corner bead and other metal and plastic accessories to prevent bending, sagging, distortion, or other mechanical damage.
- D. Damaged or deteriorated materials shall be removed from the premises and recycled to the greatest extent feasible.

1.6 FIELD CONDITIONS

- A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.
- B. Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.
 - 1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 - 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.
- C. Ventilation: Provide controlled ventilation during joint finishing operations, to eliminate excessive moisture. Avoid drafts during hot, dry weather to prevent excessively fast drying of joint compound.
- D. Temperature: Maintain temperature in areas of installation between 50 and 85 degrees F for at least 24 hours before installation begins and for not less than 48 hours after joint finishing has been completed.

PART 2 - PRODUCTS

2.1 GYPSUM BOARD, GENERAL

- A. Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

2.2 INTERIOR GYPSUM BOARD

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. American Gypsum.
 - 2. CertainTeed Corp.
 - 3. Georgia-Pacific Gypsum LLC.
 - 4. National Gypsum Company.
 - 5. USG Corporation.
- B. Moisture- and Mold-Resistant Gypsum Board: ASTM C 1396/C 1396M. With moisture- and mold-resistant core and paper surfaces.
 - 1. Core: 5/8 inch, Type X.
 - 2. Long Edges: Tapered.
 - 3. Mold Resistance: ASTM D 3273, score of 10.

2.3 TRIM ACCESSORIES

- A. Interior Trim: ASTM C 1047.
 - 1. Material: Galvanized or aluminum-coated steel sheet or rolled zinc.
 - 2. Shapes:
 - a. Cornerbead: 90-degree square edge, unless noted otherwise.
 - b. LC-Bead: J-shaped; exposed long flange receives joint compound.
 - c. L-Bead: L-shaped; exposed long flange receives joint compound.
 - d. U-Bead: J-shaped; exposed short flange does not receive joint compound.

2.4 JOINT TREATMENT MATERIALS

- A. General: Comply with ASTM C 475/C 475M.
- B. Joint Tape:
 - 1. Interior Gypsum Board: Paper.
 - 2. Resinous Backing Panels: As recommended by panel manufacturer.
- C. Joint Compound for Interior Gypsum Board: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.
 - 1. Prefilling: At open joints and damaged surface areas, use setting-type taping compound.
 - 2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use drying-type, all-purpose compound.
 - 3. Fill Coat: For second coat, use setting-type, sandable topping compound.
 - 4. Finish Coat: For third coat, use setting-type, sandable topping compound.

2.5 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.
- B. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.
 - 1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch thick.
 - 2. For fastening cementitious backer units, use screws of type and size recommended by panel manufacturer.

2.6 TEXTURE FINISHES

- A. Primer: As recommended by textured finish manufacturer.
- B. Non-Aggregate Finish: Pre-mixed, vinyl texture finish for spray application.
 - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. CertainTeed Corp.; ProRoc Easi-Tex Spray Texture.

- b. USG Corporation; BEADEx FasTex Wall and Ceiling Spray Texture.
2. Texture:
- a. Very light orange peel texture at all Level 3 finishes.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and substrates including welded hollow-metal frames and framing, with Installer present, for compliance with requirements and other conditions affecting performance.
- B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 APPLYING AND FINISHING PANELS, GENERAL

- A. Comply with ASTM C 840.
- B. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch of open space between panels. Do not force into place.
- C. Locate edge and end joints over supports. Do not place tapered edges against cut edges or ends. Do not make joints other than control joints at corners of framed openings.
- D. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide 1/4- to 1/2-inch-wide spaces at these locations and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.
- E. Attachment to Steel Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.

3.3 APPLYING INTERIOR GYPSUM BOARD

- A. Install interior gypsum board in the following locations:
 - 1. Wallboard Type: Type X moisture- and mold-resistant throughout.
- B. Single-Layer Application:
 - 1. On partitions/walls, apply gypsum panels horizontally (perpendicular to framing), and minimize end joints.
 - a. Stagger abutting end joints not less than one framing member in alternate courses of panels.
 - 2. Fastening Methods: Apply gypsum panels to supports with steel drill screws.

3.4 INSTALLING TRIM ACCESSORIES

- A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.
- B. Interior Trim: Install in the following locations:
 - 1. Cornerbead: Use at all outside corners.
 - 2. Reveal Trim: Use at transition from cement board to WR gypsum board.
 - 3. LC-Bead: Use where indicated.
 - 4. L-Bead: Use where indicated.
 - 5. U-Bead: Use at exposed panel edges.
- C. Aluminum Trim: Install in locations indicated above.

3.5 FINISHING GYPSUM BOARD

- A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.
- B. Prefill open joints and damaged surface areas.
- C. Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to receive tape.
- D. Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C 840:
 - 1. Level 3: Very light orange peel texture at all exposed surfaces.
 - 2. Level 2: Concealed FRP substrate locations.

3.6 APPLYING TEXTURE FINISHES

- A. Surface Preparation and Primer: Prepare and apply primer to gypsum panels and other surfaces receiving texture finishes. Apply primer to surfaces that are clean, dry, and smooth.
- B. Texture Finish Application: Mix and apply finish using powered spray equipment, to produce a uniform texture matching approved mockup and free of starved spots or other evidence of thin application or of application patterns.
- C. Prevent texture finishes from coming into contact with surfaces not indicated to receive texture finish by covering them with masking agents, polyethylene film, or other means. If, despite these precautions, texture finishes contact these surfaces, immediately remove droppings and overspray to prevent damage according to texture-finish manufacturer's written recommendations.

3.7 PROTECTION

- A. Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.
- B. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.
- C. Remove and replace panels that are wet, moisture damaged, and mold damaged.
 - 1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 - 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 092900

SECTION 096723 - RESINOUS FLOORING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Fluid applied urethane cement flooring and 6" integral formed epoxy cove base.
2. Joint and termination strips.
3. Joint and crack treatment.
4. Backing for urethane cement cove base.

1.2 QUALITY ASSURANCE

- A. Source Limitations: Obtain primary resinous flooring materials, including primers, resins, hardening agents, grouting coats, and topcoats, from single source from single manufacturer. Provide secondary materials, including patching and fill material, joint sealant, and repair materials, of type and from source recommended by manufacturer of primary materials.
- B. Installation shall be performed by an applicator with minimum 3 years experience in work of similar nature and scope. Installer must be approved by the manufacturer of the floor surfacing materials. The general contractor shall furnish a written statement from the manufacturer that the installer is acceptable..

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original packages and containers, with seals unbroken, bearing manufacturer's labels indicating brand name and directions for storage and mixing with other components.
- B. Store materials in dry protected area at a temperature between 60 and 80 degrees Fahrenheit.

1.4 PROJECT CONDITIONS

- A. Environmental Limitations: Comply with resinous flooring manufacturer's written instructions for substrate temperature, ambient temperature, moisture, ventilation, and other conditions affecting resinous flooring application.
- B. Lighting: Provide permanent lighting or, if permanent lighting is not in place, simulate permanent lighting conditions during resinous flooring application.
- C. Close spaces to traffic during resinous flooring application and for not less than 24 hours after application unless manufacturer recommends a longer period.
- D. Protect adjacent surfaces not scheduled to receive resinous flooring by masking, or by other means acceptable to manufacturer, to maintain these surfaces free of the resinous flooring materials.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. BASF Construction Chemicals, Inc.; BASF Building Systems.
 2. Dur-A-Flex, Inc.
 3. Key Resin Company.
 4. Pacific Polymers, Inc.
 5. PPG Industries, Inc.

2.2 DECORATIVE RESINOUS FLOORING

- A. Resinous Flooring: Abrasion-, impact- and chemical-resistant, decorative-aggregate-filled, epoxy-resin-based, monolithic floor surfacing designed to produce a seamless floor and integral cove base.
- B. System Characteristics:
1. Color and Pattern: Match recent restroom renovation.
 2. Wearing Surface: Textured for slip resistance.
 3. Overall System Thickness: 1/4 inch.
- C. System Description: Heavy duty, three-component urethane resin modified cementitious topping broadcast with colored quartz aggregate and sealed with chemical resistant clear epoxy.
- D. System Physical Properties: Provide resinous flooring system with the following minimum physical property requirements when tested according to test methods indicated:
1. Compressive Strength: 7,500 psi per ASTM C 579.
 2. Tensile Strength: 1,100 psi per ASTM C 307.
 3. Flexural Modulus of Elasticity: 2,600 psi per ASTM C 580.
 4. Coefficient of Thermal Expansion: 2×10^{-5} / degree F per ASTM C 531.
 5. Impact Resistance: No chipping, cracking, or delamination and not more than 1/16-inch permanent indentation per MIL-D-3134.
 6. Flammability: Self-extinguishing per ASTM D 635.
 7. Hardness: 80-85 Shore D per ASTM D 2240.
 8. Bond Strength: 300 psi minimum tensile strength, 100 percent concrete failure per ACI COMM #403.

2.3 ACCESSORIES

- A. Patching and Fill Material: Resinous product of or approved by resinous flooring manufacturer and recommended by manufacturer for application indicated.

PART 3 - EXECUTION

3.1 PREPARATION

- A. General: Prepare and clean substrates according to resinous flooring manufacturer's written instructions for substrate indicated. Provide clean, dry substrate for resinous flooring application. Remove existing applied finish flooring and prepare for resinous installation.
- B. Concrete Substrates: Provide sound concrete surfaces free of laitance, glaze, efflorescence, curing compounds, form-release agents, dust, dirt, grease, oil, and other contaminants incompatible with resinous flooring.
 - 1. Roughen concrete substrates as follows:
 - a. Comply with ASTM C 811 requirements unless manufacturer's written instructions are more stringent.
 - 2. Repair damaged and deteriorated concrete according to resinous flooring manufacturer's written instructions.
 - 3. Verify that concrete substrates are dry and moisture-vapor emissions are within acceptable levels according to manufacturer's written instructions.
 - 4. Alkalinity and Adhesion Testing: Verify that concrete substrates have pH within acceptable range. Perform tests recommended by manufacturer. Proceed with application only after substrates pass testing.
- C. Resinous Materials: Mix components and prepare materials according to resinous flooring manufacturer's written instructions.
- D. Use patching and fill material to fill holes and depressions in substrates according to manufacturer's written instructions.
- E. Treat control joints and other nonmoving substrate cracks to prevent cracks from reflecting through resinous flooring according to manufacturer's written instructions.

3.2 APPLICATION

- A. General: Apply components of resinous flooring system according to manufacturer's written instructions to produce a uniform, monolithic wearing surface of thickness indicated.
 - 1. Coordinate application of components to provide optimum adhesion of resinous flooring system to substrate, and optimum intercoat adhesion.
 - 2. Cure resinous flooring components according to manufacturer's written instructions. Prevent contamination during application and curing processes.
 - 3. At substrate expansion and isolation joints, comply with resinous flooring manufacturer's written instructions.
- B. Integral Cove Base: Apply cove base mix to wall surfaces before applying flooring. Apply according to manufacturer's written instructions and details including those for taping, mixing, priming, troweling, sanding, and topcoating of cove base. Round internal and external corners.
 - 1. Integral Cove Base: 6 inches high with 4 inch reveal and 2 inch lap under FRP.

- C. Apply broadcast three-component, self-leveling, urethane modified cementitious topping with broadcast quartz aggregate in thickness indicated for flooring system. Place mixture on floor and spread with a gauged straight edge to 1/4" or flat trowel.
- D. Leave a "wet line" or puddle of material between batches to avoid "knit-lines" in the finished system. Grind any ridges or lumps that form where material from adjacent batches may overlap after the first broadcast has curried.
- E. Back-roll the surface lightly with a loop roller while material is still wet, and broadcast colored quartz granules into the wet floor system until the surface of the system appears dry. Do not clump material or produce high spots.
- F. Spread chemical resistant epoxy over floor at manufacturer recommended rate, and allow to level for manufacturer recommended time period before broadcasting a second round of colored quartz granules into the wet epoxy until the surface of the system appears to be dry. Do not clump the material or produce high spots.
- G. Allow flooring system to cure for manufacturer recommended time period before removing excess quartz material, and spread grout and seal topcoat of epoxy as recommended by manufacturer.

3.3 PROTECTION

- A. Protect resinous flooring from damage and wear during the remainder of construction period. Use protective methods and materials, including temporary covering, recommended in writing by resinous flooring manufacturer.

END OF SECTION 096723

SECTION 099600 - HIGH-PERFORMANCE COATINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes surface preparation and application of high-performance coating systems.
 - 1. Interior Substrates:
 - a. Steel Substrates.
 - b. Gypsum board.

1.2 DEFINITIONS

- A. Gloss Level 5 (Semi Gloss): 35 to 70 units at 60 degrees, according to ASTM D 523.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include preparation requirements and application instructions. Provide printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.
- B. Samples: For each type of coating system and in each color indicated.

1.4 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Coatings: 5 percent, but not less than 1 gal. (3.8 L) of each material and color applied.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).
 - 1. Maintain containers in clean condition, free of foreign materials and residue.
 - 2. Remove rags and waste from storage areas daily.

1.6 FIELD CONDITIONS

- A. Apply coatings only when temperature of surfaces to be coated and surrounding air temperatures are between 50 and 95 deg F (10 and 35 deg C).
- B. Do not apply coatings when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Benjamin Moore & Co.
 2. PPG Paints, PPG Industries, Inc..
 3. ICI Paints.
 4. Kelly-Moore Paints.
 5. Sherwin-Williams Company (The).
- B. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to products listed in other Part 2 articles for the paint category indicated.

2.2 HIGH-PERFORMANCE COATINGS, GENERAL

- A. MPI Standards: Products shall comply with MPI standards indicated and shall be listed in its "MPI Approved Products Lists".
- B. Material Compatibility:
1. Provide materials for use within each coating system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
 2. For each coat in a coating system, provide products recommended in writing by manufacturers of topcoat for use in coating system and on substrate indicated.
 3. Provide products of same manufacturer for each coat in a coating system.
- C. Gloss Level 5 (Semi Gloss): 35 to 70 units at 60 degrees, according to ASTM D 523.
- D. Colors: Match Architect's samples.

2.3 INTERIOR PRIMERS/SEALERS

- A. Primer Sealer, Latex, Interior:

2.4 EPOXY COATINGS

- A. Epoxy-Modified Latex, Interior, Gloss (Gloss Level 5):

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
 - 1. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
 - a. Gypsum Board: 12 percent.
- B. Gypsum Board Substrates: Verify that finishing compound is sanded smooth.
- C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- D. Proceed with coating application only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.
- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
 - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection.
- C. Clean substrates of substances that could impair bond of coatings, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
 - 1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce coating systems indicated.
- D. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and areas where shop paint is abraded. Paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.

3.3 APPLICATION

- A. Apply high-performance coatings according to manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual."
 - 1. Use applicators and techniques suited for coating and substrate indicated.
 - 2. Coat surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, coat surfaces behind permanently fixed equipment or furniture with prime coat only.

3. Coat back sides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
 4. Do not apply coatings over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
- B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of the same material are to be applied. Tint undercoats to match color of finish coat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C. If undercoats or other conditions show through final coat, apply additional coats until cured film has a uniform coating finish, color, and appearance.
- D. Apply coatings to produce surface films without cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections. Produce sharp glass lines and color breaks.

3.4 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing coating application, clean spattered surfaces. Remove spattered coatings by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from coating operation. Correct damage by cleaning, repairing, replacing, and recoating, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced coated surfaces.

3.5 INTERIOR HIGH-PERFORMANCE COATING SCHEDULE

- A. Steel Substrates, Vertical Surfaces:
1. Epoxy System (MPI INT 5.1L):
 - a. Prime Coat: Primer, epoxy, anti-corrosive for metal (MPI #101).
 - b. Intermediate Coat: Epoxy, matching top coat.
 - c. Topcoat: Epoxy, gloss level 5 (MPI #77).
- B. Gypsum Board Substrates:
1. Epoxy System (MPI INT 9.2E):
 - a. Prime Coat: Primer sealer, latex, interior (MPI #50).
 - b. Intermediate Coat: Epoxy, matching top coat.
 - c. Topcoat: Epoxy, gloss level 5 (MPI #77).

END OF SECTION 099600

SECTION 102113 - METAL TOILET COMPARTMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes stainless steel toilet compartments configured as toilet enclosures and urinal screens.
- B. Related Requirements:
 - 1. Division 09 "Non-Structural Metal Framing" for coordination of backing to secure panels, wall posts and stiles.
 - 2. Division 10 "Toilet Accessories" for toilet tissue dispensers, grab bars, and similar accessories mounted on toilet compartments.

1.2 SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for toilet compartments.
- B. Shop Drawings: For toilet compartments.
 - 1. Include plans, elevations, sections, and attachment details.
 - 2. Show locations of centerlines of toilet fixtures.
 - 3. Show overhead support or bracing locations.
- C. Samples for Verification: For the following products, in manufacturer's standard sizes unless otherwise indicated:
 - 1. Panel material, color, and finish for toilet compartments, prepared on 2-inch-square of same thickness and material indicated for Work.
- D. Warranty: Sample of special warranty

1.3 WARRANTY

- A. Special Manufacturer's Warranty: Provide manufacturer's standard form in which manufacturer agrees to repair or replace products that fail in materials or workmanship during the following period after Substantial Completion:
 - 1. Stainless Steel Partitions: Against rust-out: 15 years.
 - 2. Stainless Steel Hardware: Lifetime.

1.4 PROJECT CONDITIONS

- A. Field Measurements: Verify actual locations of toilet fixtures, walls, columns, ceilings, and other construction contiguous with toilet compartments by field measurements before fabrication.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines for Buildings and Facilities and ICC A117.1 for toilet compartments designated as accessible.

2.2 STAINLESS STEEL TOILET COMPARTMENTS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Hadrian, Inc. or comparable product by one of the following:
1. Accurate Partitions Corp.; ASI Group.
 2. All American Metal Corp.
 3. Bradley Corporation.
 4. Global Partitions; ASI Group.
- B. Toilet-Enclosure Style: Floor to ceiling pilasters.
1. Ceiling Height: 96 inches.
 2. Compartment Depth and Width: As indicated on drawings.
 3. Door Width: 26 inches, minimum; at wheelchair accessible compartments, 32 inches, inside clear minimum.
 4. Doors and Panels:
 - a. Top at 70 inches (1778 mm) above finished floor.
 - b. Bottom at 12 inches (305 mm) above finished floor.
 5. Pilaster Width: As required to fit space; minimum 3 inches (76 mm).
- C. Urinal-Screen Style: Wall hung with integral flanges.
1. Depth: 18 inches.
 2. Height: Top at 60 inches and bottom at 18 inches above finished floor.
- D. Door, Panel, and Pilaster Construction: Seamless, metal facing sheets pressure laminated to core material; with continuous, interlocking molding strip or lapped-and-formed edge closures; corners secured by welding or clips and exposed welds ground smooth. Exposed surfaces shall be free of pitting, seam marks, roller marks, stains, discolorations, telegraphing of core material, or other imperfections.
1. Core Material: Manufacturer's standard sound-deadening honeycomb of resin-impregnated kraft paper in thickness required to provide finished thickness of 1 inch for doors and panels and 1-1/4 inches for pilasters.
 2. Tapping Reinforcement: Provide concealed reinforcement for tapping (threading) at locations where machine screws are used for attaching items to units.
- E. Urinal-Screen Construction:
1. Integral-Flange, Wall-Hung Urinal Screen: Similar to panel construction, with integral full-height flanges for wall attachment, and maximum 1-1/4 inches thick.
- F. Facing Sheets and Closures: Stainless steel sheet of nominal thicknesses as follows:

1. Pilasters, Braced at Both Ends: Manufacturer's standard thickness, but not less than 0.031 inch.
 2. Panels: Manufacturer's standard thickness, but not less than 0.031 inch.
 3. Doors: Manufacturer's standard thickness, but not less than 0.031 inch.
 4. Integral-Flange, Wall-Hung Urinal Screens: Manufacturer's standard thickness, but not less than 0.031 inch.
- G. Pilaster Shoes: Stainless-steel sheet, not less than 0.031-inch nominal thickness and 3 inches high, finished to match hardware.
- H. Brackets (Fittings):
1. Full-Height (Continuous) Type: Manufacturer's standard design; stainless steel.
- I. Steel Sheet Finish: Immediately after cleaning and pretreating, apply manufacturer's standard baked-on finish, including thermosetting, electrostatically applied, and powder coatings. Comply with coating manufacturer's written instructions for applying and baking.
1. Finish: Type 304.
 2. Texture: Diamond (5WL).

2.3 HARDWARE AND ACCESSORIES

- A. Hardware and Accessories: Manufacturer's heavy-duty stainless steel castings, including stainless steel tamper-resistant fasteners.
1. Hinges: Manufacturer's gravity-type self-closing hinges with stainless-steel continuous, cam type that adjusts to hold door open at any angle up to 90 degrees and emergency access by lifting door. Mount with stainless steel through-bolts.
 2. Latch and Keeper: Manufacturer's heavy-duty, surface-mounted, cast stainless-steel latch unit designed to resist damage due to slamming, with combination rubber-faced door strike and keeper and with provision for emergency access. Provide units that comply with regulatory requirements for accessibility at compartments designated as accessible. Mount with stainless steel through-bolts.
 3. Coat Hook: Manufacturer's heavy-duty, combination cast stainless-steel hook and rubber-tipped bumper, sized to prevent in-swinging door from hitting compartment-mounted accessories. Mount with stainless steel through-bolts.
 4. Door Bumper: Manufacturer's heavy-duty, rubber-tipped, cast stainless-steel bumper at swinging doors. Mount with stainless steel through-bolts.
 5. Door Pull: Manufacturer's heavy-duty cast stainless-steel pull at out-swinging doors complying with regulatory requirements for accessibility. Provide pull on both sides of accessible compartment doors. Mount with stainless steel through-bolts.
- B. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel, finished to match the items they are securing, with theft-resistant-type heads. Provide sex-type bolts for through-bolt applications. For concealed anchors, use stainless steel, hot-dip galvanized steel, or other rust-resistant, protective-coated steel compatible with related materials.
1. Floor to Ceiling: Galvanized steel supports and/or threaded rod, lock washers, and leveling adjustment nuts at pilasters as required; pilaster shoe to conceal anchorages.

2.4 MATERIALS

- A. Stainless-Steel Sheet: ASTM A 666, Type 304, stretcher-leveled standard of flatness.
- B. Stainless-Steel Castings: ASTM A 743/A 743M.

2.5 FABRICATION

- A. Fabrication, General: Fabricate toilet compartment components to sizes indicated. Coordinate requirements and provide solid blocking within panel where required for attachment of toilet accessories.
- B. Overhead-Braced Units: Provide manufacturer's standard corrosion-resistant supports, leveling mechanism, and anchors at pilasters to suit floor conditions. Provide shoes at pilasters to conceal supports and leveling mechanism. Include overhead brace from pilaster to plumbing wall at end toilet compartment.
- C. Door Size and Swings: Unless otherwise indicated, provide 26-inch-wide, in-swinging doors for standard toilet compartments and 36-inch-wide, out-swinging doors with a minimum 32-inch-wide, clear opening for compartments designated as accessible.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas and conditions, with Installer present, for compliance with requirements for fastening, support, alignment, operating clearances, and other conditions affecting performance of the Work.
 - 1. Confirm location and adequacy of blocking and supports required for installation.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. Coordinate layout and installation of supports, inserts, and anchors built into other units of work for toilet compartment anchorage.

3.2 INSTALLATION

- A. General: Comply with manufacturer's written installation instructions. Install units rigid, straight, level, and plumb. Secure units in position indicated with manufacturer's recommended anchoring devices.
 - 1. Maximum Clearances:
 - a. Pilasters and Panels: 1/2 inch.
 - b. Panels and Walls: 1 inch.
 - 2. Full-Height (Continuous) Brackets: Secure panels to walls and to pilasters with full-height brackets.
 - a. Locate bracket fasteners so holes for wall anchors occur in masonry or tile joints.
 - b. Align brackets at pilasters with brackets at walls.

3.3 ADJUSTING

- A. Hardware Adjustment: Adjust and lubricate hardware according to hardware manufacturer's written instructions for proper operation. Set hinges on in-swinging doors to hold doors open approximately 30 degrees from closed position when unlatched. Set hinges on out-swinging doors to return doors to fully closed position.
- B. Clean and Protect: Clean exposed surfaces of compartment systems using materials and methods recommended by manufacturer, and provide protection as necessary to prevent damage during remainder of construction period.

END OF SECTION 102113

SECTION 22 00 00 – PLUMBING

PART 1 - GENERAL

1.1 CONDITIONS OF THE CONTRACT

- A. The Conditions of the Contract (General, Supplementary, and other Conditions) and Section 220500 (Basic Materials and Methods for Plumbing) are hereby made a part of this section.
- B. This section lists general requirements for plumbing work and is hereby made a part of each Division 22 specification section.
- C. For convenience or reference the Specifications are separated into Divisions and Sections. Such separations shall not operate to make the Engineer an arbitrator to establish subcontract limits between the Prime Contractor and his Subcontractors. In any case, the Prime Contractor is responsible to the owner for a complete project.
- D. Wherever the word 'provide' is utilized with regard to materials or equipment on the drawings or in the specifications it shall be interpreted to mean 'furnish and install'.
- E. The term 'exposed' shall be interpreted to mean any equipment, ductwork, or piping that is not concealed above a continuous ceiling or inside a finished wall.

1.2 WORK INCLUDED

- A. This section consists of general requirements and standard specifications covering certain parts of the plumbing work and is supplemented by other Division 22 specification sections covering additional work, requirements, and materials specifically applicable to the plumbing work of each section. Requirements of subsequent sections of the specifications, if in conflict with these general requirements, shall govern.

1.3 REQUIREMENTS OF REGULATORY AGENCIES

- A. Provide work and materials in full accordance with the latest rules and regulations of the following:
 - 2018 International Building Code
 - 2018 Uniform Mechanical Code
 - 2018 Uniform Plumbing Code
 - 2017 National Electrical Code
 - 2018 International Fire Code
 - 2018 International Energy Conservation Code
 - 2018 NFPA Codes and Standards
 - Nevada State Fire Marshal
 - Nevada Occupational Safety and Health
 - Underwriters Laboratories
 - All other applicable state codes, rules, and regulations
- B. Nothing in the drawings or specifications shall be construed to permit work not conforming to these codes.
- C. When the Contract Documents differ from governing codes, furnish and install the larger size or higher standards called for at no additional cost to the Owner.

1.4 FEES, PERMITS, AND UTILITY SERVICES

- A. Obtain and pay for all permits and service required for installation of this work; arrange for required inspections and secure approvals from the authorities having jurisdiction.
- B. Arrange for utility connections and coordinate work with utility company.
- C. Arrange required inspections and secure approvals from the authorities having jurisdiction.

1.5 SITE EXAMINATION

- A. Examine site, verify dimensions and locations against drawings, and inform self of conditions under which work is to be done before submitting proposal. No allowance will be made for extra expense on account of error.
- B. Information shown relative to existing services is based upon available records and data but is approximate only. Make minor deviations found necessary to conform with actual locations and conditions without extra cost. Verify location and elevation of utilities prior to commencement of excavation for new piping or its installation.

1.6 PLACEMENT OF EQUIPMENT AND WORK

- A. The placement of equipment and mechanical work in the locations and spaces shown on the drawings is the Contractor's responsibility.
- B. Move equipment and/or work into spaces through openings provided or located in the spaces during construction, as required.
- C. Perform disassembling and reassembling of equipment or other work necessary to accomplish this requirement without extra cost to the Owner.

1.7 SUBMITTALS AND SUBSTITUTIONS

- A. Submit to the Architect/Engineer for review, within a reasonable time after award of Contract and in ample time to avoid delay of construction, shop drawings or submittals on all items of equipment and materials, including all substitutions. Substitutions will be interpreted to be all manufacturers other than those specifically listed by model or catalog number. Also see Division 1 for additional related requirements.
- B. Partial or incomplete sets of equipment and materials submittals will not be acceptable.
- C. Only one request for substitution will be considered on each item of equipment or material. No substitutions will be considered thereafter.
- D. Quantities are the Contractor's responsibility and will not be reviewed.
- E. All submittal data shall be tailored to suit the specific project, with appropriate model or part numbers, materials, sizes, options, and accessories clearly indicated for each different submittal item and on each submittal page. Submittal pages without this information will be returned and will need to be resubmitted with all of the required information indicated on each sheet.
- F. The Contractor shall certify that he has examined all submittal data and that the equipment and materials submitted for review meet or exceed the requirements of the drawings and specifications. Submittals without the required certification will not be acceptable.
- G. Electronic Formatted Submittals
 - 1. Provide submittals in electronic form (.pdf file format).
 - 2. Identify and incorporate submitted information as follows:
 - a. Provide complete submittal package including cover sheet with:
 - 1) Project Name
 - 2) Submittal Package Number (with Revision Number identified)
 - 3) Date
 - 4) Name and Address of Architect/Engineer
 - 5) Name of Contractor
 - 6) Name of Subcontractor

- b. Group submitted items by specification section and provide:
 - 1) Index of submitted products with page numbers
 - 2) Name of Firm or entity that prepared submittal
 - 3) Name of Supplier
 - 4) Name of Manufacturer
 - 5) Equipment and/or fixture tag, if applicable
 - 6) Number and title of appropriate specification section
3. Items indicated by the Architect/Engineer to be resubmitted shall be resubmitted as follows:
 - a. Retain items marked as 'No Exceptions Taken' or 'Make Corrections Noted' and resubmit with the revised package. Do not provide new sheets for these items.
 - b. Provide revised submittal sheets for all other reviewed items.
 - 1) Provide originally submitted sheet with Architect/Engineer comments.
 - 2) Clearly indicate amendments and modifications made in response to previous submittal review comments.
- H. If the Contractor desires to make a substitution, he shall submit complete information or catalog data to show equality of equipment or material offered to that specified. No substitutions will be allowed unless requested and reviewed in writing. The Architect/Engineer will review and take appropriate action on shop drawings, product data, samples, and other submittals as required by the contract documents. Such review shall be only for general conformance with the design concept and general compliance with the information given in the contract documents. The review shall not include review of quantities, dimensions, weights or gauges, fabrication processes, construction methods, coordination with the work of other trades, or construction safety precautions, all of which are the sole responsibility of the Contractor. Review of a specific item shall not indicate acceptance of an assembly of which the item is a component. The Architect/Engineer shall not be required to review and shall not be responsible for any deviations from the Contract Documents not clearly noted by the Contractor, nor shall the Architect/Engineer be required to review partial submissions or those for which submissions for correlated items have not been received. The Architect/Engineer reserves the right to require the originally specified item.
- I. Installation of reviewed substitutions is the Contractor's responsibility. Any changes required for installation of reviewed substituted equipment must be made without additional cost to the Owner. Review by the Architect/Engineer of the substituted equipment and/or the dimensioned drawings does not waive the requirements stated herein.

1.8 AS-BUILT DRAWINGS

- A. Upon completion of work submit to the Architect/Engineer as-built drawings showing all changes in equipment, piping, ductwork, etc. installed as part of this project which are not in accordance with the contract drawings. As-built drawing deliverables shall be in accordance with the requirements of Division 1, and shall consist of the following as a minimum:
 1. Provide as-built drawings in electronic file format (pdf file). In addition to the electronic file, when field mark-ups have been utilized, provide a complete set of full size neatly and legibly marked as-built drawings on 20 pound white bond paper.
 2. As-built drawings shall be full size (same size as the contract documents) and shall be standard engineering scale. The minimum drawing scale shall match those provided in the contract documents.
 3. As-built drawings shall include all outside utility connections, piping, etc. installed under this Contract. Locate and dimension all work with reference to permanent landmarks
- B. Match all symbols and designations used in the contract drawings when preparing the as-built drawings.

- C. Indicate clearly and correctly all work installed differently from that shown and maintain records up to date as work progresses. Include invert elevations of pipes below grade of floor, the floor lines, plugged wyes, tees, caps, exact locations and sizing of piping, location of valves, and the like. Dimension locations from structural points.
- D. Properly identify all stubs for future connections as to locations and use by setting of concrete markers at finished grade in a manner suitable to the Architect/Engineer.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Provide factory-fabricated piping specialties and valves recommended by manufacturer for use in service indicated. Provide piping specialties of types and pressure ratings indicated for each service, or if not indicated, provide proper selection as determined by Contractor to comply with installation requirements. Provide sizes and connections which properly mate with pipe, tube, and equipment connections. Where more than one type is indicated, selection is Contractor's option.
- B. Unless otherwise indicated, provide valves of same size as upstream pipe size.
- C. No material installed as part of this work shall contain asbestos in any form

2.2 MATERIALS AND EQUIPMENT

- A. Mention herein or on drawings requires that this Contractor provide each item listed of quality noted or equal. All material shall be new, full weight, standard in all respects, and in first-class condition. Provide materials of the same brand or manufacturer throughout for each class of material or equipment wherever possible. Materials shall be tested within the Continental United States by an independent, nationally recognized testing agency and shall be listed in accordance with testing agency requirements.
- B. The grade or quality of materials desired is indicated by the trade names or catalog numbers stated herein.
- C. Dimensions, sizes, and capacities shown are a minimum and shall not be changed without permission of the Architect/Engineer.

2.3 MATERIALS FURNISHED

- A. Identify all materials and equipment by manufacturer's name and model number. Remove unidentified materials and equipment from site.
- B. Equipment specified by manufacturer's number shall include all accessories, controls, etc. listed in catalog as standard with equipment. Furnish optional or additional accessories as specified.
- C. Equipment or material damaged during transportation, installation, or operation is considered as totally damaged. Replace with new equipment. Variance from this permitted only with written consent of the Architect/Engineer.
- D. Provide an authorized representative to constantly supervise work of this division. Check all materials prior to installation for conformance with the drawings and specifications.

PART 3 - EXECUTION

3.1 ACCESS TO PLUMBING WORK

- A. Comply with manufacturer's instructions for installation of access doors.
- B. Access panels shall be furnished and installed wherever valves, balance valves, damper operating mechanisms, air terminal units, fans, and similar items normally requiring adjustment or servicing are installed in concealed or inaccessible spaces. Coordinate with access doors shown on architectural drawings.

3.2 DRAWINGS AND COORDINATION

- A. General arrangement and location of piping, ductwork, equipment, etc. are shown on the drawings or herein specified. Carefully examine other work that may conflict with this work. Install this work in harmony with other crafts and at proper time to avoid delay of work.
- B. In advance of construction, work out minor changes and relocations to suit actual conditions and work of other trades to avoid conflict therewith. This shall not be cause for additional cost.
- C. Verify all measurements at the building and be responsible for the correctness of same. No extra compensation will be allowed on account of differences between actual dimensions and those indicated on the drawings.
- D. In addition, obtain all necessary information from the other trades regarding centers of partitions, walls, location of plumbing mains, fire sprinkler mains, and electrical conduits, ducts, pipes, etc. in order that pipes, equipment, and ductwork may be placed in their correct positions.
- E. Execute any work or apparatus shown on the drawings and not mentioned in the specifications, or vice versa, the same as if specifically mentioned by both. Omission from Drawings or specifications of any minor details of construction, installation, materials, or essential specialties does not relieve the Contractor from furnishing same in place complete.
- F. Furnish and install any incidental work not shown or specified which can reasonably be inferred as part of the work and necessary to provide a complete and workable system.
- G. Furnish materials and work at proper time to avoid delay of the work.

3.3 ACCESS

- A. Continuously check architectural drawings for clearance and accessibility of equipment specified herein to be placed. No allowance of any kind will be made for negligence on the part of the Contractor to foresee means of installing his equipment into proper position.

3.4 CLOSING IN OF UNINSPECTED WORK

- A. Do not allow or cause work installed to be covered up or enclosed before it has been inspected and tested. Should work be enclosed or covered up before it has been inspected and tested, uncover work at own expense. After it has been inspected and tested, make repairs necessary to restore work of other contractors to condition in which it was found at time of cutting.

3.5 PROJECT MODIFICATIONS

- A. During the progress of construction, if any conditions arise that necessitate revisions, modifications, or relocation of any plumbing equipment or materials, such revisions shall be immediately brought to the attention of the Architect/Engineer. The Contractor shall then prepare necessary drawings showing the proposed changes. All proposed changes shall be submitted, reviewed, and approved by the Architect/Engineer prior to proceeding with any associated revision work in the field.

- B. Maintain copies of all approved changes at the project site for reference by all parties during the remaining work.
- C. Incorporate all revisions into the as-built drawings.

3.6 FORMING, CUTTING AND PATCHING

- A. Coordinate with other contractors as necessary to provide any special forming, recesses, chases, etc., and provide wood blocking, backing, and grounds as necessary for proper installation of mechanical work.
- B. If this Contractor fails to coordinate with other contractors at proper time or fails to locate items properly, resulting in extra work, then this Contractor is responsible.
- C. This Contractor is responsible for proper placement of pipe sleeves, hangers, inserts, and supports for work.

3.7 GUARANTEE

- A. The Contractor shall be responsible for all work done and material installed under the plans and specifications. Repair or replace, as may be necessary, any defective work, material, or part which may show itself within one year of filing of the Notice of Substantial Completion and be responsible for damage to other materials, furnishings, equipment, or premises caused by such defects during this period, if in the opinion of the Architect/Engineer said defect is due to imperfection of material or workmanship. Provide all such work and materials at no cost to the Owner.
- B. The Contractor shall be responsible for damage to any part of the premises during the guarantee period that is caused by defects, leaks, or breaks in work furnished and/or installed under this section.

3.8 PROJECT COMPLETION TESTS AND START-UP

- A. Upon completion of the plumbing work, or at such time prior to completion as may be determined by the Architect/Engineer, operate and test all plumbing equipment and systems for a period of at least three consecutive 8 hour days to demonstrate the satisfactory overall operation of the building or project as a complete unit. Commence tests after preliminary balancing and adjustments to equipment have been checked. Notify the Architect/Engineer at least seven calendar days in advance of starting the required tests.
- B. Provide training and orientation of Owner's operating staff in proper care and operation of all plumbing equipment, systems, and controls.
- C. Neatly tabulate and deliver to the Architect/Engineer complete operational data. The Architect/Engineer reserves the right to spot check results, and if discrepancies or errors are noted, the Contractor will be required to redo balancing tests and tabulations entirely.
- D. During the test period, make final adjustments and balancing of equipment, systems, controls, and circuits so that all are placed in a first class operating condition.
- E. Mark final positions of balancing valves after balancing is complete.
- F. Final observation will not be made until all of the above have been completed and the balance report has been submitted and reviewed.

3.9 CLEANING UP

- A. Upon completion of the Work remove materials, equipment, apparatus, tools, and the like, and leave the premises clean, neat, and orderly.

END OF SECTION

SECTION 22 05 00 – BASIC MATERIALS AND METHODS FOR PLUMBING

PART 1 - GENERAL

1.1 CONDITIONS OF THE CONTRACT

- A. The Conditions of the Contract (General, Supplementary, and other Conditions) and Section 220000 (Plumbing) are hereby made a part of this section.
- B. This section provides requirements for basic materials and methods related to all of the Plumbing work. This section applies to all other Division 22 specification sections.

1.2 WORK INCLUDED

- A. Types of Plumbing related work specified in this section include the following:
 - Valves
 - Wall Flashings
 - Cathodic Protection
 - Thermometers
 - Pressure Gauges
 - Unions and Flanges
 - Pipe Escutcheons
 - Pipe Sleeves
 - Hangers and Supports for Plumbing Systems
 - Piping and Equipment Identification
- B. Types of valves specified in this section include the following:
 - Ball Valves
 - Check Valves
 - Manual Balance Valves
 - Pressure Relief Valves

1.3 PROJECT CONDITIONS

- A. Existing Utilities: Locate and protect existing utilities and other underground work in manner which will ensure that no damage or service interruption will result from excavating and backfilling.

1.4 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Firms regularly engaged in manufacture of piping specialties and valves, of types and sizes required, whose products have been in satisfactory use in similar service for not less than 5 years.
- B. Valve Types: Provide valves of the same type by the same manufacturer.
- C. Identification: Provide piping specialties and valves with manufacturer's name (or trademark) and pressure rating clearly marked on valve body.
- D. Regulatory Agency Requirements: Valves used in fire protection piping shall be UL listed and FM approved.

1.5 SUBMITTALS

- A. Product Data: Submit manufacturer's technical product data and installation instructions for each type of manufactured piping specialty and valve. Include pressure drop curve or chart for each type and size of valve, each control valve, and each balancing valve.
- B. Operation and Maintenance Data: Submit operation and maintenance data and spare parts lists for each type of manufactured piping specialty and valve. Include this data and product data in operation and maintenance manual.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Provide factory-fabricated piping specialties and valves recommended by manufacturer for use in service indicated. All valves, fittings and accessories installed in potable water systems shall be rated for such use. Provide piping specialties of types and pressure ratings indicated for each service, or if not indicated, provide proper selection as determined by the Contractor to comply with installation requirements. Provide sizes and connections which properly mate with piping, tubing, and equipment connections. Where more than one type is indicated, selection is the Contractor's option.
- B. Unless otherwise indicated, provide valves of same size as the upstream pipe size.
- C. All valves, fittings, and accessories located in potable water systems shall be constructed of appropriate materials and conform to the requirements of NSF/ANSI Standards 61 and 372.

2.2 VALVES

- A. Provide valves as shown and other valves necessary to segregate branches or units. Furnish discs suitable for service intended. Furnish a brass tag with identification of service controlled for each valve. Properly pack and lubricate valves. Place a union adjacent to each threaded valve. Provide two unions at soldered valves. Provide flanged valves in welded pipe. Provide ball valves in water lines, unless otherwise shown.
- B. Valves shall be full size of pipe, manufactured by Nibco, Apollo, Milwaukee, Nordstrom, or approved equal, in accordance with the following schedule and with the remainder of this specification section:

Ball Valves	3" and smaller	Nibco T585-66-LF	Milwaukee UPBA400S
Check Valves	2" and under	Nibco T413-Y-LF	Milwaukee UP509

- C. Ball Valves: Nibco T585-66-LF, Milwaukee UPBA400S, or approved equal. All valves shall have stainless steel ball and stem, RPTFE packing, and throttling handle. Furnish the flow performance curve for each valve.
- D. Manual Balance Valves (2" and Below): Fixed port venturi style, IMI Flow Design AccuSetter UA Series, Pro-Hydrionic CBV Series, Taco Accu-Flo, Bell & Gossett Circuit Setter Plus, Nibco T-1810, or approved equal. Variable orifice balancing valves are not acceptable.
- E. General Purpose Solenoid Valves: Asco Series 8210, or approved equal.
- F. Pressure Relief Valves:
 - 1. Provide ASME rated pressure relief valves and temperature and pressure relief valves as indicated on the drawings. Valve size and capacity shall be as required for proper relieving capacity equal to or greater than the capacity of the associated equipment output rating. Valves shall be sized and rated for compliance with Section IV of the ASME Boiler and Pressure Vessel Code and ANSI Z21.22 where applicable.
 - 2. Combined Pressure and Temperature Relief Valves: When indicated on the drawings for water heaters and/or hot water storage tanks provide bronze body relief valves with test lever and thermal sensor (thermostat), complying with listing requirements for temperature and pressure discharge capacity. Valves shall be Watts XL Series, or approved equal.
 - 3. Available Manufacturers: Subject to compliance with requirements, manufacturers offering relief valves which may be incorporated in the Work include the following:
 - Watts
 - Bell and Gossett
 - Spirax Sarco

2.3 CATHODIC PROTECTION

- A. Furnish and install dielectric unions at all locations described herein, whether shown on the drawings or not, and except as noted herein. Construct couplings and flanges so that the two pipes being connected are completely insulated from each other with no metal-to-metal contact. Heavily line the couplings with a hard, insulating, phenolic plastic threaded in standard pipe sizes. Make up the flanges with insulating components consisting of a hard, phenolic gasket, bolt sleeves, and bolt washers. Supplement the insulating gasket with neoprene faces to form a seal.
- B. Available Manufacturers: Subject to compliance with requirements, manufacturers which may be incorporated in the work include the following:
Maloney
Walter C. Vallet

2.4 THERMOMETERS

- A. Thermometers shall be of the bimetal helix type, Miljoco Model B5099A, or approved equal by Weiss or Weksler. Thermometers shall be accurate to within plus or minus 1% throughout the entire scale range. Scales shall have a minimum of 2 degrees between graduations and a maximum of 20 degrees between figures.
- B. Thermometers shall be 5 inch diameter with polycarbonate lens, stainless steel case and ring, stainless steel stem, and stainless steel well. Thermometer stem length for piping shall be 2-1/2 inches, and stem length for tanks shall be 9 inches. Thermometers installed on insulated tanks or piping shall be provided with an extension neck well to compensate for the thickness of the insulation.
- C. Thermometer ranges shall be as listed below.

<u>Location</u>	<u>Range</u>
Cold water piping.	25° to 125°F
Hot water piping.	0° to 250°F
- D. Thermometers shall include an adjustable bracket allowing rotation to any position, and shall be located such that they are easily read from a normal vantage point.

2.5 PRESSURE GAUGES

- A. Pressure gauges shall be flangeless case type, Miljoco Model P4598L, or approved equal by Weiss or Weksler. Gauges shall be accurate to within plus or minus 1% throughout the entire scale range. Scales shall have a minimum of 2 degrees between graduations and a maximum of 20 degrees between figures.
- B. Pressure gauges shall be 4-1/2 inch diameter with acrylic lens, stainless steel case, and stainless steel ring. Gauge movement shall be brass with precision-milled teeth. Gauges shall be selected with a pressure range such that the gauge reads near the middle of the total gauge range at the pressure indicated on the drawings.

2.6 UNIONS AND FLANGES

- A. Furnish and install unions at each threaded or soldered connection to all equipment, tanks and valves, of type specified in following schedule:

<u>Type of Pipe</u>	<u>Union</u>
Steel piping 2" and smaller	150 lb screwed malleable ground joint, brass to iron seat, black for black piping, galvanized for galvanized piping.
Copper tubing 2" and smaller	150 lb bronze ground joint, bronze to bronze sweat connection.

- B. Insulating couplings or flanges shall be furnished and installed at all connections of piping with dissimilar materials. Construct couplings so that the two pipes being connected are completely insulated from each other with no metal-to-metal contact. Heavily line the couplings with a hard, insulating, phenolic threaded coupling in standard pipe sizes.
- C. Provide full faced or ring type gasket material to suit facing on flanges per following schedule:
- | <u>Service</u> | <u>Type</u> |
|----------------|-------------------------------------|
| Cold Water | 1/16" thick rubber Garlock Style 22 |
| Hot Water | 1/16" thick Garlock Blue-Guard |

2.7 PIPE ESCUTCHEONS

- A. Provide chrome plated brass pipe escutcheons with inside diameter closely fitting pipe outside diameter or outside of pipe insulation where pipe is insulated. Select outside diameter of escutcheon to completely cover pipe penetration hole in floors, walls, ceilings, or pipe sleeve extension, if any. Furnish pipe escutcheons with nickel or chrome finish and screw or spring clamping device with concealed hinge.
- B. Available Manufacturers: Subject to compliance with requirements, manufacturers offering pipe escutcheons which may be incorporated in the work include the following:
- Chicago Faucets
 - Pasco Specialty and Manufacturing
 - Sanitary-Dash

2.8 PIPE SLEEVES

- A. Where pipes pass through concrete floors or walls, install galvanized metal or plastic sleeves having not less than 1/2 inch or more than 1 inch clearance around sides of the pipe or pipe covering for the full thickness of the concrete. After piping has been installed, fill annular space with appropriate firestopping material (see Section 220500-2.15).
- B. Available Manufacturers: Subject to compliance with requirements, manufacturers offering pipe sleeves which may be incorporated in the work include the following:
- Adjustcrete
 - Sperzel Crete-Sleeve

2.9 HANGERS AND SUPPORTS FOR PLUMBING SYSTEMS

- A. See Specification Section 230530 (Hangers and Supports for Plumbing Systems).

2.10 PIPING AND EQUIPMENT IDENTIFICATION

- A. Each piping system furnished and installed under this work shall be identified and the direction of flow indicated by means of colored labels and flow arrows, all as specified herein. The labels shall be applied after all painting, priming, and cleaning of the piping and insulation is completed.
- B. Provide prefabricated coiled plastic piping labels as manufactured by Marking Services Incorporated (MSI), or approved equal. Labels shall comply with ASME A13.1 with regard to color, letter height, and marker size. The labels shall have black or white lettering and flow arrows on colored backgrounds and shall not require adhesive.
- C. The label background colors shall conform to the color schedule in the 'Execution' section of this specification.
- For pipe labels used indoors use coiled polyester labels, MSI Model MS-975, or equal.
 - For piping with an outside diameter, including insulation, greater than 6 inches provide the label manufacturer's nylon straps to secure label to piping. Labels shall lie smoothly against pipe or insulation completely around the pipe.

3. The size of the lettering and label shall be such that the lettering can be easily read from the floor and the colors shall be easily discernible.
- D. Provide a white plastic lamacoid plate for each and every piece of equipment installed in this work. Lettering on plate shall be black, with size of lettering to suit equipment. Lettering shall be a minimum of ½ inch in height. Plates shall be riveted or bolted to equipment near electrical disconnect or control access panel.
- E. Where mechanical or plumbing equipment requiring access is located above a ceiling or behind an access panel, provide an adhesive clear plastic label with 3/8" black lettering on the ceiling grid or access panel identifying the equipment.
- F. Available Manufacturers: Subject to compliance with requirements, manufacturers which may be incorporated in the Work include the following:
Marking Services Incorporated (MSI)
LEM Products
Seton
Craftmark

PART 3- EXECUTION

3.1 ACCESS TO PLUMBING WORK

- A. Comply with manufacturer's instructions for installation of access doors.
- B. Access panels shall be furnished and installed wherever valves, balance valves, damper operating mechanisms, air terminal boxes, fans, and similar items normally requiring adjustment or servicing are installed in concealed or inaccessible spaces. Coordinate with the access doors shown on the architectural drawings.
- C. Where access panels are detailed on architectural or mechanical drawings, sizes indicated thereon shall be used.
- D. Where access panels are to be located in acoustic tile ceilings, the size of the access panel required shall be increased to properly fit the tile pattern without cutting into the tile.

3.2 INSTALLATION OF HANGERS AND SUPPORTS

- A. See Specification Sections 220530 (Hangers and Supports for Plumbing Systems) and 220540 (Seismic Bracing for Plumbing Systems).
- B. Where special hanging or support of piping or equipment is detailed or shown on the drawings, the drawings shall be followed.
- C. Pipe Hanger or Support Spacing - Hanger or support maximum spacing shall be as follows:
 - a. Steel pipe ¾ inch and smaller: 10 feet maximum
 - b. Steel pipe 1" and larger: 12 feet maximum
 - c. Copper pipe 1-1/2 inch and smaller: 6 feet maximum
 - d. Copper pipe 2 inch and larger: 10 feet maximum
 - e. Cast iron pipe (all sizes): At every pipe joint

3.3 INSTALLATION OF CATHODIC PROTECTION

- A. Install dielectric unions in the following locations:
 1. In all metallic water and gas service connections to the building within 5 feet of the building wall. Install adjacent to the shutoff valve and above ground wherever possible.
 2. At points of connections where copper water lines connect to steel domestic water heater tanks and other equipment.
 3. At points in piping where dissimilar metal pipes are connected together.
 4. Any special applications shown on the drawings.

- B. Where steel or cast iron pipe in the ground connects to copper or brass piping above the ground, the transition from steel or cast iron pipe to the copper or brass pipe shall be made above ground in all cases and in an accessible location where practicable.
- C. Where copper or brass piping is connected to steel or cast-iron piping and the connection is buried in the ground, the connection shall be covered with coal tar protective tape as specified in section 'Pipes And Pipe Fittings' extending outward a minimum of 5 feet on all pipes from the point of connection. The tape shall have a minimum thickness of 10 mils and a maximum thickness of 12 mils and shall be applied so as to provide at least two full thicknesses of tape over the piping. A primer specifically designed for use with the tape, shall be used. The piping shall be thoroughly cleaned before any tape or primer is applied.

3.4 INSTALLATION OF THERMOMETERS

- A. Thermometers for piping systems shall be installed so that the liquid flows completely around the sensing well. Pipe sizes at the bulb shall be increased where necessary to allow for full flow without excessive resistance.
- B. Where shown on the temperature control diagrams, the temperature control subcontractor shall furnish and install remote panel-mounted thermometers. Duct-mounted thermometers may be omitted at these locations.
- C. Thermometers shall be placed at all locations shown on the drawings.
- D. In cases where the specified thermometers cannot be located so as to be easily read, a remote reading type thermometer shall be installed, as approved by the Architect/Engineer.
- E. Thermometers provided as part of the temperature control work and located on a control panel need not be duplicated by the requirements listed above.

3.5 INSTALLATION OF GAUGES

- A. Provide gauge connections at the following locations:
 - Suction and discharge of domestic hot water recirculating pumps.
 - Elsewhere as shown on the drawings.
- B. Gauges shall be provided in convenient locations within approximately 3 feet of the flanges or connections and elsewhere as may be shown on the drawings.
- C. Gauge Cocks and Siphons
 - 1. A needle point globe valve, Crane No. 88 or equal, shall be installed at each gauge.
 - 2. A gauge siphon shall be installed at each hot water gauge.

3.6 INSTALLATION OF PIPING SPECIALTIES

- A. Pipe Escutcheons: Install pipe escutcheons on each pipe penetration through floors, walls, partitions, and ceilings where penetration is exposed to view and on exterior of building. Secure escutcheon to pipe or insulation so escutcheon covers penetration hole and is flush with adjoining surface.
- B. Sleeves: Secure sleeves to metal or wood forms in such a manner that they will not become displaced during pouring of concrete. Fill sleeves on deck with sand. After forms have been removed from concrete, the sleeves shall be removed from the openings.
- C. Core drill properly sized holes in the concrete to replace metal sleeves that are crushed or knocked out of position during pouring of concrete.

3.7 INSTALLATION OF VALVES

- A. Install valves where required for proper operation of piping and equipment, including valves in branch lines where necessary to isolate sections of piping. Locate valves so as to be accessible and so that separate support can be provided when necessary.
- B. Install valves with stems pointed up, in vertical position where possible, but in no case with stems pointed downward from horizontal plane.
- C. Provide union at each connection to equipment and downstream of each valve. Provide unions at both ends of valves when valves cannot be turned due to an obstruction.
- D. After piping systems have been tested and put into service, but before final testing, adjusting, and balancing inspect each valve for possible leaks. Adjust or replace packing to stop leaks; replace valve if leakage persists.
- E. Tag each valve and provide a complete listing of valve locations and functions. In addition, where valves are located above a ceiling or behind an access panel, provide an adhesive clear plastic label with black 3/8" lettering on ceiling grid or access panel identifying valve.

3.8 INSTALLATION OF UNIONS AND FLANGES

- A. Install unions and flanges so that piping can be easily disconnected for removal of tanks, equipment, and valves. Provide a minimum of two unions at each three-way valve.

3.9 PIPE IDENTIFICATION

- A. Identification shall be applied to all piping, except piping located in furred spaces without access to permit entrance of personnel, and piping buried in the ground or concrete.
- B. The legend and flow arrow shall be applied at all valve locations, at all points where piping enters or leaves a wall, partition, cluster of piping, or similar obstruction, and at approximately 20 foot intervals on pipe runs.
- C. Practical variations or changes in locations and spacing may be made with the specific approval of the Architect/Engineer to meet specific conditions.
- D. Wherever two or more pipes run parallel, the printed legend and other markings shall be applied in the same relative location so that all piping is easily identified.
- E. The marking shall be located to be conspicuous from any reasonable vantage point.
- F. The legends and flow arrows shall be in the colors as indicated in the pipe marking schedule.
- G. The sizes of the stenciled lettering and flow arrows shall be as follows:

Outside Diameter (Inches of Covering)	Size of Stencil Letter	Minimum Length of Flow Arrow
5/8" to 2"	1/2"	3"
2-1/2" to 4"	1"	4"
4" to 7"	2"	5"
Over 7"	3"	6"

- H. Pipe Marking Schedule:

<u>Legend</u>	<u>Color</u>
Domestic Cold Water	Green
Domestic Hot Water Supply	Yellow
Domestic Hot Water Return	Yellow
Sanitary Sewer	Brown
Plumbing Vent	Brown

3.10 ELECTRICAL WORK

- A. Adequate working space shall be provided around electrical equipment in compliance with the National Electrical Code and other applicable codes or ordinances. The plumbing work shall be coordinated with the electrical work in order to comply with these requirements. Any work which does not conform to these regulations shall be properly corrected without additional cost to the Owner.
- B. Furnish and install all line voltage and low voltage temperature control wiring in the plumbing work (typically performed by the temperature control subcontractor) including all interlock wiring between motor starters, interlock relays, and temperature control equipment. Unless noted otherwise, this does not include primary control wiring between starters and pushbuttons or other manual starter switch or branch power circuits required for temperature control systems.
 - 1. Starters located in motor control centers will be provided under the electrical work. The Contractor is referred to the electrical drawings for motors served by motor control centers.
 - 2. All such equipment shall be delivered to the electrical contractor for mounting and connecting to power wiring. Coordinate all motor starter requirements with the electrical contractor.
 - 3. Electrical devices with piping connections, such as control valves, insertion thermostats, strap-on aquastats, and similar items which are to be wired under the electrical work or by the temperature control subcontractor, shall be installed by the plumbing contractor.
- C. Equipment furnished in this work that is factory wired but requires modification to internal wiring to meet specifications or drawing requirements shall have such internal modifications made at factory before shipment.
- D. All electrical work and equipment, including internal wiring, must comply with applicable codes and applicable portions of electrical specifications. Install all line and low voltage control wiring in conduit. Conduit for temperature control wiring shall be responsibility of the plumbing contractor and shall be of type specified in the electrical specifications.

3.11 CARE AND CLEANING

- A. Repair or replace broken, damaged, or otherwise defective parts, materials, and work. At completion, carefully clean and adjust all equipment and trim installed as part of this work. Leave systems and equipment in a satisfactory operating condition.

3.12 OPERATION TEST

- A. Test each piece of equipment to show that it will operate in accordance with the indicated requirements.

3.13 CLEANING UP

- A. Upon completion of the Work remove materials, equipment, apparatus, tools, and the like, and leave the premises clean, neat, and orderly.

END OF SECTION

SECTION 22 05 20 - OPERATION AND MAINTENANCE OF PLUMBING SYSTEMS

PART 1 - GENERAL

1.1 CONDITIONS OF THE CONTRACT

- A. Sections 220000 (Plumbing) and 220500 (Basic Materials and Methods for Plumbing) are hereby made a part of this section.

1.2 WORK INCLUDED

- A. This section consists of general requirements and standard specifications covering certain parts of the plumbing work and is supplemented by other specification sections covering additional work, requirements, and materials specifically applicable to the work of each section. Requirements of subsequent sections of the specifications, if in conflict with these requirements, shall govern.

1.3 OPERATION AND MAINTENANCE INSTRUCTIONS

- A. Furnish the Architect/Engineer with two complete sets of typewritten operating and maintenance instructions, descriptive literature, catalog cuts, and diagrams covering all items of operation and maintenance for each and every plumbing system and piece of equipment furnished under these specifications.
- B. In addition to the bound hard copies the Contractor shall provide an electronic copy (pdf file).
- C. The Contractor shall commence compiling the above data (including obtaining operating and maintenance instruction data, catalog cuts, and diagrams from the manufacturer of the reviewed equipment) immediately upon review of his list of materials, so as not to delay the final installation and acceptance of the work.
- D. Bind and index each set in a durable, hardboard binder. Final observation should not be requested until the operating and maintenance binders are submitted and have been reviewed by the Architect/Engineer.
- E. Incorporate complete operating instructions including starting, stopping, and description of emergency manual operation methods for the following:
 - Plumbing Systems
 - Piping Systems
 - Temperature Controls
 - Test Data and Startup Reports
- F. Provide charts and diagrams as required.
- G. Provide operating manual for all equipment listed in individual sections of the specification.
- H. Provide maintenance instructions for each item of individual equipment covering pertinent maintenance data, such as lubricants to be used, frequency of lubrication, inspections required, adjustments required, etc.
- I. Provide parts bulletins containing manufacturer's part numbers, instructions, etc. for each item of equipment. Strip bulletins so that useless bulk is avoided.
- J. Post service telephone numbers and/or addresses in an appropriate place as designated by the Architect/Engineer.

END OF SECTION

SECTION 22 05 30 - HANGERS AND SUPPORTS FOR PLUMBING SYSTEMS

PART 1 - GENERAL

1.1 CONDITIONS OF THE CONTRACT

- A. The Conditions of the Contract (General, Supplementary, and other Conditions), Section 220000 (Plumbing), and Section 220540 (Seismic Bracing for Plumbing Systems) are hereby made a part of this section.

1.1 SUMMARY

- A. Section Includes:
 - 1. Metal pipe hangers and supports.
 - 2. Thermal hanger shield inserts.
 - 3. Fastener systems.
 - 4. Equipment supports.
- B. Related Requirements: All hangers and support systems shall be designed, selected, and installed by the Contractor to comply with the requirements listed in Section 220540 (Seismic Bracing for Plumbing Piping and Equipment).
- C. Costs for hanger, support, and seismic bracing systems complying with the requirements listed herein are the responsibility of the Contractor and shall be included in the Contractor's bid. No extra cost will be allowed for failure to include the associated costs in the Contractor's bid.

1.2 SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: Signed and sealed by a qualified professional engineer. Show fabrication and installation details and include calculations for the following (Include product data for all components):
 - 1. Trapeze Pipe Hangers
 - 2. Metal Framing (Strut) Systems
 - 3. Pipe Stands
 - 4. Equipment Supports
- C. Delegated Design Submittal: Provide a delegated design submittal for trapeze hangers indicated to comply with all performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
 - 1. Details for fabrication and assembly of trapeze hangers.
 - 2. Design calculations utilized for designing the trapeze hangers.
- D. The work of this section shall be coordinated with the requirements for the Contractor furnished seismic design submittal for hangers and supports specified in Section 220540 (Seismic Bracing for Plumbing Piping and Equipment). Design and detailing of seismic bracing, hangers, and supports is the responsibility of the Contractor.

1.3 QUALITY ASSURANCE

- A. Structural Steel Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, 'Structural Welding Code - Steel.'
- B. Pipe Welding Qualifications: Qualify procedures and operators according to ASME Boiler and Pressure Vessel Code, Section IX.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, to design trapeze pipe hangers and equipment supports.
- B. Structural Performance: Hangers and supports for plumbing piping and equipment shall withstand the effects of gravity loads and stresses within limits and under conditions indicated according to ASCE Standard 7-16.
 - 1. Design supports for multiple pipes, including pipe stands, capable of supporting combined weight of supported systems, system contents, and test water.
 - 2. Design equipment supports capable of supporting combined operating weight of supported equipment and connected systems and components.
 - 3. Design seismic restraint hangers and supports for piping and equipment.

2.2 METAL PIPE HANGERS AND SUPPORTS

- A. Carbon Steel Pipe Hangers and Supports:
 - 1. Description: MSS SP-58, Types 1 through 58, factory fabricated components.
 - 2. Galvanized Metallic Coatings: Pre-galvanized, hot dip galvanized, or electro-galvanized.
 - 3. Non-Metallic Coatings: Plastic coated or epoxy powder coated.
 - 4. Padded Hangers: Hanger with fiberglass or other pipe insulation pad or cushion to support the bearing surface of the piping.
 - 5. Hanger Rods: Continuous thread rod, nuts, and washers made of carbon steel.
- B. Stainless Steel Pipe Hangers and Supports:
 - 1. Description: MSS SP-58, Types 1 through 58, factory fabricated components.
 - 2. Padded Hangers: Hanger with fiberglass or other pipe insulation pad or cushion to support bearing surface of piping.
 - 3. Hanger Rods: Continuous thread rod, nuts, and washers made of carbon steel.
- C. Copper Pipe and Tube Hangers:
 - 1. Description: MSS SP-58, Types 1 through 58, copper plated steel, factory fabricated components.
 - 2. Hanger Rods: Continuous thread rod, nuts, and washers made of carbon steel.

2.3 TRAPEZE PIPE HANGERS

- A. Description: MSS SP-58, Type 59, shop or field fabricated pipe support assembly made from structural carbon steel shapes with MSS SP-58 carbon steel hanger rods, nuts, saddles, and U-bolts.

2.4 METAL FRAMING (STRUT) SYSTEMS

- A. Metal Framing Manufacturers Association (MFMA) Metal Framing Systems:
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include the following:
 - a. B-line
 - b. Unistrut
 - c. Flex-Strut
 - d. G-Strut
 - e. Miro Industries
 - 2. Description: Shop or field fabricated, pipe support assembly made of steel channels, accessories, fittings, and other components for supporting multiple parallel pipes.
 - 3. Standard: Comply with MFMA-4 factory fabricated components for field assembly.
 - 4. Channels: Continuous slotted carbon steel channel with in-turned lips.

5. Channel Width: Selected for applicable load criteria.
6. Channel Nuts: Formed or stamped nuts or other devices designed to fit into channel slot and, when tightened, prevent slipping along channel.
7. Hanger Rods: Continuous thread rod, nuts, and washers made of carbon steel.
8. Metallic Coating: Zinc dichromate finish applied over an electro-galvanized zinc plating.

2.5 THERMAL HANGER SHIELD INSERTS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include the following:
 1. Pipe Shields
 2. nVent/Caddy
 3. Buckaroos
 4. Carpenter & Paterson
 5. Piping Technology & Products
 6. Rilco Manufacturing
 7. Value Engineered Products
- B. Insulation Insert Material for Cold Piping: ASTM C552, Type II cellular glass with 100 psi or ASTM C591, Type VI, Grade 1 polyisocyanurate with 125 psi minimum compressive strength and vapor barrier.
- C. Insulation Insert Material for Hot Piping: Water repellent treated, ASTM C533, Type I calcium silicate with 100 psi ASTM C552, Type II cellular glass with 100 psi or ASTM C591, Type VI, Grade 1 polyisocyanurate with 125 psi minimum compressive strength.
- D. For Trapeze or Clamped Systems: Insert and shield shall cover entire circumference of pipe.
- E. For Clevis or Band Hangers: Insert and shield shall cover lower 180 degrees of pipe.
- F. Insert Length: Extend 2 inches beyond sheet metal shield for piping operating below ambient air temperature.
- G. Structural insert material for hot piping shall be water resistant, high density, calcium silicate with minimum a density of 28 lbs/ft³ and a minimum compressive strength of 900 psi. Structural inserts shall be used as recommended by the manufacturer to meet load ratings.
- H. Structural insert material for cold piping shall be water resistant, high density, polyisocyanurate with a minimum density of 14 lbs/ft³ and a minimum compressive strength of 900 psi. Structural inserts shall be used as recommended by manufacturer to meet load ratings.
- I. Provide a vapor barrier steel jacket around insulation. Insulation jackets shall be galvanized steel conforming to ASTM A653. Hanger bearing surface shall consist of a galvanized sheet metal insulation protection shield or casing.
- J. Thermal hanger supports shall be load rated. Load ratings shall be established by the pipe support manufacturer based upon testing and analysis in conformance with the latest edition of the following codes and standards: ASME B31.1, MSS SP-68, MSS SP-69, and MSS SP-89.
- K. Unless otherwise indicated, thermal hanger supports shall be as indicated in the following schedule, or approved equal. The listed model numbers are based on Pipe Shields.
 1. Pipe supported on hangers: Models A2000, A4000, A9000, and D3000 series.
 2. Pipe supported on flat surfaces: Models A2000, A4000, A6000, A7000, A7200, and A7400.
 3. Pipe Supported on pipe rolls: Models A4000, A6000, A8200, and A8400.
 4. Pipe supported on slides and guides: Model B series.
 5. Riser pipe supports: Model E series.

- L. The selected model(s) shall conform to pipe service, support style, and support spacing.
- M. Pipe support spacing shall be in accordance with the manufacturer's recommendations, but in no case shall exceed the maximum spacing required by ASME B31.1.

2.6 FASTENER SYSTEMS

- A. Powder Actuated Fasteners: Threaded steel stud, for use in hardened portland cement concrete with pull-out, tension, and shear capacities appropriate for supported loads and building materials where used.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include the following:
 - a. Hilti.
 - b. ITW Ramset/Red Head
 - c. MKT Fastening
 - d. Simpson Strong-Tie

2.7 EQUIPMENT SUPPORTS

- A. Description: Welded, shop or field fabricated equipment support made from structural carbon steel shapes.

2.8 MATERIALS

- A. Aluminum: ASTM B221.
- B. Carbon Steel: ASTM A1011/A1011M.
- C. Structural Steel: ASTM A36/A36M, carbon steel plates, shapes, and bars; galvanized.
- D. Stainless Steel: ASTM A240/A240M.
- E. Threaded Rods: Continuously threaded. Zinc plated or galvanized steel for indoor applications and stainless steel for outdoor applications. Mating nuts and washers of similar materials as rods.
- F. Grout: ASTM C1107/C1107M, factory mixed and packaged, dry, hydraulic cement, non-shrink and non-metallic grout; suitable for interior and exterior applications.
 - 1. Properties: Non-staining, non-corrosive, and non-gaseous.
 - 2. Design Mix: 5,000 psi, 28 day compressive strength.

PART 3 - EXECUTION

3.1 APPLICATION

- A. Comply with all requirements in other section of the specifications for firestopping materials and installation for penetrations through fire rated walls, ceilings, and assemblies.
- B. Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lbs.

3.2 HANGER AND SUPPORT INSTALLATION

- A. Metal Pipe Hanger Installation: Comply with MSS SP-58. Install hangers, supports, clamps, and attachments as required to properly support piping from the building structure.
- B. Metal Trapeze Pipe Hanger Installation: Comply with MSS SP-58. Arrange for grouping of parallel runs of horizontal piping, and support together on field fabricated trapeze pipe hangers.

1. Pipes of Various Sizes: Support together and space trapezes for smallest pipe size or install intermediate supports for smaller diameter pipes as specified for individual pipe hangers.
 2. Field fabricate from ASTM A36/A36M, carbon-steel shapes selected for loads being supported. Weld steel according to AWS D1.1/D1.1M.
- C. Thermal Hanger Shield Installation: Install in pipe hanger or shield for insulated piping.
- D. Fastener System Installation:
1. Install powder actuated fasteners for use in lightweight concrete or concrete slabs less than 4 inches thick in concrete after concrete is placed and completely cured. Use operators that are licensed by powder actuated tool manufacturer. Install fasteners according to powder actuated tool manufacturer's operating manual.
 2. Install mechanical expansion anchors in concrete after concrete is placed and completely cured. Install fasteners according to manufacturer's written instructions.
- E. Install hangers and supports complete with necessary attachments, inserts, bolts, rods, nuts, washers, and other accessories.
- F. Equipment Support Installation: Fabricate from welded structural steel shapes.
- G. Install hangers and supports to allow controlled thermal and seismic movement of piping systems, to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends, and similar units.
- H. Install lateral bracing with pipe hangers and supports to prevent swaying.
- I. Install building attachments within concrete slabs or attach to structural steel. Install additional attachments at concentrated loads, including valves, flanges, and strainers, 2-1/2" pipe size and larger and at changes in direction of piping. Install concrete inserts before concrete is placed; fasten inserts to forms and install reinforcing bars through openings at top of inserts.
- J. Load Distribution: Install hangers and supports so that piping live and dead loads and stresses from movement will not be transmitted to connected equipment.
- K. Pipe Slopes: Install hangers and supports to provide indicated pipe slopes and to not exceed maximum pipe deflections allowed by ASME B31.9 for building services piping.
- L. Insulated Piping:
1. Attach clamps and spacers to piping.
 - a. Piping Operating above Ambient Air Temperature: Clamp may project through insulation.
 - b. Piping Operating below Ambient Air Temperature: Use thermal hanger shield insert with clamp sized to match OD of insert.
 - c. Do not exceed pipe stress limits allowed by ASME B31.9 for building services piping.
 2. Install MSS SP-58, Type 39, protection saddles if insulation without vapor barrier is indicated. Fill interior voids with insulation that matches adjoining insulation.
 - a. Option: Thermal-hanger shield inserts may be used. Include steel weight distribution plate for pipe NPS 4 and larger if pipe is installed on rollers.
 3. Install MSS SP-58, Type 40, protective shields on cold piping with vapor barrier. Shields shall span an arc of 180 degrees.
 - a. Option: Thermal hanger shield inserts may be used. Include steel weight distribution plate for pipe NPS 4 and larger if pipe is installed on rollers.
 4. Shield Dimensions for Pipe: Not less than the following:
 - a. 1/2" to 3-1/2" pipe: 12 inches long and 0.048 inch thick.
 - b. 4" pipe: 12 inches long and 0.06 inch thick.
 - c. 4" and 5" pipe: 18 inches long and 0.06 inch thick.
 - d. 8" thru 14" pipe: 24 inches long and 0.075 inch thick.

- e. 16" thru 24" pipe: 24 inches long and 0.105 inch thick.
- 5. Pipes 8" and Larger: Include wood or reinforced calcium silicate insulation inserts of length at least as long as protective shield.
- 6. Thermal Hanger Shields: Install with insulation same thickness as piping insulation.

3.3 EQUIPMENT SUPPORTS

- A. Fabricate structural steel stands to suspend equipment from structure overhead or to support equipment above floor.
- B. Grouting: Place grout under supports for equipment and make bearing surface smooth.
- C. Provide lateral bracing to prevent swaying for equipment supports.

3.4 METAL FABRICATIONS

- A. Cut, drill, and fit miscellaneous metal fabrications for trapeze pipe hangers and equipment supports.
- B. Fit exposed connections together to form hairline joints. Field weld connections that cannot be shop welded because of shipping size limitations.
- C. Field Welding: Comply with AWS D1.1/D1.1M procedures for shielded, metal arc welding; appearance and quality of welds; and methods used in correcting welding work; and with the following:
 - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - 2. Obtain fusion without undercut or overlap.
 - 3. Remove welding flux immediately.
 - 4. Finish welds at exposed connections so no roughness shows after finishing and so contours of welded surfaces match adjacent contours.

3.5 ADJUSTING

- A. Hanger Adjustments: Adjust hangers to distribute loads equally on attachments and to achieve indicated slope of pipe.
- B. Trim excess length of continuous thread hanger and support rods to 1-1/2 inches.

3.6 PAINTING

- A. Touchup: Clean field welds and abraded areas of shop paint. Paint exposed areas immediately after erecting hangers and supports. Use same materials as used for shop painting. Comply with SSPC-PA 1 requirements for touching up field painted surfaces.
 - 1. Apply paint by brush or spray to provide a minimum dry film thickness of 2.0 mils.
- B. Galvanized Surfaces: Clean welds, bolted connections, and abraded areas and apply galvanizing repair paint to comply with ASTM A780/A780M.

3.7 HANGER AND SUPPORT SCHEDULE

- A. Specific hanger and support requirements are in Sections specifying piping systems and equipment.
- B. Comply with MSS SP-58 for pipe hanger selections and applications that are not specified in piping system Sections.
- C. Use hangers and supports with galvanized metallic coatings for piping and equipment that will not have field applied finish.
- D. Use nonmetallic coatings on attachments for electrolytic protection where attachments are in direct contact with copper tubing.

- E. Use carbon steel pipe hangers and supports metal trapeze pipe hangers and metal framing systems and attachments for general service applications.
- F. Use copper plated pipe hangers and copper or stainless steel attachments for copper piping and tubing.
- G. Use padded hangers for piping that is subject to scratching.
- H. Use thermal hanger shield inserts for insulated piping and tubing.
- I. Horizontal Piping Hangers and Supports: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
 - 1. Adjustable, Steel Clevis Hangers (MSS Type 1): For suspension of non-insulated or insulated, stationary pipes 1/2" thru 30" size.
 - 2. Yoke Type Pipe Clamps (MSS Type 2): For suspension of up to 1050°F, pipes 4" thru 24" size, requiring up to 4 inches of insulation.
 - 3. Carbon or Alloy Steel, Double Bolt Pipe Clamps (MSS Type 3): For suspension of pipes 3/4" thru 36" size, requiring clamp flexibility and up to 4 inches of insulation.
 - 4. Steel Pipe Clamps (MSS Type 4): For suspension of cold and hot pipes 1/2" thru 24" size if little or no insulation is required.
 - 5. Pipe Hangers (MSS Type 5): For suspension of pipes 1/2" thru 4" size, to allow off center closure for hanger installation before pipe erection.
 - 6. Adjustable Swivel Split or Solid Ring Hangers (MSS Type 6): For suspension of non-insulated, stationary pipes 3/4" thru 8" size.
 - 7. Adjustable, Steel Band Hangers (MSS Type 7): For suspension of non-insulated, stationary pipes 1/2" thru 8" size.
 - 8. Adjustable Band Hangers (MSS Type 9): For suspension of non-insulated, stationary pipes 1/2" thru 8" size.
 - 9. Adjustable, Swivel Ring Band Hangers (MSS Type 10): For suspension of non-insulated, stationary pipes 1/2" thru 8" size.
 - 10. Split Pipe Ring with or without Turnbuckle Hangers (MSS Type 11): For suspension of non-insulated, stationary pipes 3/8" thru 8" size.
 - 11. Extension Hinged or Two Bolt Split Pipe Clamps (MSS Type 12): For suspension of non-insulated, stationary pipes 3/8" thru 3" size.
 - 12. U-Bolts (MSS Type 24): For support of heavy pipes 1/2" thru 30" size.
 - 13. Clips (MSS Type 26): For support of insulated pipes not subject to expansion or contraction.
 - 14. Pipe Saddle Supports (MSS Type 36): For support of pipes 4" thru 36" size, with steel pipe base stanchion support and cast iron floor flange or carbon steel plate.
 - 15. Pipe Stanchion Saddles (MSS Type 37): For support of pipes 4" thru 36" size, with steel pipe base stanchion support and cast iron floor flange or carbon steel plate, and with U-bolt to retain pipe.
 - 16. Adjustable Pipe Saddle Supports (MSS Type 38): For stanchion type support for pipes 2-1/2" thru 36" size if vertical adjustment is required, with steel pipe base stanchion support and cast iron floor flange.
 - 17. Single Pipe Rolls (MSS Type 41): For suspension of pipes 1" thru 30" size , from two rods if longitudinal movement caused by expansion and contraction might occur.
 - 18. Adjustable Roller Hangers (MSS Type 43): For suspension of pipes 2-1/2" thru 24" size, from single rod if horizontal movement caused by expansion and contraction might occur.
 - 19. Complete Pipe Rolls (MSS Type 44): For support of pipes 2" thru 42" size if longitudinal movement caused by expansion and contraction might occur but vertical adjustment is unnecessary.
 - 20. Pipe Roll and Plate Units (MSS Type 45): For support of pipes 2" thru 24" size if small horizontal movement caused by expansion and contraction might occur and vertical adjustment is unnecessary.
 - 21. Adjustable Pipe Roll and Base Units (MSS Type 46): For support of pipes 2" thru 30" size if vertical and lateral adjustment during installation might be required in addition to expansion and contraction.

- J. Vertical Piping Clamps: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
1. Extension Pipe or Riser Clamps (MSS Type 8): For support of pipe risers 3/4" thru 24".
 2. Carbon or Alloy Steel Riser Clamps (MSS Type 42): For support of pipe risers 3/4" thru 24" size if longer ends are required for riser clamps.
- K. Hanger Rod Attachments: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
1. Steel Turnbuckles (MSS Type 13): For adjustment up to 6 inches for heavy loads.
 2. Steel Clevises (MSS Type 14): For 120 to 450°F piping installations.
 3. Swivel Turnbuckles (MSS Type 15): For use with MSS Type 11, split pipe rings.
 4. Malleable Iron Sockets (MSS Type 16): For attaching hanger rods to various types of building attachments.
 5. Steel Weldless Eye Nuts (MSS Type 17): For 120 to 450°F piping installations.
- L. Building Attachments: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
1. Steel or Malleable Concrete Inserts (MSS Type 18): For upper attachment to suspend pipe hangers from concrete ceiling.
 2. Top Beam C-Clamps (MSS Type 19): For use under roof installations with bar-joint construction, to attach to top flange of structural shape.
 3. Side Beam or Channel Clamps (MSS Type 20): For attaching to bottom flange of beams, channels, or angles.
 4. Center Beam Clamps (MSS Type 21): For attaching to center of bottom flange of beams.
 5. Welded Beam Attachments (MSS Type 22): For attaching to bottom of beams if loads are considerable and rod sizes are large.
 6. C-Clamps (MSS Type 23): For structural shapes.
 7. Top-Beam Clamps (MSS Type 25): For top of beams if hanger rod is required tangent to flange edge.
 8. Side Beam Clamps (MSS Type 27): For bottom of steel I-beams.
 9. Steel Beam Clamps with Eye Nuts (MSS Type 28): For attaching to bottom of steel I-beams for heavy loads.
 10. Linked-Steel Clamps with Eye Nuts (MSS Type 29): For attaching to bottom of steel I-beams for heavy loads, with link extensions.
 11. Malleable Beam Clamps with Extension Pieces (MSS Type 30): For attaching to structural steel.
 12. Welded Steel Brackets: For support of pipes from below or for suspending from above by using clip and rod. Use one of the following for indicated loads:
 - a. Light (MSS Type 31): 750 lbs.
 - b. Medium (MSS Type 32): 1500 lbs.
 - c. Heavy (MSS Type 33): 3000 lbs.
 13. Side Beam Brackets (MSS Type 34): For sides of steel or wooden beams.
 14. Plate Lugs (MSS Type 57): For attaching to steel beams if flexibility at beam is required.
 15. Horizontal Travelers (MSS Type 58): For supporting piping systems subject to linear horizontal movement where headroom is limited.
- M. Saddles and Shields: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
1. Steel Pipe Covering Protection Saddles (MSS Type 39): To fill interior voids with insulation that matches adjoining insulation.
 2. Protection Shields (MSS Type 40): Of length recommended in writing by manufacturer to prevent crushing insulation.
 3. Thermal Hanger Shield Inserts: For supporting insulated pipe.
- N. Spring Hangers and Supports: Unless otherwise indicated and except as specified in piping system Sections, install the following types:

1. Restraint Control Devices (MSS Type 47): Where indicated to control piping movement.
 2. Spring Cushions (MSS Type 48): For light loads if vertical movement does not exceed 1-1/4 inches.
 3. Spring Cushion Roll Hangers (MSS Type 49): For equipping Type 41, roll hanger with springs.
 4. Spring Sway Braces (MSS Type 50): To retard sway, shock, vibration, or thermal expansion in piping systems.
 5. Variable Spring Hangers (MSS Type 51): Preset to indicated load and limit variability factor to 25 percent to allow expansion and contraction of piping system from hanger.
 6. Variable Spring Base Supports (MSS Type 52): Preset to indicated load and limit variability factor to 25 percent to allow expansion and contraction of piping system from base support.
 7. Variable Spring Trapeze Hangers (MSS Type 53): Preset to indicated load and limit variability factor to 25 percent to allow expansion and contraction of piping system from trapeze support.
 8. Constant Supports: For critical piping stress and if necessary, to avoid transfer of stress from one support to another support, critical terminal, or connected equipment. Include auxiliary stops for erection, hydrostatic test, and load adjustment capability. These supports include the following types:
 - a. Horizontal (MSS Type 54): Mounted horizontally.
 - b. Vertical (MSS Type 55): Mounted vertically.
 - c. Trapeze (MSS Type 56): Two vertical type supports and one trapeze member.
- O. Comply with MSS SP-58 for trapeze pipe hanger selections and applications that are not specified in piping system Sections.
- P. Comply with MFMA-103 for metal framing system selections and applications that are not specified in piping system Sections.
- Q. Use powder actuated fasteners and mechanical expansion anchors instead of building attachments where required in concrete construction.

END OF SECTION

SECTION 22 07 00 - PLUMBING INSULATION

PART 1 - GENERAL

1.1 CONDITIONS OF THE CONTRACT

- A. Sections 220000 (Plumbing) and 220500 (Basic Materials and Methods for Plumbing) are hereby made a part of this section.

1.2 WORK INCLUDED:

- A. Types of plumbing insulation specified in this section include the following:
 - Domestic Cold Water Piping
 - Domestic Hot Water Supply and Return Piping
 - Equipment Insulation

1.3 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Firms regularly engaged in manufacture of plumbing insulation products, of types and sizes required, whose products have been in satisfactory use in similar service for not less than 3 years.
- B. Installer's Qualifications: A firm with at least 5 years successful installation experience on projects with mechanical insulations similar to that required for this project.
- C. Install thermal insulation products on equipment in accordance with manufacturer's written instructions and in accordance with recognized industry practices to ensure that insulation serves its intended purpose.
- D. Flame/Smoke Ratings: For insulation installed inside the building provide composite mechanical insulation (insulation, jackets, coverings, sealers, mastics, and adhesives) with a flame spread rating of 25 or less and a smoke developed index of 50 or less, as tested by the ASTM E84 (NFPA 255) method.

1.4 SUBMITTALS:

- A. Product Data: Submit manufacturer's technical product data and installation instructions for each type of mechanical insulation. Submit schedule showing manufacturer's product number, k-Value, thickness, density, and furnished accessories for each mechanical system requiring insulation. Include complete description of installation methods with this submittal.

PART 2 - PRODUCTS

2.1 PIPE INSULATION MATERIALS

- A. General: All pipe insulation conductivities and thicknesses shall meet or exceed the requirements listed in International Energy Conservation Code Table C403.11.3.
- B. Aluminum Jacketing shall be provided on exposed piping and shall be Johns Manville 'JM Aluminum Jacketing' with 'Polyfilm Moisture Barrier' and stucco-embossed finish, or approved equal, and shall be provided where indicated, in the following thicknesses:
 - 1. For Insulation Outside Diameters under 8 inches: .016 inch thick jacketing
 - 2. For Insulation Outside Diameters 8 inch and larger: .020 inch thick jacketing
- C. Exposed in all piping applications shall mean any exposed pipe in a mechanical room or mezzanine area that is less than 8'-0" above finished floor.
- D. Fiberglass Insulation:
 - 1. Fiberglass insulation shall be Johns Manville Microlok HP, or equal, with factory-applied fire-retardant ASJ jacket, self-sealing laps, and shall be applied per the manufacturer's written recommendations. Conductivity shall be .24 Btu-in/(hr-ft²-°F) at 100°F.

2. Insulate and cover all fittings with Johns Manville Zeston Series 2000 pre-molded fitting covers secured with serrated tacks, adhesive, and/or Zeston Z-Tape.
3. Install a segment of rigid calcium silicate insulation at each pipe hanger for pipe sizes 2-1/2 inches and larger.
4. Finish all cold fittings with Zeston Z-tape to provide a vapor-tight seal.
5. Seal all raw ends of insulation with Childers CP-10 weather barrier sealant, or approved equal.
6. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include the following:
Johns Manville
CertainTeed
Owens Corning

2.2 DOMESTIC COLD WATER (INDOORS)

- A. Insulate exposed domestic cold water piping with fiberglass insulation covered with aluminum jacketing and aluminum fitting covers.
- B. Insulate concealed domestic cold water piping with fiberglass insulation. Do not insulate unions, valves, and exposed runouts to fixtures served with domestic cold water piping.
 1. Minimum Insulation Thickness:
 - a. Piping 1-1/4 inch and smaller: 1/2 inch
 - b. Piping 1-1/2 inch and larger: 1 inch

2.3 DOMESTIC HOT WATER (INDOORS)

- A. Insulate exposed domestic hot water supply and return piping with fiberglass insulation covered with aluminum jacketing and aluminum fitting covers.
- B. Insulate concealed domestic hot water supply and return piping with fiberglass insulation. Do not insulate unions, valves, and exposed runouts to fixtures in domestic hot water piping.
 1. Minimum Insulation Thickness:
 - a. Piping 1 inch and smaller: 1 inch
 - b. Piping 1-1/4 inch and larger: 1-1/2 inches

2.4 EQUIPMENT INSULATION MATERIALS

- A. General: All equipment insulation R-Values and thicknesses shall meet or exceed the requirements listed in International Energy Conservation Code Section C403.11.3.
- B. Water Heating Equipment
 1. Insulate all water heating equipment operating at increased surface temperatures and which does not have factory-applied insulation, including heating water system air separators. Do not insulate heating water expansion tanks or heating water pumps.
 2. Flat insulation shall be 3 lb density fiberglass board with thickness as required for the operating temperature of the associated fluid inside the equipment. Insulation shall be Johns Manville Series 800 Spin-Glas with reinforced FSK jacket, Owens Corning Series 700 fiberglass board insulation with reinforced FSK jacket, or approved equal.
 3. Curved insulation shall be 2.5 lb density semi-rigid fiberglass with thickness as required for the operating temperature of the associated fluid inside the equipment. Insulation shall be Johns Manville Micro-Flex large diameter pipe and tank insulation with reinforced FSK jacket, Owens Corning large diameter pipe and tank insulation with reinforced FSK jacket, or approved equal.
 4. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include the following:
Johns Manville
Owens Corning

C. Removable Insulating Jackets

1. Insulation and jacket material shall be rated for the operating temperature of the equipment being insulated. Insulating jackets shall be removable and reusable, thermal and acoustical insulating jackets, fabricated with 2" thick, 10 lb/cubic foot density, needled glass fiber or fiberglass or insulation, and sewn with Kevlar thread. Insulating jackets shall be secured with stainless steel buckles and straps. Insulating jackets shall be manufactured by Thermaxx, Thermal Energy Products, Insultech, or approved equal. Removable insulating jackets shall be provided for the following items.
 - a. Motorized control valves located indoors and outdoors.
 - b. Flanged valves located indoors and outdoors.

PART 3 – EXECUTION

3.1 INSTALLATION OF PIPING INSULATION

- A. The term 'piping' used herein shall include pipe, valves, strainers, and fittings. Apply insulating cements to fittings, valves, and strainers, and trowel smooth to the thickness of adjacent covering. Covering on valves shall extend up to the bonnet. The covering cement shall be of the types herein specified
- B. Install insulation products in accordance with manufacturer's written instructions and in accordance with recognized industry practices to ensure that insulation serves its intended purpose.
- C. Install insulation on pipe systems subsequent to installation of heat tracing, testing, and acceptance of tests.
- D. Install insulation materials with smooth and even surfaces. Insulate each continuous run of piping with full length units of insulation, with single-cut pieces to complete each run. Do not use cut pieces or scraps abutting each other.
- E. Clean and dry pipe surfaces prior to insulating. Butt insulation joints firmly together to ensure complete and tight fit over surfaces to be covered.
- F. Extend piping insulation without interruption through walls, floors, and similar penetrations, except where otherwise indicated.
- G. Install pipe hangers on the outside of the insulation and not in contact with the pipe. Protect insulation as specified under Hangers and Supports.

3.2 CARE AND CLEANING

- A. Repair or replace broken, damaged, or otherwise defective insulation. Leave entire work in condition satisfactory to Architect. At completion, carefully clean equipment installed as part of this work. Leave systems and equipment in a satisfactory operating condition.

3.3 CLEANING UP

- A. Upon completion of the Work remove materials, equipment, apparatus, tools, and the like, and leave the premises clean, neat, and orderly.

END OF SECTION

SECTION 22 08 00 – TESTING, ADJUSTING, AND BALANCING OF PLUMBING SYSTEMS

PART 1 - GENERAL

1.1 CONDITIONS OF THE CONTRACT

- A. Sections 220000 (Plumbing) and 220500 (Basic Materials and Methods for Plumbing) are hereby made a part of this section.

1.2 WORK INCLUDED

- A. Temperature performance testing on all heat transfer equipment and/or components.
- B. Test and balance of plumbing distribution systems and associated equipment and apparatus.
- C. Testing, setting, and adjusting speed and volume of systems, recording data, conducting tests, preparing and submitting reports, and recommending modifications to work as required by the contract documents.
- D. Component types of testing, adjusting, and balancing specified in this section includes the following as applied to plumbing equipment:
 - Plumbing Pumps
 - Balancing Valves for Plumbing Systems

1.3 QUALITY ASSURANCE

- A. Balance Agency: Provide services and facilities of an independent agency that specializes in testing, analysis, and balancing of hydronic systems and air distribution for heating and cooling systems. Work shall be done by qualified engineering technicians and trained personnel, using instruments certified accurate to limits used in standard practice for testing and balancing of hydronic and air distribution for heating and cooling systems. The agency shall field test air and hydronic flows in accordance with methods prescribed by the Associated Air Balance Council, National Standard Volume 1, latest edition.
- B. The balance agency shall be a member of the Associated Air Balance Council. Subject to compliance with requirements, the balance agency shall be one of the following:
 - RS Analysis
 - Raglen System Balance
- C. The balance agency shall submit the results of tests in this section to the Architect/Engineer for review and acceptance.
- D. AABC Compliance: Comply with AABC 'National Standards' Volume 1, as applicable to plumbing systems and associated equipment and apparatus.
- E. Industry Standards: Comply with ASHRAE recommendations pertaining to measurements, instruments, and testing, adjusting and balancing, except as otherwise indicated.
- F. Reference Standards:
 - 1. AABC (Associated Air Balance Council) AABC National Standards Volume 1
 - 2. ASHRAE (American Society of Heating, Refrigerating, and Air Conditioning Engineers)
- G. Test Instruments: Utilize test instruments and equipment for the test and balance work required, of type, precision, and capacity as recommended in AABC National Standards Volume 1.

1.4 SUBMITTALS

- A. Provide a test and balance agenda that includes step-by-step testing and balancing procedures, test sheets, and schematic drawings, all being specific to the project.
- B. Provide submittals to indicate the extent of work proposed. Submit certified test reports as hereinafter specified signed by test and balance technician/supervisor that performed test and balance work.
- C. Include identification and types of instruments used and their most recent calibration date with submission of final test report.
- D. The completed balance report shall be submitted for review and approval prior to requesting final observation of the project.

1.5 GENERAL REQUIREMENTS

- A. The balance agency shall perform the following during the installation phase of systems:
 - 1. Study design drawings and specifications and prepare a schedule to physically inspect plumbing equipment and devices to be tested and balanced. The Contractor shall provide the balance agency with one copy of the contract drawings and specifications, plumbing equipment submittals, and change orders necessary for proper balancing of plumbing systems.
 - 2. The balance agency shall make field inspections prior to closing in portions of systems to be balanced. Agency shall verify to its satisfaction that all work, fittings, dampers, balancing devices, etc. are properly fabricated and installed as shown or specified and that Agency will be able to properly balance system.
 - 3. Prepare a testing and balancing schedule, test record forms, and necessary technical information regarding the plumbing systems and equipment.
 - 4. Provide written documentation when the above noted items have been completed. A single page letter signed off by the plumbing contractor and the test and balance agency will suffice.
 - 5. Recommend adjustments and/or corrections to plumbing equipment and piping systems that are necessary for proper balancing of systems. Provide written documentation of the recommended items to the Architect/Engineer for review.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 BALANCING

- A. Upon completion of plumbing systems, the test and balance agency shall complete tests, analysis, and balance of plumbing systems and equipment as appropriate.
- B. This report shall include as minimum, but not be limited to (following design and actual information):
 - 1. Motors and Pumps: Horsepower, brake horsepower, revolutions per minute, actual amperage, and full load rated amperage.
 - 2. Pumps: Suction and discharge pressures.
 - 3. Other information required to establish completely balanced systems.

END OF SECTION

SECTION 22 09 00 - PLUMBING FIXTURES AND TRIM

PART 1 - GENERAL

1.1 CONDITIONS OF THE CONTRACT

- A. Sections 220000 (Plumbing) and 220500 (Basic Materials and Methods for Plumbing) are hereby made a part of this section.

1.2 WORK INCLUDED

- A. Types of plumbing fixtures specified in this section include the following:

- Water Closets
- Urinals
- Lavatories

1.3 QUALITY ASSURANCE

- A. Plumbing Fixture Standards: Comply with applicable portions of the following codes and requirements for all work in this section:
 - American National Standards Institute
 - Federal Standards
 - California Plumbing Code (for projects located in California)
- B. All plumbing components within the waterways shall comply with the following:
 - Safe Drinking Water Act
 - No Lead Restrictions of ANSI/NSF Standard 61 Section 9

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's technical product data for plumbing fixtures and trim, including catalog cut of each fixture type and trim item furnished.
- B. Operation and Maintenance Data: Submit operation and maintenance data and replacement material lists for each type of material listed in this section. Include this data and product data in the operation and maintenance manual.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Handle plumbing fixtures carefully to prevent breakage, chipping, and scoring the fixture finish. Do not install damaged plumbing fixtures; replace and return damaged units to equipment manufacturer.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS FOR PLUMBING FIXTURES

- A. All fixtures shall be first class in every respect. Accurately line up finished plumbing. Take special care with the rough-in and finished plumbing where batteries of fixtures occur.
- B. Consult architectural drawings, as well as plumbing drawings for locations, dimensions, and mounting heights of plumbing fixtures.
 - 1. Take location and mounting heights for rough-in from architectural drawings.
 - 2. Follow schedule on plumbing drawings for rough-in connections. Set rough-in for all fixtures exactly per measurements furnished by the manufacturers of the fixtures used.
 - 3. Rough-in for lavatories and sinks shall be brought in through the wall under the centerline of the drain from the fixture wherever possible and as close to the fixture as possible.

- C. Provide all water supplies to fixtures with compression shutoff stops with IPS inlets, threaded brass nipples at pipe connection, and a lock-shield loose key. Provide combination fixtures with a compression stop on each water supply fitting. Provide loose key handle for each stop. Provide ½ inch rigid risers for all fixtures unless otherwise noted.
- D. Furnish shutoff valves on hose bibbs directly connected to mains with no intervening valves.
- E. Except where otherwise specified, all finish for exposed metal trim on fixture shall be polished chromium plated. This also applies to wall flanges, nuts, and washers. Handles on all faucets and stops shall be all metal chromium plated.
- F. Make connection between fixtures and flanges on soil pipe absolutely gas tight and water tight with neoprene type gaskets (wall hung fixtures) or bowl wax (floor outlet fixtures). Rubber gaskets or putty will not be permitted.
- G. Provide fixtures not having integral traps with P-traps of chromium plated cast brass body without cleanout connected to concealed waste in wall and sanitary fittings. Provide fixtures with a 17 gauge minimum traps and tailpiece and grid drain unless otherwise noted.
- H. Available Manufacturers: Subject to compliance with requirements, manufacturers offering traps which may be incorporated in the work include the following:
McGuire Manufacturing
Dearborn Brass
- I. Unions on waste pipes on fixture side of traps may be slip or flange joints with soft rubber or lead gaskets.

2.2 PLUMBING FIXTURE HANGERS AND SUPPORTS

- A. Properly install and support plumbing fixtures as required and specified herein.
- B. Carriers and supports shall be J.R. Smith, Zurn, Mifab, or equal as recommended by the manufacturer for the particular installation and type of fixture being installed. Residential type fixture supports are not acceptable.
- C. Install wall mounted water closets with combination support and waste fittings, with feet of support securely anchored to floor.
- D. Install floor mounted water closets with J.R. Smith, Mifab, or equal cast iron closet flanges with brass bolts, nuts, washers, and porcelain caps.
- E. Install the following fixtures on concealed support with feet of support securely anchored to floor. Anchor top of support to wall construction in an approved manner.
Wall mounted urinals
Drinking fountains
- F. Install wall hung lavatories in stud walls with concealed arms and floor support, with feet of support securely anchored to the floor. In addition, anchor top of support to wall construction in an approved manner.

2.3 PLUMBING FIXTURES

- A. Fixtures shall be American Standard, Kohler, Haws, Elkay, Just, Acorn, or approved equal.
- B. Fixture manufacturer and model shall be as scheduled on the drawings, complete with all components and accessories as illustrated and described. Provide stops for all concealed supplies.
- C. Flush valves used at handicapped water closets shall be mounted on the wide side of the toilet enclosure.
- D. All water coolers, drinking fountains, and hydration stations shall include integral water filters that are accessible from the front of the enclosure.

2.4 WATER CLOSET SEATS

- A. Provide seats for standard elongated bowls with self-sustaining check hinges, stainless steel posts, white color.

PART 3 - EXECUTION

3.1 INSPECTION AND PREPARATION

- A. Examine rough-in work of domestic water and waste piping systems to verify actual locations of piping connections prior to installing fixtures. Also examine floors, substrates, and conditions under which fixture work is to be accomplished. Correct any incorrect locations of piping and other unsatisfactory conditions for installation of plumbing fixtures. Do not proceed with work until all unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install plumbing fixtures of types indicated where shown and at mounting height indicated on Architectural Drawings in accordance with fixture manufacturer's written instructions, rough-in drawings, and with recognized industry practices. Ensure that plumbing fixtures comply with requirements and serve intended purposes. Comply with applicable requirements of the Uniform Plumbing Code pertaining to installation of plumbing fixtures.
- B. In all cases where plumbing fixtures are mounted on or against building walls of concrete or other materials having relatively rough or non-planar surfaces, it shall be the responsibility of this Contractor to provide any necessary grout or backing materials required to facilitate fixture mounting and eliminate void spaces between fixtures and wall to ensure adequate bearing contact.
 - 1. On completion of installation provide silicone sealer at all points of fixture contact with walls or floors.
- C. Any fixture broken, cracked, or otherwise damaged during installation shall be replaced by the Contractor at his own expense.

3.3 TRAPPING AND VENTING OF FIXTURES

- A. Trap and vent all plumbing fixtures in accordance with the Uniform Plumbing Code, whether or not shown on the drawings. Strictly adhere to any and all local codes. The only exceptions (which require specific written approval) will be those fixtures which are specially noted herein or on the drawings to be provided with special wastes.
- B. No vent shall intersect another vent at a point less than 6 inches above the extreme overflow level of highest fixture served.
- C. Take vents off the top half of horizontal runs and grade so as to free vents quickly of any water or condensation.

3.4 ADJUSTMENT OF PLUMBING PIPING SYSTEM

- A. Test and adjust all flush valves so that each fixture receives the proper amount of water. Regulate all faucets, bibbs, drinking fountains, etc. to the approval of the Architect/Engineer so that the entire system is left in a first class condition.
- B. Clean fixtures, equipment, and materials installed under this contract. Remove cement, plaster, paint and/or rust, etc. Dirt, rubbish, paint spots, or grease on walls or fixtures for which this Contractor is responsible must be removed by the Contractor.

3.5 CLEANING AND PROTECTION

- A. Clean plumbing fixtures of all dirt and debris upon completion of installation.
- B. Protect installed fixtures from dirt and damage during the remainder of the project.

3.6 FIELD QUALITY CONTROL

- A. Upon completion of installation of plumbing fixtures and after units are water pressurized, test fixtures to demonstrate capability and compliance with requirements. When possible, correct malfunctioning units at site, then retest to demonstrate compliance; otherwise, remove and replace with new units and proceed with retesting.
- B. Inspect each installed unit for damage to finish. When feasible, restore and match finish to the original at site. Otherwise, remove the fixture and replace with a new unit. Feasibility and match to be judged by the Architect/Engineer. Remove any cracked or dented units and replace with new units.

3.7 EXTRA STOCK

- A. Furnish special wrenches and other devices necessary for servicing plumbing fixtures and trim to the Owner with receipt. Furnish one device for every 10 units.

3.8 OPERATION TEST

- A. Test each piece of equipment to show that it will operate in accordance with the indicated requirements.

3.9 CLEANING UP

- A. Upon completion of the Work remove materials, equipment, apparatus, tools, and the like, and leave the premises clean, neat, and orderly.

END OF SECTION

SECTION 22 10 00 - FACILITY WATER DISTRIBUTION

PART 1 - GENERAL

1.1 CONDITIONS OF THE CONTRACT

- A. Sections 220000 (Plumbing) and 220500 (Basic Materials and Methods for Plumbing) are hereby made a part of this section.

1.2 WORK INCLUDED

- A. Types of plumbing piping systems specified in this section include the following:

- Water Piping and Fittings
- Valves
- Potable Water Expansion Tanks

1.3 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Firms regularly engaged in manufacture of plumbing piping systems products, of types, materials, and sizes required, whose products have been in satisfactory use in similar service for not less than 5 years.
- B. Contractor's Qualifications: Firm with at least 5 years of successful installation experience on projects with piping systems work similar to that required for this project.
- C. Plumbing Code Compliance: Comply with applicable portions of the Uniform Plumbing Code pertaining to selection and installation of plumbing materials and products.

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's technical product data and installation instructions for plumbing piping systems materials and products.
- B. As-Built Drawings: At project closeout, submit as-built drawings of installed piping systems.
- C. Operation and Maintenance Data: Submit operation and maintenance data and parts lists for plumbing piping systems materials and products. Include this data, product data, shop drawings, and record drawings in the operation and maintenance manual.

PART 2 - PRODUCTS

2.1 MATERIALS AND PRODUCTS

- A. Provide piping materials and factory-fabricated piping products of sizes, types, pressure ratings, temperature ratings, and capacities as indicated. Provide materials and products complying with the Uniform Plumbing Code. Where more than one type of material or product is indicated, selection is the Contractor's option.

2.2 BASIC PIPES AND PIPE FITTINGS

- A. Provide pipe and pipe fittings complying with Section 220500 (Basic Materials and Methods for Plumbing) and in accordance with the following listing:
 - 1. Interior Water Piping: Copper tube; Type L, hard drawn temper; with wrought copper fittings and solder joints.

2.3 BASIC VALVES

- A. Provide valves complying with Section 220500 (Basic Materials and Methods for Plumbing) and in accordance with the following listing:
 - 1. Check Valves (All Sizes): Swing check valves
 - 2. Valves at connections to appliances shall be Milwaukee BA-300, or approved equal.

2.4 EXPANSION TANKS FOR POTABLE WATER

- A. Provide expansion tanks of size and capacity as listed on the drawings. Expansion tanks shall be replaceable bladder type. Shell and heads shall be of carbon steel welded construction and shall be ASME rated for 125 psi at 240°F. Provide full volume flexible butyl rubber bladder, bottom system connection, air charging fitting, drain connection, lifting eye and base ring for vertical mounting. Tanks shall be factory pre-charged as indicated on drawings. Wetted connections shall be stainless steel and bladder material shall be FDA approved.
- B. Available Manufacturers: Subject to compliance with requirements, manufacturers offering expansion tanks which may be incorporated in the work include the following:
 - Watts
 - Elbi
 - Taco

PART 3- EXECUTION

3.1 INSTALLATION OF WATER PIPING

- A. Run all water piping generally level, free of traps or unnecessary bends, arranged to conform to the building requirements, and to suit clearance for other mechanical work such as ducts, flues, conduits, and other work. No piping shall be installed so as to cause unusual noise from the flow of water therein under normal conditions.
- B. Install piping on room side of building insulation.
- C. Check final location of rubber rings within couplings on PVC water piping with gauge or as recommended by manufacturer. Make connection to valves with cast iron adapters connected to water pipe with cast iron couplings. Furnish and install anchors or thrust blocks.
- D. Examine areas and conditions under which plumbing piping systems are to be installed. Do not proceed with any Work until all unsatisfactory conditions have been corrected

3.2 INSTALLATION OF HANGERS AND SUPPORTS

- A. See Specification Section 220500 (Basic Materials and Methods for Plumbing).

3.3 INSTALLATION OF VALVES

- A. Install valves as indicated on Drawings and in the following locations:
 - 1. Shutoff Valves: Install on inlet of each plumbing equipment item, and on inlet of each plumbing fixture, and elsewhere as indicated.
 - 2. Drain Valves: Install on each plumbing equipment item located to completely drain equipment for service or repair. Install at base of each riser, at base of each rise or drop in piping system, and elsewhere indicated or required to completely drain potable water system.

3.4 EQUIPMENT CONNECTIONS

- A. Piping Runouts to Fixtures: Provide hot and cold water runouts to fixtures of sizes indicated.
- B. Mechanical Equipment Connections: Connect hot and cold water piping systems to mechanical equipment as indicated, and provide a shutoff valve and union at each connection.

3.5 TESTING OF PIPING

- A. Test piping in accordance with the following schedule. Show no loss in pressure or visible leaks after a minimum duration of four hours at the test pressures indicated.

TEST SCHEDULE

<u>SYSTEM TESTED</u>	<u>TEST PRESSURE</u>	<u>TEST WITH</u>
Hot and Cold Water Piping	150 psi at rough-in and 100 psi after equipment connection	Water

- B. Testing equipment, materials, and labor shall be furnished by the Contractor.
- C. Repair piping systems sections which fail required piping test, by disassembly and reinstallation, using new materials to the extent required to overcome leakage. Chemicals, stop-leak compounds, mastics, or other temporary repair methods are not acceptable.
- D. Drain test water from piping systems after all testing and repair work has been completed.

3.6 DOMESTIC WATER SYSTEM STERILIZATION

- A. Close open ends of water piping each day to prevent contamination or foreign matter entering pipe during construction. Thoroughly flush out piping to remove any dirt or foreign matter.
- B. After flushing of pipe systems, sterilize entire water systems from new point or points of connection before being turned over to Owner for use. Slowly fill system with water and add chlorine chemical agent to produce a minimum of 50 ppm of chlorine in the entering water.
- C. Retain treated water in pipe for a minimum of 24 hours. Should chlorine residual at pipe extremities be less than 50 ppm at this time, piping shall be re-chlorinated. As an option, the water systems may be filled with a water and chlorine solution containing a minimum of 200 ppm of chlorine and allowed to stand for four hours.
- D. After chlorination, flush lines of chlorinated water and refill from the domestic water supply. Continue flushing until residual chlorine is not greater than the chlorine residual in the flushing water at all pipe extremities. The procedure shall be repeated if it is shown by bacteriological examination made by an approved testing agency that contamination persists in the system.
- E. Domestic water sterilization shall be performed in accordance with all requirements of the Nevada Division of Health, Water Supply Regulations (or equivalent authority on projects located in California). Approval of the State Health Division shall be obtained prior to placing the system in service.
- F. Submit a written report to the State Health Division as required by State regulations. Provide a copy of the report to the Architect/Engineer prior to placing the system in service and prior to completion of project.

3.7 SPARE PARTS

- A. Furnish to the Owner, with receipt, one valve key for each key operated hydrant, hose bibb, and faucet installed.

END OF SECTION

SECTION 22 13 00 - FACILITY SANITARY SEWERAGE

PART 1 - GENERAL

1.1 CONDITIONS OF THE CONTRACT

- A. Sections 220000 (Plumbing) and 220500 (Basic Materials and Methods for Plumbing) are hereby made a part of this section.

1.2 WORK INCLUDED

- A. Types of plumbing piping and accessories specified in this section include the following:
 - Building Drain and Vent Piping
 - Condensate Drain Piping
 - Waste Piping Specialties
 - Cleanouts
 - Floor Drains

1.3 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Firms regularly engaged in manufacture of plumbing piping systems products, of types, materials, and sizes required, whose products have been in satisfactory use in similar service for not less than 5 years.
- B. Contractor's Qualifications: Firm with at least 5 years of successful installation experience on projects with piping systems work similar to that required for project.
- C. Plumbing Code Compliance: Comply with applicable portions of the Uniform Plumbing Code pertaining to selection and installation of plumbing materials and products.

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's technical product data and installation instructions for plumbing piping system materials and products.
- B. As-Built Drawings: At project closeout, submit as-built drawings of installed piping systems in accordance with all associated requirements.
- C. Operation and Maintenance Data: Submit operation and maintenance data and parts lists for all plumbing piping system materials and products. Include this data in the operation and maintenance manual in accordance with all associated requirements.
- D. Pump Product Data: Submit manufacturer's pump specifications, installation and start-up instructions, and current accurate pump characteristic performance curves with selection points clearly indicated. Pump efficiency as well as construction will be taken into consideration when assessing the submitted pump.
- E. Pump Operation and Maintenance Data: Submit operation and maintenance data and parts lists for each type of pump, control, and accessory, including trouble-shooting maintenance guide. Include this data, product data, and shop drawings in the operation and maintenance manual, in accordance with all associated requirements.

PART 2- PRODUCTS

2.1 MATERIALS AND PRODUCTS

- A. Provide piping materials and factory-fabricated piping products of sizes, types, pressure ratings, temperature ratings, and capacities as indicated. Provide materials and products complying with the Uniform Plumbing Code. Where more than one type of material or product is indicated, selection is the Contractor's option.

2.2 BASIC PIPES AND PIPE FITTINGS

A. Above Ground Building Drain Piping

1. Cast iron hub and spigot soil pipe; cast iron, hub and spigot soil pipe fittings, with compression gasket joints.
2. Hubless Cast Iron Soil Pipe and Fittings: CISPI Standard 301 (Latest Edition) and ASTM A888 (Latest Edition). Pipe and fittings shall be marked with the collective trademark of the Cast Iron Soil Pipe Institute.
3. Hubless Cast Iron Soil Pipe Couplings: Couplings for use in connection with Hubless Cast Iron Soil Pipe and Fittings shall comply with CISPI 310-311. Shield and clamp assembly shall consist of a 300 series stainless steel corrugated shield, stainless steel bands, number as required for pipe size, and sealing sleeve in conformance with ASTM C564.
4. Exposed Couplings: Provide coupling with 4 stainless steel clamps, stainless steel bolts and nuts, and neoprene gasket in conformance with ASTM C1540 for heavy duty shielded couplings. Couplings shall be Husky Model SD-4000, Ideal-Tridon Heavy Duty, or approved equal.

B. At the Contractor's option vertical piping above floor from lavatories and sinks may be standard weight galvanized steel pipe with class 125 black cast iron fittings, drainage pattern, with screwed joints.

C. Condensate Drain Piping: Type L, hard copper tubing with wrought copper solder joint fittings and 95 percent tin, 5 percent antimony solder. Condensate drain piping 1 inch and smaller shall use 45 degree wye and long radius fittings at all changes in direction. Condensate drain piping 1-1/4" and larger shall be use DWV fittings.

2.3 CLEANOUTS

A. General: Cleanouts of the same diameter as the pipe shall be installed in all horizontal soil and waste lines where indicated, and at all points of change in direction. Cleanouts shall be located not less than 18 inches from building construction so as to provide sufficient space for rodding. Provide listed products by Zurn, or equal product by Mifab.

B. Cleanouts shall have cast iron ferrules and bronze plugs.

C. Cleanouts extending to floor level shall be provided with membrane flange and clamping collar, bronze raised head plug, and nonslip scoriated top.

1. Cleanouts in cast iron soil or waste lines: Zurn Z-1440A.
2. Cleanouts in walls: Zurn Z-1446-A with stainless steel access cover.

PART 3 EXECUTION

3.1 INSPECTION

A. Examine areas and conditions under which plumbing piping systems are to be installed. Do not proceed with Work until unsatisfactory conditions have been corrected in manner acceptable to Contractor.

3.2 INSTALLATION OF SANITARY DRAINAGE SYSTEMS

A. Sewer Piping: Run all horizontal sanitary drain piping inside of building on a uniform grade of not less than ¼ inch per foot. Unless otherwise noted on the drawings piping shall have invert elevations as shown and shall slope uniformly between the given elevations.

B. Run all drainage piping as straight as possible and provide easy bends with long turns. Make all offsets at an angle of 45 degrees or less.

C. Grade all vent piping such that it will free itself quickly of any water or condensation.

D. Where possible join groups of vent risers together with one enlarged outlet through the roof.

- E. Hubless Cast Iron Joints: Comply with the coupling manufacturer's installation instructions and with CISPI Pamphlet No. 310, latest edition.

3.3 INSTALLATION OF HANGERS AND SUPPORTS

- A. See Specification Section 220500 (Basic Materials and Methods for Plumbing).

3.4 INSTALLATION OF DRAINAGE PIPING PRODUCTS

- A. Cleanouts: Install in piping as indicated, as required by the Uniform Plumbing Code, at each change in direction of piping greater than 45 degrees, at minimum intervals of 50 feet for piping 4 inches and smaller and 100 feet for larger piping, and at the base of each conductor.
- B. Flashing Flanges: Install flashing flange and clamping device with each cleanout passing through waterproof membrane.
- C. Install drains in accordance with manufacturer's written instructions and in locations indicated. Install floor drains and floor sinks with the lip of the drain slightly below finished floor to ensure drainage. Coordinate with other trades to ensure that the floor slopes to drain.

3.5 INSTALLATION OF PUMPS

- A. Install pumps where indicated, in accordance with manufacturer's published instructions, complying with recognized industry practices to ensure that pumps comply with requirements and serve intended purposes.
- B. Provide access space around pumps for service as indicated, but in no case less than that recommended by manufacturer.
- C. Piping shall be supported from the building structure so as to prevent any strain on the pump casings. A final check for perfect alignment of the piping connections shall be made after pump has been secured to its base. Provide valves, accessories, gauges, flexible connections, and supports as indicated.
- D. Install electrical devices furnished by manufacturer but not specified to be factory mounted. Furnish a copy of the manufacturer's wiring diagram to the electrical contractor.
- E. Verify that electrical wiring installation is in accordance with manufacturer's submittal and the installation requirements of Division 26. Do not proceed with equipment startup until the wiring installation is complete and correct.
- F. Check alignment, and where necessary, realign shafts of motors and pumps within the tolerances recommended by the pump manufacturer.
- G. Lubricate pumps before startup. Perform startup in accordance with the manufacturer's written instructions.
- H. Pumps shall not be connected to piping before piping is thoroughly flushed and cleaned of all dirt and grit. After piping connections have been made, systems shall be filled before starting pumps. Pumps shall not be run dry under any circumstances.

3.6 TEST OF PIPING

- A. Test piping at completion of rough-in, in accordance with the following schedule. Show no loss in pressure or visible leaks after a minimum duration of four hours at the test pressures indicated.

TEST SCHEDULE

<u>SYSTEM TESTED</u>	<u>TEST PROCEDURE</u>	<u>TEST WITH</u>
All Soil, Waste, Drain, & Vent Piping; All Storm Drains within the building. Minimum height of standpipe shall be 10 feet above piping being tested.	Fill with water to top of highest vent and allow to stand 4 hours or longer without a loss of water.	Water

- B. At the Contractor's option, piping may be tested with air per UPC Section 712.3.
- C. Testing equipment, materials, and labor shall be furnished by this Contractor.
- D. Repair piping systems sections which fail required piping test, by disassembly and reinstallation, using new materials to extent required to overcome leakage. Do not use chemicals, stop-leak compounds, mastics, or other temporary repair methods.
- E. Drain test water from piping systems after testing and repair work has been completed.

3.7 CARE AND CLEANING

- A. Repair or replace broken, damaged, or otherwise defective parts, materials, and work. Leave entire work in condition satisfactory to Architect/Engineer. At completion carefully clean and adjust all equipment, fixtures, and trim that is installed as part of this work. Leave systems and equipment in a satisfactory operating condition.

3.8 OPERATION TEST

- A. Test each piece of equipment to show that it will operate in accordance with the indicated requirements.

3.9 CLEANING UP

- A. Upon completion of the Work remove materials, equipment, apparatus, tools, and the like, and leave the premises clean, neat, and orderly.

END OF SECTION

SECTION 22 36 00 – ELECTRIC WATER HEATERS

PART 1 - GENERAL

1.1 CONDITIONS OF THE CONTRACT

- A. Sections 220000 (Plumbing) and 220500 (Basic Materials and Methods for Plumbing) are hereby made a part of this section.

1.2 WORK INCLUDED

- A. Types of plumbing equipment specified in this section include the following:
Electric Water Heaters

1.3 QUALITY ASSURANCE

- A. Manufacturers: Firms regularly engaged in manufacture of plumbing equipment of type and sizes required, whose products have been in satisfactory use in similar service for not less than 5 years.
- B. Available Manufacturers: Subject to compliance with requirements, manufacturers offering electric water heaters which may be incorporated in the work include the following, or approved equal:
Lochinvar
State
- C. Grade or quality of materials desired is indicated by trade names or catalog numbers stated herein.
- D. Dimensions, sizes, and capacities shown are minimum, and shall not be changed without permission of the Architect/Engineer.
- E. UL and NEMA Compliance: Provide electric motors and electrical components required as part of plumbing equipment, which have been listed and labeled by Underwriters Laboratories and comply with NEMA Standards.
- F. NEC Compliance: Comply with National Electrical Code (ANSI/NFPA 70) as applicable to installation and electrical connections of ancillary electrical components of plumbing equipment.

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's plumbing equipment specifications, installation and start-up instructions, capacity and ratings, with selection points clearly indicated.
- B. Operation and Maintenance Data: Submit operation and maintenance data and parts lists for each item of plumbing equipment. Include trouble-shooting maintenance guide.

PART 2 - MATERIALS

2.1 ELECTRIC WATER HEATERS

- A. Electric water heater shall be completely insulated and jacketed for vertical installation. The jacket shall be a round heavy gauge galvanized steel assembly, primed and pre-painted on both sides with a minimum dry film thickness of 0.70 mils. Jacket shall have a full length element access panel and a hinged control panel access door for safety. The jacketed tank assembly shall have an accessible drain. The tank shall be factory insulated with a 3 inch thick high density non-CFC polyurethane foam to meet the minimum standby loss requirements of the latest edition of ASHRAE 90.1 (Energy Efficiency Standards).
- B. The immersion heating elements shall be low watt density with an incoloy sheath for long life. The heating elements shall mount in individual screw-in tank flanges.

- C. The tank shall be rated for 150 psi working pressure and a 300 psi test pressure. The tank shall be glass lined with vitreous glass enamel and fired at 1600°F to ensure molecular fusing of glass and steel. Tank saver anodes shall be installed in the tank for corrosion protection. A hand-hole cleanout shall be provided to allow inspection and cleaning of the vessel.
- D. All field electrical wiring connections to the water heater shall be made to a main terminal block. All internal wiring shall be made to solderless terminal lug wiring connections. Wiring shall be color coded for ease of servicing. An ASME rated temperature and pressure relief valve shall be provided with the water heater. The water heater shall be factory assembled, wired, and tested. The entire water heater shall be UL listed and provided with a 3 year limited warranty on the tank and a 1 year limited warranty on parts.
- E. Heating elements shall be switched by a magnetic contactor operated by a fused 120 volt control circuit with advanced electronic control. The electronic control shall have an LCD readout which shall display operational and diagnostic information. Standard features shall include low water cutoff, element sensing, and night setback. The control shall be capable of supplying up to 180°F water. The control circuit shall use a built-in transformer to reduce the line voltage to 120 volts for operation of the control circuit components. The control circuit shall include a manual reset safety high limit control to prevent over-heating in the event of a component failure.

PART 3- EXECUTION

3.1 INSTALLATION OF ELECTRIC WATER HEATERS

- A. Install heaters as indicated on the drawings, in accordance with the manufacturer's written installation instructions, and in compliance with applicable codes.
- B. Furnish wiring diagram to the electrical installer.
- C. Connect hot and cold water piping to units with shutoff valves and dielectric unions. Connect drain and relief piping as noted on the drawings.
- D. Start-up, test, and adjust water heaters in accordance with the manufacturer's start-up instructions. Check and calibrate controls.

3.2 TRAINING

- A. Provide a minimum of 1 hour of training and orientation of the Owner's staff in proper care and operation of the electric water heaters and controls.

3.3 CARE AND CLEANING

- A. Repair or replace broken, damaged, or otherwise defective parts, materials, and work. Leave entire work in condition satisfactory to the Architect/Engineer. At completion, carefully clean and adjust equipment, fixtures, and trim that are installed as part of this work. Leave systems and equipment in a satisfactory operating condition.

3.4 OPERATION TEST

- A. Test each piece of equipment to show that it will operate in accordance with the indicated requirements.

3.5 CLEANING UP

- A. Upon completion of the Work remove materials, equipment, apparatus, tools, and the like, and leave the premises clean, neat, and orderly.

END OF SECTION

SECTION 23 00 00 – HEATING, VENTILATING, AND AIR CONDITIONING

PART 1- GENERAL

1.1 CONDITIONS OF THE CONTRACT

- A. The Conditions of the Contract (General, Supplementary, and other Conditions) and the General Requirements (Sections of Division 1) are hereby made a part of this section.
- B. This section lists general requirements for Heating, Ventilating, and Air Conditioning (HVAC) work and is hereby made a part of each Division 23 specification section.
- C. For convenience or reference the Specifications are separated into Divisions and Sections. Such separations shall not operate to make the Engineer an arbitrator to establish subcontract limits between the Prime Contractor and his Subcontractors. In any case, the Prime Contractor is responsible to the owner for a complete job.
- D. Wherever the word 'provide' is utilized with regard to materials or equipment on the drawings or in the specifications it shall be interpreted to mean 'furnish and install'.
- E. The term 'exposed' shall be interpreted to mean any equipment, ductwork, or piping that is not concealed above a continuous ceiling or inside a finished wall.

1.2 WORK INCLUDED

- A. This section consists of general requirements and standard specifications covering certain parts of the HVAC work and is supplemented by other Division 23 specification sections covering additional work, requirements, and materials specifically applicable to the HVAC work of each section. Requirements of subsequent sections of the specifications, if in conflict with these general requirements, shall govern.

1.3 REQUIREMENTS OF REGULATORY AGENCIES

- A. Provide work and materials in full accordance with the latest rules and regulations of the following:
 - Nevada
 - 2018 International Building Code
 - 2018 Uniform Mechanical Code
 - 2018 Uniform Plumbing Code
 - 2017 National Electrical Code
 - 2018 International Fire Code
 - 2018 NFPA Codes and Standards
 - Nevada State Fire Marshal
 - Nevada Occupational Safety and Health
 - National Fire Protection Association
 - Underwriters Laboratories
 - All other applicable state codes, rules, and regulations
- B. Nothing in the drawings or specifications shall be construed to permit work not conforming to these codes and regulations.
- C. When the Contract Documents differ from governing codes, furnish and install the larger size or higher standards called for at no additional cost to the Owner.

1.4 FEES, PERMITS, AND UTILITY SERVICES

- A. Obtain and pay for all permits and service required for installation of this work; arrange for required inspections and secure approvals from the authorities having jurisdiction.
- B. Arrange for utility connections and coordinate work with utility company.
- C. Arrange required inspections and secure approvals from the authorities having jurisdiction.

1.5 SITE EXAMINATION

- A. Examine site, verify dimensions and locations against drawings, and inform self of conditions under which work is to be done before submitting proposal. No allowance will be made for extra expense on account of error.
- B. Information shown relative to existing services is based upon available records and data but is approximate only. Make minor deviations found necessary to conform to actual locations and conditions without extra cost. Verify location and elevation of utilities prior to commencement of excavation for new piping or its installation.
- C. Exercise extreme care in excavating near existing utilities to avoid any damage thereto. This Contractor is responsible for any damage caused by his operations.

1.6 PLACEMENT OF EQUIPMENT AND WORK

- A. The placement of equipment and mechanical work in the locations and spaces shown on the drawings is the Contractor's responsibility.
- B. Move equipment and/or work into spaces through openings provided or located in the spaces during construction, as required.
- C. Perform disassembling and reassembling of equipment and/or other work necessary to accomplish this requirement without extra cost to the Owner.

1.7 SUBMITTALS AND SUBSTITUTIONS

- A. In all cases, there is one basis of design manufacturer or product for each item of equipment or product shown on the drawings and/or specified herein. These products are identified by name and model number on the drawings and/or in the specifications. Alternative manufacturers and products are also listed; however their inclusion as an alternative manufacturer or product does not cause them to be the basis of design. If an alternative manufacturer and/or product is desired to be used by the Contractor, it will be considered a substitution. Substitutions will be interpreted to be all manufacturers or products other than the basis of design. Only one request for substitution will be considered for each item of material or equipment. No substitutions will be considered thereafter. After a substitution request is reviewed and is found to be unacceptable the Architect/Engineer reserves the right to require the originally specified equipment or product at no additional cost to the Owner.
- B. If the Contractor desires to make a substitution, he shall submit complete information or catalog data to show equality of equipment or material offered to that specified. No substitutions will be allowed unless requested and reviewed in writing. The Architect/Engineer will review and take appropriate action on shop drawings, product data, samples, and other submittals as required by the contract documents. Such review shall be only for general conformance with the design concept and general compliance with the information given in the contract documents. The review shall not include review of quantities, dimensions, weights or gauges, fabrication processes, construction methods, coordination with the work of other trades, or construction safety precautions, all of which are the sole responsibility of the Contractor. Review of a specific item shall not indicate acceptance of an assembly of which the item is a component. The Architect/Engineer shall not be required to review and shall not be responsible for any deviations from the Contract Documents not clearly noted by the Contractor, nor shall the Architect/Engineer be required to review partial submissions or those for which submissions for correlated items have not been received. The Architect/Engineer reserves the right to require the originally specified item.
- C. Installation of reviewed substitutions is the Contractor's responsibility. Any changes required for installation of reviewed substituted equipment must be made without additional cost to the Owner. Review by the Architect/Engineer of the substituted equipment and/or the dimensioned drawings does not waive the requirements stated herein.

- D. In any case where the Contractor intends to utilize a listed or unlisted acceptable equipment manufacturer that is not the basis of design as listed on the drawings and in the specifications it is the Contractor's responsibility to confirm prior to bidding that all ductwork, piping, controls, electrical power, conduit, service clearances, space requirements, and structural requirements match those of the basis of design equipment. Costs for any revisions necessary to accommodate the ductwork, piping, controls, electrical power, conduit, service clearances, space requirements, and structural requirements for the alternative equipment are the responsibility of the Contractor and shall be included in the Contractor's bid. No extra cost will be allowed for failure to allow for accommodations related to the alternative equipment in the Contractor's bid.
- E. Submit to the Architect/Engineer for review, within a reasonable time after award of Contract and in ample time to avoid delay of construction, shop drawings or submittals on all items of equipment and materials, including all substitutions. Also see Division 1 for additional related requirements.
- F. Partial or incomplete sets of equipment and materials submittals will not be acceptable.
- G. Assessment of quantities is solely the Contractor's responsibility and will not be reviewed.
- H. All submittal data shall be tailored to suit the specific project, with appropriate model or part numbers, materials, sizes, options, and accessories clearly indicated for each different submittal item and on each submittal page. Submittal pages without this information will be returned and will need to be resubmitted with all of the required information indicated on each sheet.
- I. The Contractor shall certify that he has examined all submittal data and that the equipment and materials submitted for review meet or exceed the requirements of the drawings and specifications. Submittals without the required certification will not be acceptable.
- J. Should the Contractor neglect to include submittal data for any item of equipment or material it shall be assumed and agreed that the associated equipment or material is the exact item specified as the basis of design on the drawings and in the specifications.
- K. Electronic Formatted Submittals
 - 1. Provide submittals in electronic form (.pdf file format).
 - 2. Identify and incorporate submitted information as follows:
 - a. Provide complete submittal package including cover sheet with:
 - 1) Project Name
 - 2) Submittal Package Number (with Revision Number identified)
 - 3) Date
 - 4) Name and Address of Architect/Engineer
 - 5) Name of Contractor
 - 6) Name of Subcontractor
 - b. Group submitted items by specification section and provide:
 - 1) Index of submitted products with page numbers
 - 2) Name of firm or entity that prepared submittal
 - 3) Name of supplier
 - 4) Name of manufacturer
 - 5) Equipment and/or fixture tag, if applicable
 - 6) Number and title of appropriate specification section
 - 3. Items indicated by the Architect/Engineer to be resubmitted shall be resubmitted as follows:
 - a. Retain items marked as 'No Exceptions Taken' or 'Make Corrections Noted' and resubmit with the revised package. Do not provide new sheets for these items.
 - b. Provide revised submittal sheets for all other reviewed items. Provide originally submitted sheet with Architect/Engineer comments. Clearly indicate amendments and modifications made in response to previous submittal review comments.

PART 2 - PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. Mention herein or on the drawings requires that this Contractor provide each item listed of quality noted, or equal. All material shall be new, full weight, standard in all respects, and in first class condition. Provide materials of the same brand or manufacturer throughout for each class of material or equipment wherever possible. Materials shall be tested within the continental United States by an independent, nationally recognized testing agency and shall be listed in accordance with testing agency requirements.
- B. The grade or quality of materials desired is indicated by the trade names and/or catalog numbers stated on the drawings and in the specifications.
- C. Dimensions, sizes, and capacities shown are a minimum and shall not be changed without the written permission of the Architect/Engineer.
- D. No material installed as part of this work shall contain asbestos in any form

2.2 MATERIALS FURNISHED

- A. Identify all materials and equipment by manufacturer's name and model number. Remove unidentified materials and equipment from site.
- B. Equipment specified by manufacturer's number shall include all accessories, controls, etc. listed in catalog as standard with equipment. Furnish optional accessories as specified.
- C. Equipment or material damaged during transportation, installation, or operation is considered as totally damaged. Replace with new equipment. Variance from this requirement will be permitted only with the written consent of the Architect/Engineer.
- D. Provide an authorized representative to constantly supervise the work of this division. Check all materials prior to installation for conformance with drawings and specifications.

PART 3 - EXECUTION

3.1 ACCESS TO HVAC WORK

- A. Comply with manufacturer's written instructions for installation of access doors.
- B. Access panels shall be furnished and installed wherever valves, balance valves, damper operating mechanisms, air terminal boxes, fans, and similar items normally requiring adjustment or servicing are installed in concealed or inaccessible spaces. Coordinate with access doors shown on architectural drawings.

3.2 DRAWINGS AND COORDINATION

- A. General arrangement and location of piping, ductwork, equipment, etc. are shown on the drawings or herein specified. Carefully examine other work that may conflict with this work. Install this work in harmony with other crafts and at proper time to avoid delay of work.
- B. In advance of construction, work out minor changes and relocations to suit actual conditions and work of other trades to avoid any conflicts. This shall not be cause for additional cost.
- C. Verify all measurements at the building and be responsible for the correctness of same. No extra compensation will be allowed on account of differences between actual dimensions and those indicated on the drawings.
- D. In addition, obtain all necessary information from the other trades regarding centers of partitions, walls, location of plumbing mains, fire sprinkler mains, and electrical conduits, ducts, pipes, etc. in order that pipes, equipment, and ductwork may be placed in their correct positions.

- E. Execute any work or apparatus shown on the drawings and not mentioned in the specifications, or vice versa, the same as if specifically mentioned by both. Omission from drawings or specifications of any minor details of construction, installation, materials, or essential specialties does not relieve this Contractor from furnishing same in place complete.
- F. Furnish and install any incidental work not shown or specified which can reasonably be inferred as part of the work and necessary to provide a complete and workable system.
- G. Furnish materials and work at proper time to avoid delay of the work.

3.3 TEMPORARY UTILITIES, HEATING, AND COOLING

- A. Temporary utilities may be connected to the Owner's existing metered utilities only with the Owner's and the utility company's written authorization. Any connection to the Owner's existing utilities shall be separately metered to allow for proper allocation of utility costs unless another arrangement is specifically agreed to and authorized by the Owner in writing. Temporary meters shall be removed upon completion of the Work.
- B. The Contractor shall be solely responsible for providing temporary heating, cooling, and/or ventilation as required to prevent degradation or damage to the Work. The permanent heating, cooling, and air handling systems shall not be utilized for the purpose of temporary heating, cooling, or ventilation until the Owner approves of such use in writing. In no case shall the permanent heating, cooling, or air handling systems be operated until they are complete, including formal startup, check out, and testing and balancing.
- C. Utilization of any of the permanent heating, cooling, or air handling systems prior to the date of Substantial Completion shall not impact the specified warranty for such equipment, which shall begin on the date of Substantial Completion.

3.4 ACCESS

- A. Continuously check architectural drawings for clearance and accessibility of equipment specified herein to be placed. No allowance of any kind will be made for negligence on part of the Contractor to foresee means of installing his equipment into proper position.

3.5 CLOSING IN OF UNINSPECTED WORK

- A. Do not allow or cause work installed to be covered up or enclosed before it has been inspected and tested. Should work be enclosed or covered up before it has been inspected and tested, uncover work at own expense. After it has been inspected and tested, make repairs necessary to restore work of other contractors to condition in which it was found at time of cutting.

3.6 PROJECT MODIFICATIONS

- A. During the progress of construction, if any conditions arise that necessitate revisions, modifications, or relocation of any mechanical equipment or materials, such revisions shall be immediately brought to the attention of the Architect/Engineer. The Contractor shall then prepare necessary drawings showing the proposed changes. All proposed changes shall be submitted, reviewed, and approved by the Architect/Engineer prior to proceeding with any associated revision work in the field.
- B. Maintain copies of all approved changes at the project site for reference by all parties during the remaining work.
- C. Incorporate all revisions into the as-built drawings.

3.7 FORMING, CUTTING, AND PATCHING

- A. Coordinate with other contractors as necessary to provide any special forming, recesses, chases, etc., and provide wood blocking, backing, and grounds as necessary for proper installation of mechanical work.

- B. If this Contractor fails to coordinate with other contractors at proper time or fails to locate items properly, resulting in extra work, then this Contractor is responsible.
- C. This Contractor is responsible for proper placement of pipe sleeves, hangers, inserts, and supports for work.
- D. Cutting, patching, and repairing of existing (old) construction to permit installation of piping, etc. is responsibility of this Contractor. Repair or replace damage to existing work with skilled mechanics for each trade involved in a first class manner.

3.8 EXISTING SERVICES

- A. Provide and install all required connections to existing systems as required by the drawings and specifications.
- B. Integrate existing systems with all new work to provide a complete working system.
- C. Provide minimum 48 hour notice to Owner of any service interruptions. All service interruptions shall be kept to the minimum possible time. When requested by Owner service interruptions shall occur outside of normal working hours.
- D. The Contractor shall be responsible for damage to any part of the premises during the guarantee period that is caused by defects, leaks, or breaks in work furnished and/or installed under this section.
- E. The Contractor shall replace refrigerant, lubricants, and/or gases lost as a result of defects, breaks, or leaks in the work.

3.9 AS-BUILT DRAWINGS

- A. Upon completion of work submit to the Architect/Engineer as-built drawings showing all changes in equipment, piping, ductwork, etc. installed as part of this project which are not in accordance with the contract drawings. As-built drawing deliverables shall be in accordance with the requirements of Division 1, and shall consist of the following as a minimum:
 - 1. Provide as-built drawings in electronic file format (pdf file). In addition to the electronic file, when field mark-ups have been utilized, provide a complete set of full size neatly and legibly marked as-built drawings on 20 pound white bond paper.
 - 2. As-built drawings shall be full size (same size as the contract documents) and shall be standard engineering scale. The minimum drawing scale shall match those provided in the contract documents.
 - 3. As-built drawings shall include all outside utility connections, piping, etc. installed under this Contract. Locate and dimension all work with reference to permanent landmarks.
- B. Match all symbols and designations used in the contract drawings when preparing the as-built drawings.
- C. Indicate clearly and correctly all work installed differently from that shown, and maintain records up to date as work progresses. Include invert elevations of pipes below grade of floor, the floor lines, plugged wyes, tees, caps, exact locations and sizing of piping, location of valves, and the like. Dimension locations from structural points.
- D. Properly identify all stubs for future connections as to locations and use by setting of concrete markers at finished grade in manner suitable to the Architect/Engineer.

3.10 PROJECT COMPLETION TESTS AND STARTUP

- A. Upon completion of the mechanical work, or at such time prior to completion as may be determined by the Architect/Engineer, operate and test all mechanical equipment and systems for a period of at least five consecutive 8 hour days to demonstrate the satisfactory overall operation of the building or project as a complete unit. Include operation of heating and air conditioning equipment and systems for a period of not less than two 8 hour days at not less than 90 percent of full specified heating and cooling capacities in tests.

- B. Commence tests after preliminary balancing and adjustments to equipment have been checked. Immediately before starting tests, install air filters and lubricate all running equipment. Notify the Architect/Engineer at least seven calendar days in advance of starting the above tests.
- C. Provide training and orientation of Owners operating staff in proper care and operation of equipment, systems and controls.
- D. Neatly tabulate and deliver to the Architect/Engineer complete operational data, including air flows, room temperatures, fan speeds, motor currents, plenum and duct static pressures, and other data as required. The Architect/Engineer reserves the right to spot check results, and if discrepancies or errors are noted, Contractor will be required to redo balancing tests and tabulations entirely.
- E. During test period, make final adjustments and balancing of equipment, systems, controls, and circuits so that all are placed in first class operating condition.
- F. Mark final positions of balancing valves after balancing is complete.
- G. All areas of building shall receive proper flow of hot and chilled water to assure adequate and uniform temperatures throughout.
- H. Final observation will not be made until all of the above have been completed and balance report has been submitted and reviewed.

3.11 POST CONTRACT COMPLETION TESTS

- A. If the required full load operation conditions cannot be conducted at the time of the 'Project Completion Tests and Start-Up' due to outdoor seasonal temperatures, the Contractor shall return to the job site when appropriate weather conditions arise (and/or when requested by the Architect/Engineer) to complete proper loading of equipment and systems as required. The Contractor will be allowed seven calendar days after notification to begin the tests. The Owner will be responsible for providing new air filters for the Contractor to install prior to this testing if necessary.

3.12 PRE-SEASON START UP

- A. Within one year of filing of the Notice of Substantial Completion, when all full load tests required under 'Project Completion Tests and Start-Up' and 'Post Contract Completion Tests' have not yet been performed, the Contractor shall perform startup of any equipment or systems required for heating or cooling season operation when such equipment and systems have remained shut down or remain to be tested under full load. The Contractor shall ensure that all equipment and systems are operating properly before being turned over for the first operational use by the Owner (all such testing shall occur within one year of filing the Notice of Substantial Completion). The Owner will be responsible for providing new air filters for the Contractor to install prior to this testing if necessary.

3.13 GUARANTEE

- A. The Contractor shall be responsible for all work done and material installed under the plans and specifications. Repair or replace, as may be necessary, any defective work, material, or part which may show itself within one year of filing of the Notice of Substantial Completion and be responsible for damage to other materials, furnishing, equipment, or premises caused by such defects during this period, if in the opinion of the Architect/Engineer said defect is due to imperfection of material or workmanship. Provide all such work and materials at no cost to the Owner.

3.14 CLEANING UP

- A. Upon completion of the Work remove materials, equipment, apparatus, tools, and the like, and leave the premises clean, neat, and orderly.

END OF SECTION

SECTION 23 05 20 - OPERATION AND MAINTENANCE OF HVAC SYSTEMS

PART 1 - GENERAL

1.1 CONDITIONS OF THE CONTRACT

- A. Sections 230000 (Heating, Ventilating, and Air Conditioning) and 230500 (Basic Materials and Methods for HVAC) are hereby made a part of this section.

1.2 WORK INCLUDED

- A. This section consists of general requirements covering certain parts of the HVAC work and is supplemented by other specification sections covering additional work, requirements, and materials specifically applicable to the work of each section. Requirements of other sections of the specifications, if in conflict with these requirements, shall govern.

1.3 OPERATING AND MAINTENANCE INSTRUCTIONS

- A. Furnish the Architect/Engineer with two complete sets of typewritten operating and maintenance instructions, descriptive literature, catalog cuts, and diagrams covering all items of operation and maintenance for each and every mechanical system and piece of equipment furnished under these specifications.
- B. In addition to the bound hard copies the Contractor shall provide an electronic copy (pdf file).
- C. The Contractor shall begin compiling the above data (including obtaining operating and maintenance instruction data, catalog cuts, and diagrams from the manufacturer of the reviewed equipment) immediately upon review of his list of materials, so as not to delay the final installation and acceptance of the work.
- D. Bind and index each set in a durable, hardboard binder. Final observation should not be requested until the operating and maintenance binders are submitted and have been reviewed by the Architect/Engineer.
- E. Incorporate complete operating instructions including starting, stopping, and description of emergency manual operation methods for the following:
 - Heating Systems
 - Ventilating Systems
 - Air Conditioning Systems
 - Test Data and Startup Reports
- F. Provide charts and diagrams as required.
- G. Provide operating manual for all equipment listed in individual sections of the specification.
- H. Provide maintenance instructions for each item of individual equipment covering pertinent maintenance data, such as lubricants to be used, frequency of lubrication, inspections required, adjustments required, etc.
- I. Provide parts bulletins containing manufacturer's part numbers, instructions, etc. for each item of equipment. Strip bulletins so that useless bulk is avoided.
- J. Post service telephone numbers and/or addresses in an appropriate place as designated by the Architect/Engineer.

END OF SECTION

SECTION 23 05 30 - HANGERS AND SUPPORTS FOR HVAC SYSTEMS

PART 1 - GENERAL

1.1 CONDITIONS OF THE CONTRACT

- A. Section 230000 (Heating, Ventilating, and Air Conditioning), Section 230500 (Basic Materials and Methods for HVAC), and Section 230540 (Seismic Bracing for HVAC Systems) are hereby made a part of this section.

1.1 SUMMARY

- A. Section Includes:
 - 1. Fastener Systems
 - 2. Ductwork Supports
- B. Related Requirements: All hangers and support systems shall be designed, selected, and installed by the Contractor to comply with the requirements listed in Section 230540 (Seismic Bracing for HVAC Systems).
- C. Costs for hanger, support, and seismic bracing systems complying with the requirements listed herein are the responsibility of the Contractor and shall be included in the Contractor's bid. No extra cost will be allowed for failure to include the associated costs in the Contractor's bid.
- D. In no case shall hangers and/or supports for HVAC ductwork be attached to a metal roof deck, unless provisions or allowances are explicitly shown on the structural drawings.

1.2 SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: Show fabrication and installation details for the following (Include product data for all components):
 - 1. Metal Framing (Strut) Systems
 - 2. Ductwork Supports
 - 3. Equipment Supports
- C. Delegated Design Submittals: Provide delegated design submittals for items indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
 - 1. Details for fabrication and assembly of trapeze hangers.
 - 2. Design calculations utilized for designing the trapeze hangers.
 - 3. Design details and calculations for ductwork and equipment supports.
- D. The work of this section shall be coordinated with the requirements for the Contractor furnished seismic design submittal for hangers and supports specified in Section 230540 (Seismic Bracing for HVAC Systems). Design and detailing of seismic bracing, hangers, and supports is the responsibility of the Contractor.
- E. Submittals shall be fully coordinated with the structural drawings and shall include all applicable structural attachment details. Locations and the methods of attachment of hangers and supports to the main structural frame shall comply with the limitations specified in the structural drawings. Shop drawings shall include all vertical support anchorage loads. Each specific load shall be indicated in the submittals and the structural element that the support is attached to shall be clearly depicted/identified.
- F. Shop drawing submittals will be reviewed by both the design mechanical engineer and the design structural engineer.

1.3 QUALITY ASSURANCE

- A. Structural Steel Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M (Structural Welding Code - Steel).
- B. Pipe Welding Qualifications: Qualify procedures and operators according to ASME Boiler and Pressure Vessel Code, Section IX.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Where required, engage a licensed professional engineer (licensed in the state where the project is located), to design trapeze pipe hangers/supports, ductwork hangers/supports, & equipment hangers/supports.
- B. Structural Performance: Hangers and supports for HVAC ductwork shall withstand the effects of gravity loads and stresses within limits and under conditions indicated according to ASCE Standard 7-16.
 - 1. Design hangers/supports for ductwork and associated accessories.

2.2 DUCTWORK HANGERS AND SUPPORTS

- A. Hanger Rods for Noncorrosive Environments: Galvanized steel rods and nuts.
- B. Hanger Rods for Corrosive Environments: Electro-galvanized, all-thread rods or galvanized rods with threads painted with zinc-chromate primer after installation.
- C. Strap and Rod Sizes: Comply with SMACNA HVAC Duct Construction Standards - Metal and Flexible, Table 5-1 (Minimum Hanger Sizes for Rectangular Ducts) and Table 5-2 (Minimum Hanger Sizes for Round Ducts).
- D. Steel Cables for Galvanized Steel Ducts: Galvanized steel complying with ASTM A603.
- E. Steel Cables for Stainless Steel Ducts: Stainless steel complying with ASTM A492.
- F. Steel Cable End Connections: Galvanized steel assemblies with brackets, swivel, and bolts designed for duct hanger service; with an automatic locking and clamping device.
- G. Duct Attachments: Sheet metal screws, blind rivets, or self-tapping metal screws; compatible with duct materials.
- H. Trapeze and Riser Supports:
 - 1. Supports for Galvanized Steel Ducts: Galvanized steel shapes and plates.
 - 2. Supports for Stainless Steel Ducts: Stainless steel shapes and plates.
 - 3. Supports for Aluminum Ducts: Aluminum or galvanized steel coated with zinc chromate.

2.3 METAL FRAMING (STRUT) SYSTEMS

- A. Metal Framing Manufacturers Association (MFMA) Metal Framing Systems:
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include the following:
 - a. B-line
 - b. Unistrut
 - c. Flex-Strut
 - d. G-Strut
 - e. Miro Industries
 - 2. Description: Shop or field fabricated, pipe support assembly made of steel channels, accessories, fittings, and other components for supporting multiple parallel pipes.
 - 3. Standard: Comply with MFMA-4 factory fabricated components for field assembly.
 - 4. Channels: Continuous slotted carbon steel channel with in-turned lips.

5. Channel Width: Selected for applicable load criteria.
6. Channel Nuts: Formed or stamped nuts or other devices designed to fit into channel slot and, when tightened, prevent slipping along channel.
7. Hanger Rods: Continuous thread rod, nuts, and washers made of carbon steel.
8. Metallic Coating: Zinc dichromate finish applied over an electro-galvanized zinc plating.

2.4 FASTENER SYSTEMS

- A. Powder Actuated Fasteners: Threaded steel stud, for use in hardened portland cement concrete with pull-out, tension, and shear capacities appropriate for supported loads and building materials where used.
 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include the following:
 - a. Hilti.
 - b. ITW Ramset/Red Head
 - c. MKT Fastening
 - d. Simpson Strong-Tie
- B. Mechanical Expansion Anchors: Insert wedge type anchors for use in hardened portland cement concrete; with pull-out, tension, and shear capacities appropriate for supported loads and building materials where used.
 1. Indoor Applications: Zinc-coated stainless steel.
 2. Outdoor Applications: Stainless steel.
 3. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include the following:
 - a. B-line
 - b. Empire Tool and Manufacturing
 - c. Hilti
 - d. ITW Ramset/Red Head
 - e. MKT Fastening

2.5 MATERIALS

- A. Aluminum: ASTM B221.
- B. Carbon Steel: ASTM A1011/A1011M.
- C. Structural Steel: ASTM A36/A36M, carbon steel plates, shapes, and bars; galvanized.
- D. Stainless Steel: ASTM A240/A240M.
- E. Threaded Rods: Continuously threaded. Zinc plated or galvanized steel for indoor applications and stainless steel for outdoor applications. Mating nuts and washers shall be same or similar materials as rods.
- F. Grout: ASTM C1107/C1107M, factory mixed and packaged, dry, hydraulic cement, non-shrink and non-metallic grout; suitable for interior and exterior applications.
 1. Properties: Non-staining, non-corrosive, and non-gaseous.
 2. Design Mix: 5,000 psi, 28 day compressive strength.

PART 3 - EXECUTION

3.1 APPLICATION

- A. Comply with all requirements in other section of the specifications for firestopping materials and installation for penetrations through fire rated walls, ceilings, and assemblies.

- B. Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lbs.

3.2 DUCTWORK HANGERS/SUPPORTS

- A. Fabricate structural steel supports to suspend ductwork from structure overhead.
- B. Fabricate structural steel stands to support ductwork above the floor (when indicated on the drawings). Provide lateral bracing for ductwork supports to prevent swaying.

3.3 METAL FABRICATIONS

- A. Cut, drill, and fit miscellaneous metal fabrications for trapeze pipe hangers and equipment supports.
- B. Fit exposed connections together to form hairline joints. Field weld connections that cannot be shop welded because of shipping size limitations.
- C. Field Welding: Comply with AWS D1.1/D1.1M procedures for shielded, metal arc welding; appearance and quality of welds; and methods used in correcting welding work; and with the following:
 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 2. Obtain fusion without undercut or overlap.
 3. Remove welding flux immediately.
 4. Finish welds at exposed connections so no roughness shows after finishing and so contours of welded surfaces match adjacent contours.

3.4 ADJUSTING

- A. Hanger Adjustments: Adjust hangers to distribute loads equally on attachments and to achieve indicated slope of pipe.
- B. Trim excess length of continuous thread hanger and support rods to 1-1/2 inches.

3.5 HANGER AND SUPPORT SCHEDULE

- A. Specific hanger and support requirements are in Sections specifying ductwork.
- B. Use hangers and supports with galvanized metallic coatings for ductwork that will not have field applied finish.
- C. Use powder actuated fasteners and mechanical expansion anchors instead of building attachments where required in concrete construction.

END OF SECTION

SECTION 23 08 00 – TESTING, ADJUSTING, AND BALANCING OF HVAC SYSTEMS

PART 1 - GENERAL

1.1 CONDITIONS OF THE CONTRACT

- A. Sections 230000 (Heating, Ventilating, and Air Conditioning) and 230500 (Basic Materials and Methods for HVAC) are hereby made a part of this section.
- B. Section 230910 (Sequence of Operation) is hereby made a part of this section.

1.2 WORK INCLUDED

- A. Temperature performance testing on all heat transfer equipment and/or components.
- B. Test and balance of air distribution systems and associated equipment and apparatus.
- C. Test and balance of hydronic distribution systems and associated equipment and apparatus.
- D. Testing, setting, and adjusting speed and volume of systems, recording data, conducting tests, preparing and submitting reports, and recommending modifications to work as required by the contract documents.
- E. Component types of testing, adjusting, and balancing specified in this section includes the following as applied to mechanical equipment:
 - Fans
 - Ductwork Systems
 - Air Distribution

1.3 QUALITY ASSURANCE

- A. Balance Agency: Provide services and facilities of an independent agency that specializes in testing, analysis, and balancing of hydronic systems and air distribution for heating- cooling systems. Work shall be done by qualified engineering technicians and trained personnel, using instruments certified accurate to limits used in standard practice for testing and balancing of hydronic and air distribution for heating-cooling systems. The balance agency shall field test air and hydronic flows in accordance with the methods prescribed by the Associated Air Balance Council, National Standard Volume 1, latest edition.
- B. The balance agency shall be a member of the Associated Air Balance Council. Subject to compliance with requirements, the balance agency shall be one of the following (no exceptions):
 - RS Analysis
 - Raglen System Balance
- C. The balance agency shall submit the results of tests in this section to the Architect/Engineer for review and acceptance.
- D. AABC Compliance: Comply with AABC 'National Standards' Volume 1, as applicable to mechanical air and hydronic distribution systems and associated equipment and apparatus.
- E. Industry Standards: Comply with ASHRAE recommendations pertaining to measurements, instruments, and testing, adjusting and balancing, except as otherwise indicated.
- F. Reference Standards:
 - 1. AABC (Associated Air Balance Council) AABC National Standards Volume 1.
 - 2. ASHRAE (American Society of Heating, Refrigerating, and Air Conditioning Engineers).
- G. Test Instruments: Utilize test instruments and equipment for the test and balance work required, of type, precision, and capacity as recommended in AABC National Standards Volume 1.

1.4 SUBMITTALS

- A. Provide a test and balance agenda that includes step-by-step testing and balancing procedures, test sheets, and schematic drawings, all being specific to the project.
- B. Provide submittals to indicate the extent of work proposed. Submit certified test reports as hereinafter specified signed by test and balance technician/supervisor that performed test and balance work.
- C. Include identification and types of instruments used and their most recent calibration date with submission of final test report.
- D. The completed balance report shall be submitted for review and approval prior to requesting final observation of the project.

1.5 GENERAL REQUIREMENTS

- A. The balance agency shall perform the following during the installation phase of systems:
 - 1. Study the design drawings and specifications and prepare a schedule to physically inspect mechanical equipment for the hydronic and air distribution systems to be tested and balanced. The Contractor shall provide the balance agency with one copy of the contract drawings and specifications, mechanical equipment submittals, and change orders necessary for proper balancing of the hydronic and air distribution systems.
 - 2. The balance agency shall make field inspections prior to closing in portions of systems to be balanced. The balance agency shall verify that all work, fittings, dampers, balancing devices, etc. are properly fabricated and installed as shown or specified and that the balance agency will be able to properly balance the systems.
 - 3. Prepare a testing and balancing schedule, test record forms, and necessary technical information regarding hydronic and air distribution systems for the installed heating and cooling equipment.
 - 4. Provide written documentation when the above noted items have been completed, (see example checklist provided at the end of this section). A single page letter signed off by the mechanical contractor and the test and balance agency will suffice.
 - 5. Recommend adjustments and/or corrections to mechanical equipment and hydronic and air distribution systems that are necessary for proper balancing of systems. Provide written documentation of the recommended items to the Architect/Engineer for review.
- B. Patching Materials: Except as otherwise indicated, use same products as used by original installer for patching holes in insulation, ductwork, and housings which have been cut or drilled for test purposes, including access for test instruments, attaching jigs, and similar purposes. At tester's option, plastic plugs with retainers may be used to patch drilled holes in low pressure ductwork and housings (2" w.g. and below).

PART 2 – PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 TESTING AND BALANCING

- A. Upon completion of hydronic and air handling systems, the test and balance agency shall complete tests, analysis, and balance of hydronic and air handling systems for all heating and cooling equipment.
- B. This report shall include as minimum, but not be limited to (following design and actual information):
 - 1. Supply, Return, and Exhaust Fans: CFM, static pressure, and outlet velocity.
 - 2. Inlets, Outlets, and Main Branch Ducts: CFM and air velocity.
 - 3. All Rooms: Air temperature during testing.
 - 4. Other information required to establish completely balanced systems.

3.2 BALANCING REQUIREMENTS

- A. All air and water systems and devices shall be balanced to within +0% to +5% of design.
- B. Make allowance for air filter resistance at time of tests (by false-loading the filter bank with cardboard or other suitable material such that the test results can be repeated). Test and balance all main supply and return air ducts to the design air quantities.
- C. After final air and hydronic testing and balancing make necessary adjustments to obtain uniform temperatures as required during actual occupancy.
- D. Take static pressure and air velocity readings with instruments that have been recently calibrated. Take final velocity readings with an Anor velometer, Anemostat air meter, or vane type anemometer, all recently calibrated prior to testing. Include certified correction curves for each calibration as part of the record. Certify instruments are accurate to standards currently used in common practice for system balance work. Use test cones for diffusers.
- E. Run tests with supply, return, and exhaust systems operating and doors, windows, etc. closed or under normal traffic. Conduct final testing with cooling coils under load to ensure that static pressures are or near design conditions.
- F. Adjust deflection of supply outlets to ensure proper and uniform air distribution.
- G. Work with the temperature control subcontractor in adjustment of automatic dampers, valves, thermostats, etc. as required to maintain proper temperatures in all portions of the building.
- H. The Contractor responsible for installing heating, cooling, and ventilating equipment shall make any changes, additions, or modifications to dampers, fan drives, motor sheaves, pump impellers, motors, and other equipment as necessary for proper air and hydronic balance.
- I. Balance of systems shall be reviewed by the Architect/Engineer. During this review the mechanical contractor shall furnish workmen, materials, ladders, etc. to enable the Architect/Engineer to witness all readings as may be directed. If any errors are found, the Testing and Balancing Agency shall readjust the system to the satisfaction of the Architect/Engineer.
- J. See the Field Observation Checklist Example on the following page.

PART 4 EXAMPLE FORM

Field Observation Checklist (Example)			
YES	NO	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is the ductwork intact?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are any endcaps missing?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are the access doors installed and secured tightly?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are there openings in the ductwork?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are any inlets or outlets missing?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are the turning vanes installed correctly?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is the ductwork, including fan inlets and outlets, installed according to the drawings and specifications?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is the ductwork free of debris?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are all duct dampers, including fire and smoke dampers, installed and accessible?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are all terminal boxes, reheat coils, reheat components, etc. installed and accessible?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Does the return air have an unobstructed path from each conditioned space back to the unit?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is the building architecturally complete?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are all doors, windows, ceilings, partitions, etc. installed?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are filters installed correctly and have frames that will not allow leakage?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are the coils clean and properly installed?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are the drive components installed?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are the automatic control dampers installed in the correct locations?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are the fan housings, plenums, etc. installed according to the drawings and specifications and properly sealed?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are the flexible connections installed properly?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are the fan wheels aligned properly with proper clearance between the fan and housing?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are suitable traverse locations available?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is the piping intact and free of leaks?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are the pumps, piping, and equipment installed according to the drawings and specifications?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are all valves, flow meters, and temperature-pressure taps installed to allow for a complete TAB?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are all valves, flow meters, and temperature-pressure taps accessible?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are all valves piped correctly?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are all terminal unit coils installed correctly and accessible?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are the terminal units piped correctly?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are the piping systems free of debris?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Have the piping systems been cleaned and flushed?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are all air vents properly installed?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are vibration isolators properly installed and adjusted?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are flexible connections installed properly?

Notes: This checklist is an example and shall be customized for each individual project.
N/A = Not Applicable to this project.

END OF SECTION

SECTION 23 31 00 - HVAC DUCTWORK

PART 1 - GENERAL

1.1 CONDITIONS OF THE CONTRACT

- A. Sections 230000 (Heating, Ventilating, and Air Conditioning) and 230500 (Basic Materials and Methods for HVAC) are hereby made a part of this section.

1.2 WORK INCLUDED

- A. Types of ductwork specified in this section include the following:
 - Sheet Metal Ductwork
 - Flexible Ductwork
 - Externally Insulated Ductwork

1.3 QUALITY ASSURANCE

- A. Installer: A firm with at least three years of successful installation experience on projects similar to that required for this work.
- B. SMACNA Compliance: Comply with applicable portions of Sheet Metal and Air Conditioning Contractor's National Association (SMACNA) recommendations for all work in this section.
- C. ASHRAE Standards: Comply with applicable portions of American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) recommendations for all work in this section.
- D. NFPA Standards: Comply with applicable portions of ANSI/NFPA Standard 90A (Standard for the Installation of Air Conditioning and Ventilating Systems) and ANSI/NFPA 90B (Standard for the Installation of Warm Air Heating and Air Conditioning Systems) for all work in this section.
- E. NAIMA Standards: Comply with all applicable portions of the North American Insulation Manufacturers Association (NAIMA) standards for all related work in this section.

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's specifications on manufactured products and factory fabricated ductwork used for the work of this section.
- B. As-Built Drawings: At project closeout, submit as-built drawings of installed ductwork, duct accessories, outlets, and inlets.

PART 2 – MATERIALS

2.1 GENERAL

- A. Fabricate all ductwork using a commercial grade of galvanized steel complying with the SMACNA HVAC Duct Construction Standards (latest edition) for the specified duct pressure class.
- B. Fabricate ductwork with all accessories installed during fabrication to the greatest extent possible. Refer to Specification Section 233110 (HVAC Ductwork Accessories) for accessory requirements.
- C. See Specification Section 230700 (HVAC Insulation) for additional related requirements.
- D. All ductwork shall be constructed and sealed in accordance with the requirements of the Sheet Metal and Air Conditioning Contractor's National Association (SMACNA) unless indicated otherwise herein.

- E. Construct and seal all ductwork in accordance with the pressure related to the equipment or system to which it is connected unless indicated otherwise herein. See Section 3.1 of this specification for additional requirements and clarification.
- F. Duct fittings shall be constructed to match the adjoining ductwork and to comply with all duct requirements applicable to fittings. See 'Typical Branch Ducts' details on the drawings for acceptable fitting types.
- G. Except as otherwise indicated, or where a reaction between dissimilar metals might occur, provide hot-dipped galvanized steel fasteners, anchors, rods, straps, trim, and angles for support of all ductwork. Utilize Unistrut channel supports and hangers as appropriate for larger duct sizes. Penetrating ductwork with screws shall be avoided to the greatest extent possible. Wherever screws are required to penetrate ductwork the penetrations shall be sealed air and water tight.

2.2 TWO INCH PRESSURE CLASS DUCTWORK

- A. Rectangular ductwork shall be fabricated using a commercial grade of galvanized steel complying with the SMACNA HVAC Duct Construction Standards (latest edition) for the specified duct pressure class. Ductwork and fitting gauges shall be in accordance with Chapter 2 of the SMACNA HVAC Duct Construction Standards (latest edition).
- B. Round ductwork shall be spiral lock seam round and/or oval duct and fittings.

2.3 ROUND DUCTWORK

- A. Round Ductwork: Provide spiral lock seam prefabricated duct, constructed and sealed for 4 inch pressure class. The requirement for spiral lock seam round ducts also applies to 2 inch pressure class round ductwork. Longitudinal seam round ductwork is not acceptable.
Available Manufacturers: Subject to compliance with requirements, manufacturers offering factory fabricated ductwork which may be incorporated in the work include the following:
Manufacturer
McGill Airflow Uni-Seal
Semco
Air Handling Systems
- B. Spiral lock seam prefabricated factory-built round and oval duct and fittings shall be used wherever possible. Shop fabricated ducts shall be used only where rectangular shaped ducts are shown on the drawings or where transitions and special fittings cannot be prefabricated by the factory.
- C. Optional Shop Fabricated Ductwork and Fittings: As an alternative to factory fabricated ductwork the Contractor may shop fabricate the spiral seam ductwork provided that certification is submitted and approved indicating that the shop fabricated ductwork and fittings are equal to that specified for factory fabricated ductwork and fittings.
- D. Shop-fabricate ductwork in 4, 8, 10, or 12 foot lengths, unless otherwise indicated or required, to complete duct runs. Pre-assemble ductwork in the shop to the greatest extent possible, so as to minimize field assembly of systems. Disassemble systems only to the extent necessary for shipping and handling. Match and mark duct sections for reassembly and for a coordinated installation.
- E. Round Fittings: The following round duct fittings shall be used, in accordance with what is depicted on the drawings.
 - 1. All round fittings shall be full bodied type. Adjustable elbows are not acceptable.
 - 2. Round elbows shall be constructed with a 1.5 radius to diameter (R/D) ratio.
 - 3. Smooth radius die-stamped 45 degree to 90 degree elbows for duct sizes up to 8 inches.
 - 4. Five piece 90 degree fully welded elbows for duct sizes 10 inches and larger.
 - 5. Low loss conical tees, conical laterals, reducing tees, and 90° crosses.

6. Reducers and increasers shall be constructed for a maximum angle of 30 degrees.
 7. Fabricate round supply connections at rectangular plenums in two inch pressure class low pressure ductwork (for example, downstream of terminal units) using spin-in type fittings, complete with scoop and manual balance damper.
 8. Tap type fittings that require field cuts into the main ductwork will not be accepted.
 9. No exceptions will be allowed on the listed fitting requirements.
- F. Concealed Round Ductwork: Construct of galvanized sheet steel complying with ANSI/ASTM A653, in conformance with the listed manufacturing method, and in the listed minimum duct and fitting gauge.

<u>Diameter</u>	<u>Minimum Duct Gauge</u>	<u>Minimum Fitting Gauge</u>	<u>Manufacturing Method</u>
3" to 14"	28	28	Spiral Lockseam
16" to 24"	26	26	Spiral Lockseam
26" to 42"	24	24	Spiral Lockseam
44" to 60"	22	22	Spiral Lockseam
62" to 96"	20	20	Spiral Lockseam

2.4 HANGERS AND SUPPORTS FOR DUCTWORK

- A. See Section 230530 (Hangers and Supports for HVAC Systems)

2.5 DUCTWORK INSULATION

- A. All 2 inch pressure class rectangular supply, return, and outside air ductwork shall be externally insulated (unless specifically indicated otherwise in these specifications or on the drawings). See Specification Section 230700 (HVAC Insulation)
- B. All 2 inch pressure class round ductwork shall be externally insulated. See Specification Section 230700 (HVAC Insulation).

2.6 MISCELLANEOUS DUCTWORK MATERIALS

- A. Provide miscellaneous materials and products of types and sizes indicated, unless otherwise indicated. Provide per the requirements listed in the latest SMACNA manuals, including proper connection of ductwork and equipment.
- B. Duct Joints: Join and seal prefabricated, factory built ducts, fittings, and couplings in strict accordance with duct manufacturer's instructions. Install duct sealers, pop rivets, or sheet metal screws, canvas, and lagging adhesive on each joint. Duct sealer shall be fire retardant. Sheet metal screws for joints shall be minimum #10 size galvanized.

2.7 SEALANTS

- A. Duct sealant shall be water-based, non-fibrated, and fire resistive with a UL 181B listing for use on low, medium, and high pressure ductwork. Sealant VOC levels shall also meet all federal, state, and local requirements and be classified with mildew resistance per ASTM G21 with 0 growth rating.
- B. Sealant shall be rated for up to 10" w.g. and shall be installed in strict accordance with the manufacturer's written instructions. Pressure sensitive tapes are not acceptable.
- C. Subject to compliance with requirements, manufacturers offering sealants which may be incorporated in the work include the following:
Design Polymerics DP-1010
Hardcast Iron-Grip 601
Foster 32-19
Childers CP-146

2.8 FLEXIBLE DUCTS

- A. Flexible ducts may be used in concealed areas where detailed and as specified.

- B. Flexible ducts shall consist of an exterior reinforced laminated vapor barrier, 2 inch thick fiberglass insulation (R-6), encapsulated spring steel wire helix, and impervious, smooth, non-perforated interior vinyl liner. Each individual length of flexible duct shall include factory fabricated steel connection collars. Flexible ducts shall be UL approved and tested and shall meet Class 1 requirements of NFPA 90A.
- C. Flexible ducts from rigid runouts to diffusers and registers shall be Thermaflex M-KE, or approved equal, with a maximum length of 5 feet.
- D. Comply with all applicable portions of the Air Duct Council Flexible Duct Performance and Installation Standards.

PART 3 - EXECUTION

3.1 INSTALLATION OF DUCTWORK

- A. Assemble and install ductwork to achieve air tight and noiseless (no objectionable noise) systems capable of performing each indicated service.
- B. Install each run with minimum of joints. Align ductwork accurately at connections within 1/8 inch misalignment tolerance and with internal surfaces smooth. Support ducts rigidly with suitable ties, braces, hangers, and anchors of type which will hold ducts true to shape and to prevent buckling.
- C. Install concrete inserts for support of ductwork in coordination with formwork as required to avoid delays in work.
- D. Where ducts pass through interior partitions and exterior walls, conceal space between construction opening and duct or duct-plus-insulation with sheet metal flanges of same gauge as duct. Overlap opening on four sides by at least 1-1/2 inches.
- E. Support ductwork and piping in a manner complying with Section 230530 (Hangers and Supports for HVAC Piping and Equipment). Where special hanging of ductwork or piping is detailed or shown on drawings, the drawings shall be followed.
- F. Duct hangers used in areas where a specialty architectural ceiling or floor occurs shall be compatible for use with that system. See architectural and structural drawings for locations.
- G. Seal all ductwork to the seal class required in the following table, and using the methods prescribed in the SMACNA HVAC Air Duct Leakage Test Manual, latest edition.

Duct Class	Up to 2" w.g.	3" w.g.	4" thru 10" w.g. or exposed to weather
Seal Class	C	B	A
Sealing	Transverse Joints Only	Transverse Joints and Seams	Joints, Seams, and all Applicable Wall Penetrations
Leakage Class			
Rectangular Metal	16	8	4
Round Metal	8	4	2

1. Sealant shall be applied 3 inches wide and at 32 mil wet film thickness.
2. For ducts greater than 2" pressure class, or exposed to weather, a first layer of sealant shall be applied to an 18 mil thickness, with scrim applied over the sealant, and then another 18 mil thickness of sealant shall be applied over the scrim.

3.2 INSTALLATION OF FLEXIBLE DUCTWORK

- A. Provide supports at or near the mid-length point using 2 inch wide 28 gauge steel hanger collars attached to the structure with an approved duct hanger. Installation shall eliminate sharp radius turns, offsets, or kinks.
- B. Bends in flexible ductwork shall be kept to a minimum. The minimum bend radius shall be 1.5 times the duct diameter with no bends greater than 45 degrees. This specifications and any applicable drawings or details shall be strictly adhered to.
- C. Each length of flexible duct shall be provided with steel connection collars.
- D. Make connections to rigid duct and equipment with draw bands and sealer, and then apply duct tape over outside of sheath.

3.3 CLEANING AND PROTECTION

- A. Clean ductwork internally, unit by unit as it is installed, of any dust and debris. Clean external surfaces of foreign substances which might cause corrosive deterioration of metal or where ductwork is to be painted.
- B. Strip protective paper from stainless steel ductwork surfaces, and repair finish wherever it has been damaged.
- C. Temporary Closure: At ends of ducts which are not connected to equipment or air distribution devices at the time of ductwork installation, provide temporary closure using polyethylene film or other covering which will prevent entrance of dust and debris until the time that connections are to be completed.

3.4 CLEANING UP

- A. Upon completion of the Work remove materials, equipment, apparatus, and tools, and leave the premises clean, neat, and orderly.

END OF SECTION

SECTION 23 31 10 - HVAC DUCTWORK ACCESSORIES

PART 1 - GENERAL

1.1 CONDITIONS OF THE CONTRACT

- A. Sections 230000 (Heating, Ventilating, and Air Conditioning) and 230500 (Basic Materials and Methods for HVAC) are hereby made a part of this section.

1.2 WORK INCLUDED

- A. Types of ductwork accessories specified in this section include volume dampers, control dampers, fire-smoke dampers, turning vanes, duct hardware, duct access doors, flexible connections, and backdraft dampers.

1.3 QUALITY ASSURANCE

- A. SMACNA Compliance: Comply with applicable portions of Sheet Metal and Air Conditioning Contractor's National Association (SMACNA) HVAC Duct Construction Standards (Metal and Flexible) latest edition, for all work in this section.
- B. ASHRAE Standards: Comply with American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) recommendations, latest edition, for all work in this section.
- C. NFPA Compliance: Comply with ANSI/NFPA 90A (Standard for the Installation of Air Conditioning and Ventilating Systems) and ANSI/NFPA 90B (Standard for the Installation of Warm Air Heating and Air Conditioning Systems).
- D. Compliance: Construct, test, install and label fire dampers and fire doors in accordance with Underwriters Laboratories (UL) Standard 555 (Fire Dampers and Ceiling Dampers).
- E. Dampers shall be warranted against manufacturing defects for a period of 5 years.
- F. Dampers shall be tested, rated and labeled in accordance with the latest requirements of UL 555 (Fire Dampers) and UL 555S (Smoke Dampers).
- G. Damper pressure drop ratings shall be based on tests and procedures performed in accordance with AMCA 500.
- H. Damper pressure drop ratings shall be based on tests and procedures performed in accordance with AMCA 500 and certified in accordance with AMCA 500D.

1.4 REFERENCES

AMCA 500D	Laboratory Test Methods for Testing Dampers for Ratings
AMCA 511	Certified Ratings Program for Air Control Devices
IBC	International Building Code
NFPA 90A	Standard for the Installation of Air Conditioning and Ventilating Systems
NFPA 90B	Standard for the Installation of Warm Air Heating and Air Conditioning Systems
NFPA 92A	Smoke Control Systems
NFPA 101	Life Safety Code
UL 555	Standard for Safety; Fire Dampers
UL 555S	Standard for Safety; Smoke Dampers

1.5 SUBMITTALS

- A. Product Data: Submit manufacturer's product data for each type of ductwork accessory, including dimensions, capacities, and materials of construction, and installation instructions.
- B. Fire-Smoke Dampers: Submit complete installation instructions for all types of fire damper to be used on this project, as part of main submittal.

PART 2 - MATERIALS

2.1 DUCT HARDWARE

- A. Provide duct hardware manufactured by one manufacturer for all items on project for the following:
 - 1. Test Holes: Provide in ductwork at fan inlet and outlet and elsewhere as required. Plastic test plugs may only be used on low pressure ductwork (2" w.g. or less). Test holes installed in medium pressure ductwork (above 2" w.g.) and at outdoor equipment shall be covered with Ventlok Model 699 covers, or approved equal.
 - 2. Quadrant Locks: Provide for each damper quadrant lock device on one end of shaft and end-bearing plate on other end. Provide extended quadrant locks and extended bearing plates for externally insulated ductwork.
- B. Available Manufacturers: Subject to compliance with requirements, manufacturers offering duct hardware which may be incorporated in the work include the following:
 - Ventfabrics
 - Ventlok by Ventfabrics

2.2 MANUAL VOLUME DAMPERS, CONTROL DAMPERS, AND BACKDRAFT DAMPERS

- A. Manual Dampers: Provide dampers of single-blade type or multi-blade type constructed in accordance with SMACNA (HVAC Duct Construction Standards), latest edition. Damper blades shall not exceed 6 inches in width, except that 8 inch wide dampers may be used in 8 inch wide ducts.
- B. Concealed Damper Actuators: Where dampers are installed above non-accessible ceilings and are not served by access doors, provide extension cables and concealed ceiling mounted damper regulators. Damper regulator shall be Young Regulator Model 270-896, or approved equal.
- C. Control Dampers: Provide dampers with low leakage opposed blades, frame and blades constructed of 16 gauge galvanized steel, suitable for electric actuators.
- D. Backdraft Dampers: Provide dampers with parallel blades, constructed of 16 gauge aluminum; provide 1/2 inch diameter ball bearings, 1/2 inch diameter steel axles spaced on 9 inch centers. Construct frame of 2" x 1/2" x 1/8" thick steel channel for face areas 25 sf and under; and 4" x 1-1/4" x 16 gauge channel for face areas over 25 sf. Provide galvanized steel finish on frame with aluminum touch-up.
- E. Available Manufacturers: Subject to compliance with requirements, manufacturers offering dampers which may be incorporated in the work include the following:
 - Ruskin
 - Greenheck
 - Pottorff
 - Air Balance

PART 3 - EXECUTION

3.1 INSTALLATION OF DUCT ACCESSORIES

- A. Install duct accessories in accordance with manufacturer's installation instructions with applicable portions of details of construction as shown in SMACNA standards and in accordance with recognized industry practices to ensure that products serve intended function.
- B. Install turning vanes in square or rectangular 90 degree elbows in supply and exhaust air systems and elsewhere as indicated.
- C. Install access doors to open against system air pressure, with latches operable from either side, except outside only where duct is too small for person to enter.
- D. Coordinate with other work as necessary to interface installation of duct accessories properly with other work.
- E. Field Quality Control: Operate installed duct accessories to demonstrate compliance with requirements. Test for air leakage while system is operating. Repair or replace faulty accessories as required to obtain proper operation and leak-proof performance.

3.2 CARE AND CLEANING

- A. Repair or replace broken, damaged, or otherwise defective parts, materials, and work. Leave entire work in condition satisfactory to the Architect/Engineer. At completion, carefully clean and adjust equipment, fixtures, and trim installed as part of this work. Leave systems and equipment in satisfactory operating condition.

3.3 INSPECTION OF FIRE-SMOKE DAMPERS

- A. Upon completion of this work all fire-smoke dampers shall be tested by the installing contractor in the presence of the local fire department. Provide spare fusible links as required to complete testing to the complete satisfaction of the local fire department.

3.4 OPERATION TEST

- A. Test each piece of equipment to show that it will operate in accordance with the indicated requirements.

3.5 CLEANING UP

- A. Upon completion of the Work remove materials, equipment, apparatus, tools, and the like, and leave the premises clean, neat, and orderly.

END OF SECTION

SECTION 23 37 00 - AIR OUTLETS AND INLETS

PART 1 - GENERAL

1.1 CONDITIONS OF THE CONTRACT

- A. Sections 230000 (Heating, Ventilating, and Air Conditioning) and 230500 (Basic Materials and Methods for HVAC) are hereby made a part of this section.

1.2 WORK INCLUDED:

- A. This section includes specifications and requirements for air outlets and inlets.

1.3 QUALITY ASSURANCE

- A. SMACNA Compliance: Comply with applicable portions of Sheet Metal and Air Conditioning Contractor's National Association (SMACNA) HVAC Duct Construction Standards (Metal and Flexible), latest edition, for all work in this section.
- B. ASHRAE Standards: Comply with American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) recommendations, latest edition, for all work in this section.
- C. NFPA Compliance: Comply with ANSI/NFPA 90A 'Standard for the Installation of Air Conditioning and Ventilating Systems', and ANSI/NFPA 90B 'Standard for the Installation of Warm Air Heating and Air Conditioning Systems'.

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's product data for each type of ductwork accessory, including dimensions, capacities, and materials of construction, and installation instructions.

PART 2 - MATERIALS

2.1 AIR OUTLETS AND INLETS

- A. See air distribution schedule on the drawings for outlet and inlet types.
- B. Grilles, registers, and diffusers shall be selected and guaranteed by the manufacturer to operate without objectionable noise or draft.
- C. Furnish and install sponge rubber gaskets between grilles and grounds of finished surfaces. Wood grounds will be furnished by others. Metal grounds shall be furnished by the Contractor. Sidewall grilles and registers shall be provided with a dull/flat prime coat finish, unless noted otherwise. All supply diffusers, registers, and grilles located at ceilings shall have factory-applied bone white finish, unless indicated otherwise on the drawings.
- D. Paint visible ductwork behind grilles, registers, and diffusers flat black.
- E. General: Except as otherwise indicated, provide manufacturer's standard ceiling air diffusers where shown of size, shape, capacity, and type indicated; constructed of materials and components as indicated and as required for a complete installation. Provide diffusers with border styles that are compatible with adjacent ceiling systems and that are specifically manufactured to fit into ceiling modules with accurate fit and adequate support. Refer to the architectural drawings and specifications for types of ceiling systems which will contain each type of ceiling air diffuser and/or grille.
- F. Allowable Manufacturers: Subject to compliance with requirements, manufacturers offering air outlets and inlets which may be incorporated in the work include the following:
 - Price
 - Krueger
 - Titus

PART 3 - EXECUTION

3.1 INSTALLATION OF AIR OUTLETS AND INLETS

- A. Install outlets and inlets in accordance with manufacturer's written instructions and in accordance with recognized industry practices to ensure that products serve intended functions.
- B. Locate ceiling air diffusers, registers, and grilles as indicated on reflected ceiling plans. Unless otherwise indicated, locate units in the center of acoustical ceiling modules.
- C. Examine areas and conditions under which outlets and inlets are to be installed. Do not proceed with work until unsatisfactory conditions have been corrected.
- D. Ceiling mounted air terminals or services shall be positively attached to the ceiling suspension main runners or to cross runners with the same carrying capacity as the main runners.
- E. Air terminals or services weighing not more than 56 pounds shall have two 12 gauge hangers connected from the air terminal or service to the structure above. These wires may be slack.
- F. Air terminals or services weighing more than 56 pounds shall be supported directly from the structure above using submitted and approved hangers.

3.2 CARE AND CLEANING

- A. Repair or replace broken, damaged, or otherwise defective parts, materials, and work. Leave entire work in condition satisfactory to Architect/Engineer. At completion, carefully clean and adjust equipment, fixtures, and trim installed as part of this work. Leave systems and equipment in a satisfactory operating condition.

3.3 OPERATION TEST

- A. Test each piece of equipment to show that it will operate in accordance with the indicated requirements.

3.4 CLEANING UP

- A. Upon completion of the Work remove materials, equipment, apparatus, tools, and the like, and leave the premises clean, neat, and orderly.

END OF SECTION

Apprenticeship Utilization Act Information and Forms

APPRENTICESHIP UTILIZATION ACT

BACKGROUND

Senate Bill 207 (Apprenticeship Utilization Act) passed during the 2019 Legislative Session added sections 338.0116 and 338.01165 to the NRS. These new provisions apply to bids for public works where the value exceeds \$100,000.00. In passing SB 207, The Legislature hereby finds and declares that: (1) A skilled workforce in construction is essential to the economic well-being of the State; (2) Apprenticeship programs are a proven method of training a skilled workforce in construction; and (3) Requiring the use of apprentices on the construction of public works will ensure the availability of a skilled workforce in construction in the future for this State.

A contractor or subcontractor engaged in **horizontal construction** who employs a worker on a public work pursuant to NRS 338.040 shall use one or more apprentices for at least 3 percent of the total hours of labor worked for each apprenticed craft or type of work to be performed on the public work for which more than three workers are employed.

“Horizontal Construction” means the construction of any fixed work, including any irrigation, drainage, water supply, flood control, harbor, railroad, highway, tunnel, airport or airway, sewer, sewage disposal plant or water treatment facility and any ancillary vertical components thereof, bridge, inland waterway, pipeline for the transmission of petroleum or any other liquid or gaseous substance, pier, and work incidental thereto. The term does not include vertical construction, the construction of any terminal or other building of an airport or airway, or the construction of any other building.

A contractor or subcontractor engaged in **vertical construction** who employs a worker on a public work pursuant to NRS 338.040 shall use one or more apprentices for at least 10 percent of the total hours of labor worked for each apprenticed craft or type of work to be performed on the public work for which more than three workers are employed.

“Vertical Construction” means the construction or remodeling of any building, structure or other improvement that is predominantly vertical, including, without limitation, a building, structure or improvement for the support, shelter and enclosure of persons, animals, chattels or movable property of any kind, and any improvement appurtenant thereto.

A Public Body/Awarding Body, upon the request of a contractor or subcontractor, **MAY** submit a request for a modification or waiver of the percentage of hours of labor of one or more apprentices prior to (1) the bid advertisement; (2) the bid opening; or (3) the award of the contract if, “Good Cause” exists. The Labor Commissioner may also grant a modification or waiver from the requirements of NRS 338.01165 after work on the public work has commenced.

CITY OF SPARKS – OPERATIONAL PROCESS FOR COMPLIANCE (POST-BID)

The timeline associated with initial collection of materials associated with compliance with the Apprenticeship Utilization Act (“the Act”) is as follows:

Pre-Award Meeting – Following the public opening of bids (as soon as practical), a meeting will be scheduled with the apparent low bidder to discuss the bidder’s ability to meet the requirements of the Act. At this meeting, the contractor will provide a “Project Workforce Checklist” that indicates the expected classification of workers on the project and the determination as to whether or not apprentices may be required per the provisions of the Act.

Determination of Availability of Apprentices

Immediately following the Pre-Award Meeting, the low bidder will survey the market to determine whether there are a sufficient number of apprentices available in the jurisdiction to meet the requirements of the Act, specific to the project at-hand. The contractor will then communicate the results of this survey to the City of Sparks by either indicating they can go forward without further action by the City or by delivering a completed “Apprenticeship Utilization Act Waiver Request” form(s) for consideration by the City and the Nevada Labor Commissioner.

Communications concerning compliance and/or delivery of waiver requests should occur within 14 calendar days of the Pre-Award Meeting.

Waiver Requests

Upon receipt of any waiver requests, the City will consider the materials provided and, as required, forward the materials to the Nevada Labor Commissioner for consideration and possible approval. Upon receipt of that determination, the City of Sparks will communicate the results back to the Contractor as soon as possible.

Contract Award

Once the City and the low bidder have completed the work required to determine the apparent compliance with the Act, the award of the construction contract will be scheduled for consideration by the City Council.

Post-Award Requests

As allowed by the Act, should an awarded Contractor determine in the course of a project that their ability to comply with the requirements of the Act has changed, additional waiver requests or other relevant information should be communicated to the City as soon as practical for further action and consideration by the City and/or the Nevada Labor Commissioner.

Sample Forms

Additional information and sample forms for use in compliance with the Act may be found on the website of the Nevada Labor Commissioner at:

http://labor.nv.gov/Apprenticeship_Utilization_Act/Apprenticeship_Utilization_Act/

This information may also be found following this page and include:

- 1) Apprenticeship Utilization Guide
- 2) Apprenticeship Verification Process
- 3) Project Workforce Checklist
- 4) Request for Apprentice Availability on a Public Work
- 5) Apprenticeship Utilization Act Waiver Request

STEVE SISOLAK
GOVERNOR

TERRY REYNOLDS
DIRECTOR

SHANNON CHAMBERS
LABOR COMMISSIONER



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REVISED NOVEMBER 29, 2021

(Originally issued on January 28, 2020)

ADVISORY OPINION - NEVADA ADMINISTRATIVE CODE § 607.650

SENATE BILL 207 - APPRENTICESHIP UTILIZATION ACT (AUA)

Pursuant to Nevada Administrative Code (NAC) Section 607.650, the Labor Commissioner is issuing the following Advisory Opinion regarding Senate Bill (SB) 207/Apprenticeship Utilization Act (AUA). The Labor Commissioner has received multiple inquiries, opinion requests, comments, suggestions, and proposals on how Senate Bill 207 should be interpreted, implemented, and enforced. The Labor Commissioner also met with various stakeholders.

This Advisory Opinion is intended to provide as much guidance as possible on Senate Bill 207. However, it must be recognized that not every working environment or situation may be encompassed by the answers and guidance set forth in this Advisory Opinion. The Labor Commissioner will continue to work with stakeholders, public/awarding bodies, contractors/subcontractors, and employers and employees on Senate Bill 207. However, the Labor Commissioner will attempt to interpret, implement, and enforce Senate Bill 207 based on the plain language of the bill and the intent of the Legislative Sponsors of the bill to ensure that apprenticeship utilization takes place on public works projects in the State of Nevada.

KEY HIGHLIGHTS OF SENATE BILL (SB 207) – EFFECTIVE JANUARY 1, 2020

The Legislature hereby finds and declares that: 1. A skilled workforce in construction is essential to the economic well-being of this State; 2. Apprenticeship programs are a proven method of training a skilled workforce in construction; and 3. Requiring the use of apprentices on the construction of public works will ensure the availability of a skilled workforce in construction in the future for this State.

Sec. 1.7. 1. Notwithstanding any other provision of this chapter and except as otherwise provided in this section, a contractor or subcontractor engaged in vertical construction who employs a worker on a public work pursuant to NRS 338.040 shall use one or more apprentices for at least 10 percent of the total hours of labor worked for each apprenticed craft or type of work to be performed on the public work for which more than three workers are employed.

2. Notwithstanding any other provision of this chapter and except as otherwise provided in this section, a contractor or subcontractor engaged in horizontal construction who employs a worker on a public work pursuant to NRS 338.040 shall use one or more apprentices for at least 3 percent of the total hours of labor worked for each apprenticed craft or type of work to be performed on the public work for which more than three workers are employed.

<https://www.leg.state.nv.us/App/NELIS/REL/80th2019/Bill/6351/Text>

DEFINITIONS FOR PUBLIC BODY AND PUBLIC WORK AND AWARDING BODY NEVADA REVISED STATUTES (NRS) SECTIONS 338.010(17)(18) AND NEVADA ADMINISTRATIVE CODE (NAC) SECTION 338

17. “Public body” means the State, county, city, town, school district or any public agency of this State or its political subdivisions sponsoring or financing a public work.

18. “Public work” means any project for the new construction, repair or reconstruction of a project financed in whole or in part from public money for:

- (a) Public buildings;
- (b) Jails and prisons;
- (c) Public roads;
- (d) Public highways;
- (e) Public streets and alleys;
- (f) Public utilities;
- (g) Publicly owned water mains and sewers;
- (h) Public parks and playgrounds;
- (i) Public convention facilities which are financed at least in part with public money; and
- (j) All other publicly owned works and property.

NAC 338.0054 “Awarding body” defined. ([NRS 338.012](#)) “Awarding body” means a public body, as that term is defined in [NRS 338.010](#), or any authorized agent or representative of a public body.

DEFINITIONS FOR HORIZONTAL AND VERTICAL CONSTRUCTION NRS 338.010(13)(24) – SENTATE BILL 141 (2021)

Horizontal Construction NRS 330.010 - Subdivision 13. “Horizontal construction” means any construction, alteration, repair, renovation, demolition or remodeling necessary to complete a public work, including , without limitation, any irrigation, drainage, water supply, flood control, harbor, railroad, highway, tunnel, airport or airway, sewer, sewage disposal plant or water treatment facility and any ancillary vertical components thereof, bridge, inland waterway, pipeline for the transmission of petroleum or any other liquid or gaseous substance, pier, and any other work incidental thereto. The term does not include vertical construction, the construction of any terminal or other building of an airport or airway, or the construction of any other building.

Vertical Construction NRS 338.010 - Subdivision 24. “Vertical construction” means any construction, alteration, repair, renovation, demolition or remodeling necessary to complete a public work for any building, structure or other improvement that is predominantly vertical, including, without limitation, a building, structure or improvement for the support, shelter and enclosure of persons, animals, chattels or movable property of any kind, and any other work or improvement appurtenant thereto.

WHAT IS COMPLEX AND/OR HAZARDOUS?

Tasks routinely and customarily performed by an apprentice in an apprenticed craft or type of work, unless specifically prohibited by the applicable Apprenticeship Program or Apprenticeship Standards, are not considered to be either uniquely hazardous or complex tasks for the purpose of enforcement of the provisions of Senate Bill 207 and any regulations adopted pursuant thereto.

SENATE BILL 207 ONLY APPLIES TO PUBLIC WORKS PROJECTS OF \$100,000 OR MORE.

Assembly Bill 136 passed during the 2019 Nevada Legislative Session changed the public works project amount that triggers prevailing wage laws from \$250,000 to \$100,000. The Sponsor of Senate Bill 207, Senator Brooks, stated that the intent of Senate Bill 207 was to apply to public works projects based on prevailing wage laws and the amount that triggers prevailing wage laws. The Legislature determined that amount to be \$100,000. Therefore, Senate Bill 207 only applies to public works projects of \$100,000 or more.

SENATE BILL 207 DOES NOT APPLY TO DAVIS-BACON OR 100% FEDERALLY FUNDED PROJECTS.

Senate Bill 207 is a state law that applies to state public works projects based on the definition set forth above in NRS Section 338.010 subdivision 17.

Senate Bill 207 does not apply to 100% federally funded projects and/or those projects that fall exclusively under the federal Davis-Bacon Act requirements for compliance and/or enforcement.

For projects that have a mix of state and federal funding, the public/awarding body should include the provisions of Senate Bill 207 as part of their bid documents and apply Senate Bill 207 on those projects.

The public/awarding body can work with their federal funding agencies and seek a determination from them as to whether Senate Bill 207 should apply based on the funding structure of the project. The Labor Commissioner will consider this information in determining whether Senate Bill 207 applies on those types of projects.

THE LABOR COMMISSIONER DOES NOT HAVE JURISDICTION OVER AND WILL NOT ENFORCE “ON-THE-JOB TRAINING”/OJT REQUIREMENTS IF THE AUA APPLIES.

Assembly Bill 459 passed during the 81st Regular Session of the Nevada Legislature (2021) moved the jurisdiction of the Nevada State Apprenticeship Council back to the Office of the Labor Commissioner and designated the Office of the Labor Commissioner as the recognized State Apprenticeship Agency.

Projects that require compliance with the AUA and fall under the jurisdiction and enforcement of the Labor Commissioner will be required to meet the requirements of the AUA. The Labor Commissioner will not apply and/or enforce additional “on-the-job”/OJT requirements and public/awarding bodies should not enforce additional OJT requirements if state law, the AUA applies.

Pursuant to Nevada Revised Statutes (NRS) sections 610.020 and 610.144, and Nevada Administrative Code (NAC) section 610.540, state registered apprenticeship programs must already comply with the following requirements related to equal opportunity, affirmative action, selection methods, and a nondiscriminatory pool for application as an apprentice.

NRS 610.020 Purposes. The purposes of this chapter are:

1. To open to people, without regard to race, color, creed, sex, sexual orientation, gender identity or expression, religion, disability, genetic information, national origin or age of 40 years or older, the opportunity to obtain training that will equip them for profitable employment and citizenship.
2. To establish, as a means to this end, an organized program for the voluntary training of persons under approved standards for apprenticeship, providing facilities for their training and guidance in the arts and crafts of industry and trade, with instruction in related and supplementary education.
3. To promote opportunities for employment for all persons, without regard to race, color, creed, sex, sexual orientation, gender identity or expression, religion, disability, genetic information, national origin or age of 40 years or older, under conditions providing adequate training and reasonable earnings.
4. To regulate the supply of skilled workers in relation to the demand for skilled workers.
5. To establish standards for the training of apprentices in approved programs.
6. To establish a State Apprenticeship Council.
7. To provide for a State Apprenticeship Director with the authority to carry out the purposes of this chapter.
8. To provide for reports to the Legislature and to the public regarding the status of the training of apprentices in the State.
9. To accomplish related ends.

NRS 610.144 Requirements for program to be eligible for registration and approval by State Apprenticeship Council.

1. Be an organized, written plan embodying the terms and conditions of employment, training and supervision of one or more apprentices in an occupation in which a person may be apprenticed and be subscribed to by a sponsor who has undertaken to carry out the program.
2. Contain the pledge of equal opportunity prescribed in 29 C.F.R. § 30.3(c) and, when applicable:
 - (a) A plan of affirmative action in accordance with 29 C.F.R. § 30.4;
 - (b) A method of selection authorized in 29 C.F.R. § 30.10;
 - (c) A nondiscriminatory pool for application as an apprentice; or
 - (d) Similar requirements expressed in a state plan for equal opportunity in employment in apprenticeships adopted pursuant to 29 C.F.R. Part 30 and approved by the United States Department of Labor.

NAC 610.540 Standards: Pledge of equal opportunity. ([NRS 610.090](#), [610.144](#)) Each sponsor shall include in its standards a pledge of equal opportunity which is worded substantially as follows:

The recruitment, selection, employment and training of apprentices during apprenticeship will be without discrimination because of race, color, religion, sex, sexual orientation, age, disability or national origin. The sponsor will take affirmative action to provide equal opportunity in apprenticeship and will operate the program of apprenticeship as required under Title 29 of the Code of Federal Regulations, Part 30, and all regulations on equal opportunity of employment in the State of Nevada.

[Apprenticeship Council, Equal Employment Opportunity, § 4 subsec. (b), eff. 9-11-76] (NAC A by R082-04, 7-13-2004)

THE LABOR COMMISSIONER TYPICALLY DOES NOT HAVE JURISDICTION OVER THE BIDDING PROCESS.

NRS section 338.013 requires an identifying number from the Labor Commissioner. Please see below.

NRS 338.013 Inclusion of identifying number from Labor Commissioner in advertisement or solicitation and bids and other responsive documents; reports by public bodies and contractors to Labor Commissioner.

1. A public body that undertakes a public work shall request from the Labor Commissioner and include in any advertisement or other type of solicitation, an identifying number with a designation of the work. That number must be included in any bid or other document submitted in response to the advertisement or other type of solicitation.
2. Each public body which awards a contract for any public work shall report its award to the Labor Commissioner within 10 days after the award, giving the name and address of the contractor to whom the public body awarded the contract and the identifying number for the public work.
3. Each contractor engaged on a public work shall report to the Labor Commissioner and the public body that awarded the contract the name and address of each subcontractor whom the contractor engages for work on the project within 10 days after the subcontractor commences work on the contract and the identifying number for the public work.
4. The public body which awarded the contract shall report the completion of all work performed under the contract to the Labor Commissioner before the final payment of money due the contractor by the public body.

The bidding requirements and provisions set forth in NRS 338.1373 et seq. fall under the jurisdiction of the public/awarding bodies, with limited exceptions where the Labor Commissioner can get involved in the bidding and award of contracts if potential violations of prevailing wage and public works laws may be occurring.

Therefore, each public/awarding body is encouraged to work with their respective attorneys/counsel to develop forms and a process to implement Senate Bill 207. Examples and guidance have been provided on how to include the requirements of Senate Bill 207 in bid documents and in determining what is a responsive bid. The Labor Commissioner will not take over or assume any of the bidding and award duties of the public/awarding body as required by existing laws and regulations.

DEFINITION OF APPRENTICE NAC 338.

NAC 338.0052 “Apprentice” defined. ([NRS 338.012](#)) “Apprentice” means a person employed and individually registered in a bona fide apprenticeship program with:

1. The Bureau of Apprenticeship and Training of the Office of Apprenticeship, Training, Employer and Labor Services of the Employment and Training Administration of the United States Department of Labor or its successor; and
2. The State Apprenticeship Council pursuant to [chapter 610](#) of NRS and any regulations adopted pursuant thereto.

THERE ARE NO REGISTERED APPRENTICESHIP PROGRAMS IN MY JURISDICTION.

A Request for Waiver may be submitted by the public/awarding body. Please follow the link to the Advisory Opinion on “Jurisdiction(s)” for purposes of Senate Bill 207.

http://labor.nv.gov/uploadedFiles/labornvgov/content/Apprenticeship_Utilization_Act/AO-2019-03%20AUA%20Jurisdiction%20definition.pdf

DOES THE AWARDING BODY STILL NEED TO REQUEST A WAIVER IF THERE IS NO REGISTERED APPRENTICESHIP PROGRAM IN THE JURISDICTION?

Yes, a Request for Waiver still needs to be submitted.

However, the Labor Commissioner will not require a Request for Waiver for the Truck Driver Job Classification in the State of Nevada because there currently are no Registered Apprenticeship Programs for Truck Drivers in the State of Nevada, and because of the volume of waivers that could be generated simply for the Truck Driver Job Classification.

HOW MANY APPRENTICESHIP PROGRAMS DO I HAVE TO REQUEST APPRENTICES FROM?

A contractor/subcontractor that has more than three workers employed on a public work within the same apprenticed craft or type of work needs to request apprentices from every Registered Apprenticeship Program for that craft or type of work performed in their jurisdiction. This could include requesting apprentices from both a Union Apprenticeship Program and a Non-Union Apprenticeship Program. (See above for Advisory Opinion on “Jurisdiction(s)” for purposes of Senate Bill 207)

For example, the Laborers Job Classification and Job Description may also include Brick and Hod Plaster Carriers, Flaggers, Cement Masons, Fence Erectors, Asbestos Abatement, and Landscaping. Similarly, the Carpenters Job Classification and Job Description may also include different types of work performed. The Labor Commissioner will likely view each different Job Description within the broader Job Classification as separate crafts or types of work for purposes of SB207.

The contractor/subcontractor should identify the craft or type of work to be performed and determine how that work is bid and assigned according to area practice and within that jurisdiction. The Labor Commissioner does not have jurisdiction over jurisdictional disputes involving collective bargaining agreements where contractors/subcontractors and/or the Unions are claiming a type of work that has been assigned according to area practice and is set forth in the collective bargaining agreements.

Please also see the sample Project Workforce Checklist on the link below.

http://labor.nv.gov/Apprenticeship_Utilization_Act/Apprenticeship_Utilization_Act/

WHAT HAPPENS IF THE DISPATCHED APPRENTICE DOES NOT SHOW UP OR THERE ARE OTHER ISSUES WITH THE APPRENTICE?

The contractor/subcontractor should contact the Registered Apprenticeship Program and notify them that the apprentice did not show up. The contractor/subcontractor should also document the incident and notify the prime contractor and/or public/awarding body of the situation.

Apprenticeship questions, issues and/or complaints regarding Registered Apprenticeship Programs and the verification and/or qualifications and/or work of an Apprentice that is dispatched should be directed to the Registered Apprenticeship Program first. Additional information can be found at https://labor.nv.gov/Wages/Nevada_State_Apprenticeship_Council/.

WHAT HAPPENS IF THE CONTRACTOR/SUBCONTRACTOR IS ONLY GOING TO HAVE MORE THAN 3 WORKERS PER CRAFT OR TYPE OF WORK TO BE PERFORMED FOR ONE DAY OR A LIMITED PERIOD OF TIME?

The Labor Commissioner cannot possibly address every individual situation that could arise on a public works jobsite. If a contractor/subcontractor is required or finds the need to bring on additional workers that triggers the requirements of Senate Bill 207, the contractor/subcontractor should make every effort to bring on an apprentice to comply with the requirements of Senate Bill 207.

The Labor Commissioner also recognizes that there may be situations where the contractor/subcontractor only has more than 3 workers within a specific apprenticed craft or type of work for a day or for a limited period where it may not be reasonable and/or practical to request and/or obtain apprentice(s). The contractor/subcontractor should document the reason for the increase in workers and why it was necessary, and work with the prime contractor and/or public/awarding body to determine if the increase in workers will be temporary or a long-term situation.

The contractor/subcontractor should then determine if the contractor/subcontractor needs to request apprentices or if the public/awarding body should seek a Request for Waiver from the Labor Commissioner. In situations like this, the Labor Commissioner may look at the project as a whole and will review the actions of the contractor/subcontractor and public/awarding body to determine if their actions were reasonable and not an attempt to circumvent the requirements of Senate Bill 207.

In addition, in cases of emergencies, the law provides an exemption to prevailing wage requirements, and therefore the requirements of Senate Bill 207. (See also NRS sections 338.011 and 338.090.)

HOW WILL SENATE BILL 207 BE ENFORCED?

The plain language of Senate Bill 207 provides that it will be enforced contractor by contractor, subcontractor by subcontractor, and project by project. Therefore, the general/prime contractor cannot satisfy the 10% or 3% requirement on the project for all their subcontractors. If a subcontractor has more than 3 workers for an apprenticed craft or a type of work performed, they will need to comply with the

requirements of Senate Bill 207 separately. Similarly, a general/prime contractor that has more than 3 workers within an apprenticed craft or type of work performed will need to comply with the requirements of Senate Bill 207 separately.

So, for example, if you have 4 Electricians who each work a 40-hour week, $40 \times 4 = 160$, and that was the total hours they worked on the entire project. Because there were more than 3 workers per craft or type of work performed that would trigger the requirements of Senate Bill 207. Depending upon whether it was Vertical Construction = 10% or Horizontal Construction = 3% of the total hours of the project for that craft or type of work performed would have to be hours worked by an Apprentice based on the 160 total project hours.

It is important to look at and recognize the craft or the type of work performed. For example, the Flagger Job Classification is listed as separate, but the assignment of this work typically falls under the Laborers through collective bargaining agreements and area practice. However, a Flagger performs a distinct type of work from a general Laborer. So, if there are more than 3 Flaggers on a public works jobsite, there will need to be an apprentice on the jobsite for that craft or type of work performed, or a waiver obtained. Senate Bill 207 specifically specifies “craft” or “type of work performed.” Prevailing wage laws require that workers are paid based on the type of work the worker actually performs. Senate Bill 207 reinforces this requirement by requiring apprentices specifically for the craft or type of work performed.

The Laborer and Operator Job Classifications contain Groups. The Groups will not be considered separately but will be counted together towards the more than 3 workers threshold. As stated above, exceptions to this could be Laborers if they are performing a separate and distinct type of work, such as a Flagger. If there is an Operator Group 1 worker, an Operator Group 2 worker, an Operator Group 4 worker, and an Operator Group 5 worker, they will all be counted together as 4 Operators, thereby triggering the requirements of Senate Bill 207.

There may be situations where the Labor Commissioner may need to look at and/or review the project on a broader basis or as a “whole” to determine compliance with Senate Bill 207. While the law does not necessarily provide any “carve outs” to not enforce the law contractor by contractor, subcontractor by subcontractor, or project by project, the Labor Commissioner will review compliance with Senate Bill 207 and compliance with prevailing wage laws based on the facts and evidence presented and the actions of the contractors, subcontractors, and public/awarding bodies.

WHAT HAPPENS IF THE PUBLIC/AWARDING BODY AND/OR LABOR COMMISSIONER FIND I COMMITTED A VIOLATION?

The law provides for notice, due process, and an opportunity to be heard. NAC sections 338.105 through 338.116 set forth the provisions governing the investigation, determination, objection, and hearing process. NRS section 338.015 also provides for notice and an opportunity for a hearing before an administrative penalty may be imposed. The Labor Commissioner does have the authority to impose administrative penalties of up to \$5,000 per violation against contractors, subcontractors, and public/awarding bodies.

Contractors, subcontractors, and public/awarding bodies should comply with the certified payroll reporting and review requirements set forth in NRS and NAC section 338 to monitor and review compliance with Senate Bill 207 and prevailing wage laws.

In the event a claim/complaint is filed with the Labor Commissioner it will follow the process set forth in NAC sections 338.106 through 338.116 and/or NRS section 338.015, and any other applicable laws and regulations.

Failure to maintain proper documentation and/or submit required reports, such as certified payroll reports, could result in potential violations and disqualification.

Intentional and/or purposeful actions that demonstrate an intent to circumvent the requirements of Senate Bill 207 and prevailing wage laws may result in administrative penalties and disqualification.

CONCLUSION

In this Advisory Opinion, the Labor Commissioner has attempted to provide guidance on the interpretation and implementation of Senate Bill 207. The Labor Commissioner will defer to the legislative intent, plain language, legislative testimony, and intent of Senate Bill 207 should additional questions arise.

The Labor Commissioner has made every effort to address the questions, concerns, and issues raised relating to Senate Bill 207. To the extent that a question, concern, or issue is not addressed in this Advisory Opinion, it is recommended that you contact the Office of the Labor Commissioner and submit your question(s) in writing to AUA@labor.nv.gov or contact our office at the phone numbers and address locations listed on the first page of this Advisory Opinion.

Please be advised that the Labor Commissioner may revisit the interpretation and implementation of Senate Bill 207 as needed through an additional Advisory Opinion or through the Administrative Rulemaking process.

Sample Forms and information on SB 207 can be found at:
http://labor.nv.gov/Apprenticeship_Utilization_Act/Apprenticeship_Utilization_Act/

Sincerely,



Shannon M. Chambers
Labor Commissioner
Office of the Labor Commissioner
State of Nevada
Department of Business and Industry

STEVE SISOLAK
Governor

TERRY REYNOLDS
Director

SHANNON M. CHAMBERS
Labor Commissioner

STATE OF NEVADA



OFFICE OF THE LABOR COMMISSIONER
1818 COLLEGE PARKWAY, SUITE 102
CARSON CITY, NEVADA 89706
PHONE (775) 684-1890
FAX (775) 687-6409

OFFICE OF THE LABOR COMMISSIONER
3300 W. SAHARA AVE. SUITE 225
LAS VEGAS, NEVADA 89102
PHONE (702) 486-2650
FAX (702) 486-2660

Department of Business & Industry

OFFICE OF THE LABOR COMMISSIONER

<http://www.labor.nv.gov>

Senate Bill 207 – Apprenticeship Utilization Act becomes effective January 1, 2020

<https://www.leg.state.nv.us/App/NELIS/REL/80th2019/Bill/6351/Text>

APPRENTICE VERIFICATION PROCESS

When a Contractor and/or Subcontractor first lists an Apprentice on a Certified Payroll Report (CPR) they must submit with that CPR documentation to substantiate that the Apprentice is registered with the Bureau of Apprenticeship and Training of the Office of Apprenticeship, Training, Employer and Labor Services of the Employment and Training Administration of the United States Department of Labor or its successor **and** the State Apprenticeship Council. (Emphasis added). A properly enrolled and registered Apprentice is exempt from NRS 338.020 to NRS 338.090, inclusive. An Apprentice is paid pursuant to terms of the Apprenticeship Agreement/Standards for the type of work covered by the Apprenticeship Agreement/Standards as approved by the State Apprenticeship Council and/or Nevada Revised Statutes (NRS) section 610 or Nevada Administrative Code (NAC) section 610. (See NRS 338.080)

ELECTRONIC REPORTING/VERIFICATION OF APPRENTICES FOR CERTIFIED PAYROLL REPORTS AND SENATE BILL 207

Contractor and/or Subcontractors utilizing electronic Certified Payroll Reporting software, such as LCP Tracker or other software, should upload the documentation substantiating that the Apprentice is registered with the Bureau of Apprenticeship and Training of the Office of Apprenticeship, Training, Employer and Labor Services of the Employment and Training Administration of the United States Department of Labor or its successor **and** the State Apprenticeship Council. The Contractor and/or Subcontractor should upload any Apprentice Forms verifying the Apprentice's registration and any expiration parameters that need to be applied for the Apprentice in the Certified Payroll Reporting software.

The Awarding/Public Bodies should verify and review /certify that the Apprentice is registered and that the supporting documents were electronically uploaded before a Contractor and/or Subcontractor can certify them on the first Certified Payroll Report. The Awarding/Public Bodies and/or other entities as necessary, will validate the Apprentice information as the database Administrator for that project or multiple projects. This will allow the database Administrator, typically, the Awarding/Public Bodies, to verify and accept the Apprentice Forms for the Apprentice/Worker in question, regardless of the number of projects the Apprentice/Employee may be assigned to within the database.

****Contractors and/or Subcontractors and/or Awarding/Public Bodies will not need to obtain an Apprentice Verification Form because, the Apprentice Forms will be loaded into the database by the Contractor and/or Subcontractor along with any expiration parameters. This information will then be reviewed and verified by the Awarding/Public Bodies and/or other entities as necessary.**

This Apprentice approval process ensures an Apprentice is: 1.) Registered with the Bureau of Apprenticeship and Training of the Office of Apprenticeship, Training, Employer and Labor Services of the Employment and Training Administration of the United States Department of Labor or its successor **and** the State Apprenticeship Council; and 2.) Assists with validating Apprentice %'s for purposes of Senate Bill 207.

Compliance with Senate Bill 207 (Passed during 2019 Legislative Session.) The Awarding/Public Bodies and Contractors or Subcontractors must ensure the reporting of Apprentices complies with Senate Bill 207, unless a Waiver has been granted by the Labor Commissioner. Apprentices shall be used and reported for at least 10 % of the total hours on vertical construction and 3 % of the total hours for horizontal construction of the total hours of labor worked for each apprenticed craft or type of work to be performed on the public work when more than three employees of each a craft are employed at the site of work.

Apprenticeship Ratio: Be sure to review the apprenticeship standards to see if they provide for a ratio of apprentices to journeymen. If the ratio is not complied with the apprentice is to be paid at full journeyman rate for the type of work performed. (See NAC 338.0095). Awarding/Public Bodies may contact the Governor's Office of Workforce Innovation to verify the proper apprenticeship ratio because, they have jurisdiction over the Nevada State Apprenticeship Council and apprenticeship standards/agreements and the registration of apprentices.

STEVE SISOLAK
Governor

TERRY REYNOLDS
Director

SHANNON M. CHAMBERS
Labor Commissioner

STATE OF NEVADA



OFFICE OF THE LABOR COMMISSIONER
1818 COLLEGE PARKWAY, SUITE 102
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Department of Business & Industry

OFFICE OF THE LABOR COMMISSIONER

<http://www.labor.nv.gov>

**SUPPLEMENTAL GUIDANCE
APPRENTICESHIP UTILIZATION ACT
MARCH 5, 2021**

**WHAT DOES MORE THAN 3 WORKERS EMPLOYED FOR EACH
APPRENTICED CRAFT OR TYPE OF WORK PERFORMED MEAN?**

For a public works project over \$100,000, the Apprenticeship Utilization Act – Nevada Revised Statutes (NRS) section 338.01165, would be triggered when there were more than 3 workers employed for each apprenticed craft or type of work to be performed on the public works project. NRS section 338.01165 does not specify or clarify if the more than 3 is for the entire public works project, or more than 3 for a specific day(s), week(s), and/or another period. NRS section 338.01165 does however clarify that for Horizontal Construction, if there are more than 3 workers employed for each apprenticed craft or type of work performed, then 3% of the total hours for that apprenticed craft or type of work performed must be worked by an apprentice. For Vertical Construction, it is 10% of the total hours for that apprenticed craft or type of work performed that must be worked by an apprentice.

The Office of the Labor Commissioner/Labor Commissioner (OLC/LC) has interpreted the plain language of NRS section 338.01165 in connection with the legislative history and intent to mean that there must be more than 3 employees/workers employed on the public works project/work site at any one time and/or the same time for each apprenticed craft or type of work performed to trigger the requirements of NRS section 338.01165. In other words, there must be a “crew” of more than 3 employees/workers for each apprenticed craft or type of work performed on the public works project/work site at the same time for the requirements of NRS section 338.01165 to apply. This could include a crew of more than 3 employee/workers of an apprenticed craft or type of work performed present at the same time on the project/work site for only 1 full day of work. The OLC/LC would also look to the potential rotation of crews to avoid the requirements of NRS section 338.01165.

CITY OF SPARKS

Project Workforce Checklist

For Compliance with the Nevada Apprenticeship Utilization Act, 2019

Project: _____ Contractor: _____

Craft/Type of Work	More than 3 Employees Anticipated?	Anticipate Needing Waiver?†
Air Balance Technician	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Alarm Installer	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Boilermaker	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Bricklayer , can also include tile setter, terrazzo workers and marble masons.	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Carpenter , can also include cement masons, floor coverer, millwright and piledriver (non-equipment), plasterers and terrazzo workers.	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Cement Mason	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Electrician , includes communication technician, line, neon sign and wireman. Can also include alarm installer.	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Elevator Constructor	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Fence Erector	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Flag Person	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Floor Coverer	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Glazier (see also Painters and Allied Trades)	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Highway Striper	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Hod Carrier , includes brick-mason tender and plaster tender.	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Iron Worker , can also include fence erectors (steel/iron)	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Laborer , can also include fence erector (non-steel/iron), flag person, highway striper and traffic barrier erector	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Lubrication and Service Engineer	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Mason , can also cement, plasterer, tile setter, terrazzo workers and marble masons	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Mechanical Insulator	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Millwright	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Operating Engineer , can also include equipment greaser, piledriver, soils and material tester, steel fabricator/erector (equipment) and surveyor (non-licensed) and well driller.	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Painters and Allied Trades , can also include glaziers, floor coverers, and tapers.	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Pile Driver (non-equipment)	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>

Craft/Type of Work	More than 3 Employees Anticipated?	Anticipate Needing Waiver? [‡]
Plasterer	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Plumber/Pipefitter	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Refrigeration	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Roofer (not sheet metal)	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Sheet Metal Worker, can also include air balance technician.	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Soils and Materials Tester, includes certified soil tester	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Sprinkler Fitter	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Surveyor (non-licensed)	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Taper	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Tile/Terrazzo Worker/Marble Mason	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Traffic Barrier Erector	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Truck Driver	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Well Driller (see also Operating Engineer)	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Other*:	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<p>[‡]Pursuant to the Labor Commissioner’s Nov. 27, 2019 Advisory Opinion, waivers are not required in those crafts/types of work where no recognized apprenticeship program exists in the region where the public work is located. Contractor is responsible for verifying whether recognized apprenticeship programs exist in the region for each craft/type of work to be performed.</p>		
<p>*Contractor is responsible for ensuring all crafts/types of work to be performed on the public work are accounted for in this checklist. Attach additional pages if needed.</p>		

I affirm I am fully authorized to acknowledge, on behalf of the Contractor listed above, the anticipated workforce, and acknowledge that changes to the anticipated workforce which may have an impact on compliance with the Nevada Apprenticeship Utilization Act, 2019 will require the submittal of a revised form within ten (10) working days of such change.

Signed: _____

Name and Title: _____

Date: _____

Contractor Name: _____

STATE OF NEVADA
Office of the Labor Commissioner

REQUEST FOR APPRENTICE AVAILABILITY ON A PUBLIC WORK

Senate Bill (SB) 207 - Apprenticeship Utilization Act passed during the 2019 Legislative Session adds a section to NRS section 338. In passing SB 207, The Legislature hereby finds and declares that: (1) A skilled workforce in construction is essential to the economic well-being of the State; (2) Apprenticeship programs are a proven method of training a skilled workforce in construction; and (3) Requiring the use of apprentices on the construction of public works will ensure the availability of a skilled workforce in construction in the future for this State. <https://www.leg.state.nv.us/App/NELIS/REL/80th2019/Bill/6351/Text>

You may use this form to request an Apprentice or determine availability of an Apprentice from a Registered Apprenticeship Program in the applicable craft or trade in the area of the Public Works Project. For information about Registered Apprenticeship Programs in your area and Registered Apprentices, please visit www.labor.nv.gov or the Nevada State Apprenticeship Council at www.owinn.nv.gov/Apprenticeship/AboutSAC/ *The Governor's Office of Workforce Innovation (OWINN) is responsible for the Nevada State Apprenticeship Council and the approval and registration of Apprenticeship Programs and Apprentices.

Requests for dispatch must be in writing and submitted (and received) at least 5 business days in advance (excluding weekends and holidays) via first class mail, fax or email. Proof of submission (and receipt) will be required. Please refer to Chapter 610 of the Nevada Revised Statutes and Nevada Administrative Code Chapter 610 for the laws and regulations governing Registered Apprenticeship Programs and Registered Apprentices.

<u>Request Submitted to:</u> _____	<u>Date Request Submitted:</u> _____
------------------------------------	--------------------------------------

Name of Registered Apprenticeship Program: _____
Contact Person/Title: _____
Address: _____, _____, NV _____
Tel No.: (____) _____ Fax No.: (____) _____ Email: _____

Requestor Information:
Contractor/Subcontractor: _____ License Number: _____
Contact Person/Title: _____
Address: _____, _____, _____
Tel No.: (____) _____ Fax No.: (____) _____ Email: _____

Availability Request Information:
Number of Apprentice(s) Required: ____ Craft or Trade: _____
Apprentice(s) Report Date: _____ (5 business days' notice required) Report Time: __: __ __.
Name of Person to Report to: _____
Address to Report to: _____, _____, NV _____

Project Information:
Contract Name/Number: _____ Project Location: _____
Awarding Body Name: _____
Contact Person/Title: _____
Tel No.: (____) _____ Fax No.: (____) _____ Email: _____

 Print Name/Title _____ *Signature ____/____/____ Date

*By signing this form you certify that the information you have provided is true and correct to the best of your knowledge.

Request Approved: Request Denied:

Notes: _____

 Print Name/Title _____ Signature ____/____/____ Date
 Date Received: _____ Date Returned: _____

**Governor's Office of Workforce
Innovation (OWINN)**

Main Phone # 702-486-8080

When completed, email to:
NVApprenticeship@gov.nv.gov



**REQUEST FOR NEVADA
REGISTERED APPRENTICE
VERIFICATION**

Name of requesting contractor/awarding body/organization:	
Name and title of person requesting this verification:	
Contact phone # of person requesting this verification:	
Email address of person requesting this verification:	
Date this request was submitted to OWINN:	
Additional information regarding current Public Works projects for requester: (for example, project owner(s), PWP/contract #(s), project name(s), etc.)	

*APPRENTICE NAME (First, Last)	RAPIDS ID #	OCCUPATION	APPRENTICESHIP PROGRAM (for example, Local 12)
Additional information regarding apprentice(s): (for example, apprentice status, wage %, etc.)			

*Apprentices only need to be verified once per year/per contractor, and once approved, can be used for multiple Public Works.

Note: The Requesting Contractor/Awarding Body/Organization certifies and assures the information above is true and correct. It also acknowledges that Journeymen wages must be paid for time worked during canceled or suspended time periods or when required ratios are not met. Furthermore, the OWINN office will not process this Apprentice Verification request unless this form is signed, and ALL FIELDS are completed.

Signed: _____ **Date:** _____

Name/Title: _____

FOR OWINN USE ONLY

Date Received: _____

Occupation	Initial Ratio		Ratio Thereafter	
	Apprentice(s)	per Journeymen	Apprentice(s)	per Journeymen
	_____ / _____		_____ / _____	
	_____ / _____		_____ / _____	

OWINN Verified by: _____ Date: _____

STATE OF NEVADA
Office of the Labor Commissioner

APPRENTICESHIP UTILIZATION ACT WAIVER REQUEST

Senate Bill (SB) 207 - Apprenticeship Utilization Act passed during the 2019 Legislative Session adds a section to NRS section 338. In passing SB 207, The Legislature hereby finds and declares that: (1) A skilled workforce in construction is essential to the economic well-being of the State; (2) Apprenticeship programs are a proven method of training a skilled workforce in construction; and (3) Requiring the use of apprentices on the construction of public works will ensure the availability of a skilled workforce in construction in the future for this State. <https://www.leg.state.nv.us/App/NELIS/REL/80th2019/Bill/6351/Text>

A Public Body, upon the request of a contractor or subcontractor, may submit a request for a modification or waiver of the percentage of hours of labor of one or more apprentices prior to (1) the bid advertisement; (2) the bid opening; or (3) the award of the contract if, "Good Cause" exists. The Labor Commissioner may also grant a waiver from the requirements of SB 207 after work on the public work has commenced if the public body, contractor or subcontractor submits documentation and evidence that meets the requirements to establish "Good Cause."

Public Works Project (PWP) # _____

Awarding Body Name: _____

Contact Person/Title: _____

Address: _____, NV _____

Phone: (____) _____ **Fax:** (____) _____ **E-Mail:** _____

Contractor/Subcontractor: _____ **License Number:** _____

Contact Person/Title: _____

Address: _____, _____

Phone: (____) _____ **Fax:** (____) _____ **E-Mail:** _____

Please check the box for the reason for a Waiver Request and provide/submit supporting documentation/evidence:

Yes No

There are no Apprentices available from an Apprenticeship Program Registered by the Nevada State Apprenticeship Council within the jurisdiction where the public work is to be completed.

Yes No

The contractor or subcontractor is required to perform uniquely complex or hazardous tasks on the public work that require the skill and expertise of a greater percentage Apprentice or Journeyworkers.

Yes No

The contractor or subcontractor has requested Apprentices from a Registered Apprenticeship Program and the request has been denied or the request has not been approved within 5 business days.

Please attach additional documentation/evidence supporting the Waiver Request or describe why an Apprentice is not available or cannot be provided:

Contractor/Subcontractor Name Date Waiver Request Submitted to Awarding Body *Signature

Awarding Body Printed Name/Title *Signature Date

***By signing this form, you certify that the information you have provided is true and correct to the best of your knowledge.**

For Office of the Labor Commissioner's Use Only:

Waiver Request Approved: Waiver Request Denied:

Notes: _____

Printed Name/Title Signature Date

Date Received: _____ **Date Returned:** _____

Special Conditions and Forms Specific to Federal Requirements (if applicable)

The City of Sparks has recognized and adopts the “Procurement Standards” generally referred to as “Uniform Guidance” detailed in 2 CFR Part 200 (Sub 317 through 322) as detailed in the following pages. These sections generally apply to all procurements using Federal funds. Additionally, subsequent language and forms are specific to the requirements detailed by the federal department who administers the grant funding this project.

In instances where these Special Conditions conflict with the General Conditions, the Special Conditions will prevail with respect to that instance or item(s).



FEDERAL FUNDING REQUIREMENTS

The City intends to fund all, or part of the expenditures made under this solicitation and/or resulting contract with federal funds. Therefore, the Offeror (Vendor/Contractor/Consultant) awarded a contract will be subject to compliance with the provisions of 2 CFR 200 UNIFORM ADMINISTRATIVE REQUIREMENTS, COST PRINCIPLES, AND AUDIT REQUIREMENTS FOR FEDERAL AWARDS (aka “Uniform Guidance”), including but not limited to:

1. **Davis-Bacon Act.** If applicable, offeror agrees to comply with all applicable provisions of 40 USC § 3141 – 3148.
2. **Contract Work Hours and Selection Standards.** Offeror agrees to comply with all applicable provisions of 40 USC § 3701 – 3708 to the extent this agreement indicates any employment of mechanics or laborers.
3. **Rights to Invention Made Under Contract or Agreement.** Offeror agrees to comply with all applicable provisions of 37 CFR Part 401.
4. **Clean Air Act, Federal Water Pollution Control Act, and Energy Policy Conservation Act.** Offeror agrees to comply with all applicable provisions of the Clean Air Act under 42 USC § 7401 – 7671, the Energy Federal Water Pollution Control Act 33 USC § 1251 – 1387, and the Energy Policy Conservation Act under 42 USC § 6201.
5. **Debarment and Suspension (Executive Orders 12549 and 12689).** A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), “Debarment and Suspension.” SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.
6. **Procurement of Recovered Materials.** Per 2 CFR §200.323, the awarded contractor must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at [40 CFR part 247](#) that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.
7. **Restrictions on Lobbying.** Offeror is prohibited from using monies for lobbying purposes. The Offeror shall certify to the best of their knowledge that:
 1. No federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an officer or employee of a Member of Congress in connection with the



awarding of any federal contract, the making of any federal loan, the entering into of any cooperative Contract, and the extension, continuation, renewal, amendment, or modification or any federal contract, grant, loan, or cooperative contract; and

2. If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this federal contract, grant, loan, and or cooperative contract, the undersigned shall complete and submit Standard Form – LLL, “Disclosure Form to Report Lobbying”, in accordance with the instructions.
3. The Offeror shall require that the language of this certification be included in the award documents for all sub-awards at all tiers and that all sub-recipients shall certify accordingly.

8. COPELAND ACT (Anti-Kickback Act)

The Copeland Act makes it a criminal offense for any person to induce, by any manner whatsoever, any person employed in the construction, prosecution, completion, or repair of any public building, public work, or building or work financed in whole or in part by loans or grants from the United States, to give up any part of the compensation to which he is entitled under his contract of employment. Incorporated herein and pursuant to 29 CFR 3, the Copeland Act applies to both contractors and subcontractors and prescribes “anti-kickback” regulations under section 2 of the Act of June 13, 1934, as amended (40 USC, Chapter 3, Section 276c and 18 USC, Part 1, Chapter 41, Section 874; and 29 CFR Part 3), popularly known as the Copeland Act. The part is intended to aid in the enforcement of the minimum wage provisions of the Davis-Bacon Act and the various statutes dealing with federally assisted construction that contain similar minimum wage provisions, including those provisions which are not subject to Reorganization Plan No. 14 (e.g., the College Housing Act of 1950, the Federal Water Pollution Control Act, and the Housing Act of 1959), and in the enforcement of the overtime provisions of the Contract Work Hours Standards Act whenever they are applicable to construction work.

- 9. Drug-Free Workplace.** Offeror shall provide a drug free workplace in compliance with the Drug Free Workplace Act of 1988.

10. Civil Rights Compliance.

1. Compliance with Regulations: Offeror will comply with the Acts and the Regulations relative to Nondiscrimination in Federally assisted programs.
2. Nondiscrimination: Offeror, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, sex, or national origin in the selection and retention of subcontractors, including procurement of materials and leases of equipment. Offeror will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 45 CFR Part 21.



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3. **Solicitations for Subcontracts, Including Procurement of Materials and Equipment:** In all solicitations either by competitive bidding or negotiation made by Offeror for work to be performed under a subcontract, including procurement of materials or leases of equipment, each potential subcontractor or supplier will be notified by Offeror of obligations under this contract and the Acts and Regulations relative to Nondiscrimination on the grounds of race, color, sex, or national origin.
 4. **Information and Reports:** Offeror will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto, and will permit access to its books, records, accounts, other sources of information, and facilities as may be determined by to be pertinent to ascertain compliance with such Acts, Regulations or directives. Where any information required of Offeror is in the exclusive possession of another who fails or refuses to furnish this information, Offeror will so certify to and will set forth what efforts it has made to obtain the information.
 5. **Sanctions for Noncompliance:** In the event of Offeror's noncompliance with the Nondiscrimination provisions of this Agreement, the City will impose such sanctions as it may determine to be appropriate, including, but not limited to: withholding of payments to the Offeror under this Agreement until the Offeror compiles and/or cancelling, terminating or suspension of this Agreement, in whole or in part.
 6. **Incorporation of Provisions:** Offeror will include the provisions of the paragraphs listed above, in this section 9.13, in every subcontract, including procurement of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. Offeror will take such action with respect to any subcontract or procurement as the City, the State, or the Federal agencies may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if Offeror becomes involved in, or is threatened with, litigation with a subcontractor or supplier because of such direction, Offeror may request the State to enter such litigation to protect the interests of the State. In addition, Offeror may request the United States to enter into such litigation to protect the interests of the United States.
 11. **Disadvantaged Business Enterprise Program Requirements.** Offeror shall not discriminate based on race, color, national origin, or sex in the award and performance of any federally assisted contract or in the administration of its DBE program or the requirements of 49 CFR Part 26. Offeror shall take all necessary and reasonable steps under 49 CFR Part 26 to ensure non-discrimination in award and administration of DOT-assisted contracts. Each sub-award or sub-contract must include the following assurance: *The Offeror, sub-recipient, or sub-contractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Agreement. The Offeror shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of federally assisted contracts. Failure by the Offeror to carry out these requirements is a material breach of this agreement, which may result in the termination of this agreement or such other remedy as the recipient deems appropriate.*



12. **Pertinent Non-Discrimination Authorities.** During the performance of the awarded contract, Offeror, for itself, its assignees, and successors in interest agree to comply with the following nondiscrimination statutes and authorities; including but not limited to:

1. Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination based on race, color, national origin); and 49 CFR Part 21.
1. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects).
2. Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), as amended, (prohibits discrimination on the basis of sex).
3. Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.) as amended, (prohibits discrimination based on disability); and 49 CFR Part 27.
4. The Age Discrimination Act of 1975, as amended, (49 U.S.C. § 6101 et seq.), (prohibits discrimination based on age).
5. Airport and Airway Improvement Act of 1982, (49 U.S.C. Chapter 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex).
6. The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all the programs or activities of the Federal-aid recipients, subrecipients and Offerors, whether such programs or activities are Federally funded or not).
7. Titles II and III of the Americans with Disabilities Act, which prohibits discrimination based on disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38.
8. The Federal Aviation Administration’s Nondiscrimination statute (49 U.S.C. § 47123) (prohibits discrimination based on race, color, national origin, and sex).
9. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations.
10. Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, the parties must take reasonable steps to ensure that LEP persons have meaningful access to the programs (70 Fed. Reg. at 74087 to 74100).
11. Title IX of the Education Amendments of 1972, as amended, which prohibits the parties from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq.).

13. **Contracting With Small and Minority Businesses, Women's Business Enterprises, and Labor Surplus Area Firms.** Per 2 CFR 200.321, the awarded contractor must take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible. If subcontracts are to be let, the awarded prime



contractor is required to take the affirmative steps listed in this section. Affirmative steps must include:

- i. Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
- ii. Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
- iii. Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
- iv. Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises; and
- v. Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.

14. Domestic Preferences for Procurements. Per 2 CFR 200.322, as appropriate and to the extent consistent with law, the City, to the greatest extent practicable under a Federally funded award, provides a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). The requirement of this section includes all subawards including all contracts and purchase orders for work or products under this award. For purposes of this section:

1. "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.
2. "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

15. Contract Cost and Price. Per 2 CFR 200.324:

If the cost of the submittal is in excess of \$250,000.00, the City must negotiate profit as a separate element of the submittal's price. To establish a fair and reasonable profit, the City's consideration will be given to the complexity of the work to be performed, the risk borne by the contractor, the contractor's investment, the amount of subcontracting, the quality of its record of past performance, and industry profit rates in the surrounding geographical area for similar work. The cost plus a percentage of cost and percentage of construction cost methods of contracting must not be used.

U.S. Department of Labor
Wage and Hour Division

PAYROLL
(For Contractor's Optional Use; See Instructions at www.dol.gov/whd/forms/wh347instr.htm)



Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.

Rev. Dec. 2008

NAME OF CONTRACTOR OR SUBCONTRACTOR ADDRESS
 PAYROLL NO. FOR WEEK ENDING PROJECT AND LOCATION PROJECT OR CONTRACT NO.
 OMB No.: 1235-0008
 Expires: 01/31/2015

(1) NAME AND INDIVIDUAL IDENTIFYING NUMBER (e.g., LAST FOUR DIGITS OF SOCIAL SECURITY NUMBER) OF WORKER	(2) NO. OF WITHHOLDING EXEMPTIONS	(3) WORK CLASSIFICATION	OT. OR ST.	(4) DAY AND DATE							(5) TOTAL HOURS	(6) RATE OF PAY	(7) GROSS AMOUNT EARNED	(8) DEDUCTIONS				(9) NET WAGES PAID FOR WEEK		
															FICA	WITH- HOLDING TAX	OTHER		TOTAL DEDUCTIONS	

While completion of Form WH-347 is optional, it is mandatory for covered contractors and subcontractors performing work on Federally financed or assisted construction contracts to respond to the information collection contained in 29 C.F.R. §§ 3.3, 5.5(a). The Copeland Act (40 U.S.C. § 3145) contractors and subcontractors performing work on Federally financed or assisted construction contracts to "furnish weekly a statement with respect to the wages paid each employee during the preceding week." U.S. Department of Labor (DOL) regulations at 29 C.F.R. § 5.5(a)(3)(ii) require contractors to submit weekly a copy of all payrolls to the Federal agency contracting for or financing the construction project, accompanied by a signed "Statement of Compliance" indicating that the payrolls are correct and complete and that each laborer or mechanic has been paid not less than the proper Davis-Bacon prevailing wage rate for the work performed. DOL and federal contracting agencies receiving this information review the information to determine that employees have received legally required wages and fringe benefits.

Public Burden Statement

We estimate that it will take an average of 55 minutes to complete this collection, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. If you have any comments regarding these estimates or any other aspect of this collection, including suggestions for reducing this burden, send them to the Administrator, Wage and Hour Division, U.S. Department of Labor, Room S3502, 200 Constitution Avenue, N.W., Washington, D.C. 20210

Date _____

I, _____ (Name of Signatory Party) _____ (Title)
do hereby state:

(1) That I pay or supervise the payment of the persons employed by

_____ on the _____
(Contractor or Subcontractor)
_____ that during the payroll period commencing on the
(Building or Work)
_____ day of _____, and ending the _____ day of _____,
all persons employed on said project have been paid the full weekly wages earned, that no rebates have
been or will be made either directly or indirectly to or on behalf of said
_____ from the full
(Contractor or Subcontractor)

weekly wages earned by any person and that no deductions have been made either directly or indirectly
from the full wages earned by any person, other than permissible deductions as defined in Regulations, Part
3 (29 C.F.R. Subtitle A) issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948,
63 Stat. 108, 72 Stat. 967, 76 Stat. 357, 40 U.S.C. § 3145), and described below:

(2) That any payrolls otherwise under this contract required to be submitted for the above period are
correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the
applicable wage rates contained in any wage determination incorporated into the contract; that the
classifications set forth therein for each laborer or mechanic conform with the work he performed;

(3) That any apprentices employed in the above period are duly registered in a bona fide
apprenticeship program registered with the State apprenticeship agency recognized by the Bureau of
Apprenticeship and Training, United States Department of Labor, or if no such recognized agency exists in a
State, are registered with the Bureau of Apprenticeship and Training, United States Department of Labor.

(4) That:
(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

— in addition to the basic hourly wage rates paid to each laborer or mechanic listed in
the above referenced payroll, payments of fringe benefits as listed in the contract
have been or will be made to appropriate programs for the benefit of such
employees, except as noted in section 4(c) below.

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

— Each laborer or mechanic listed in the above referenced payroll has been paid
as indicated on the payroll, an amount not less than the sum of the applicable
basic hourly wage rate plus the amount of the required fringe benefits as listed
in the contract, except as noted in section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION
REMARKS:	

NAME AND TITLE	SIGNATURE
THE WILLFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1001 OF TITLE 18 AND SECTION 231 OF TITLE 31 OF THE UNITED STATES CODE.	

About The Enclosed
CERTIFICATION AND DISCLOSURE REGARDING
PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS

In accordance with Public Law 101-121 (*The Anti-Lobbying Act*) which became effective on *December 23, 1989*; any Contractor who requests or receives a Federal contract exceeding \$100,000 shall submit with his/her offer, the required certification and disclosures regarding payments to influence certain transactions with the offer. Therefore, we are requesting that you submit the required certification and disclosures, in order that they may be filed with your application for consideration for participation in the Federal Employees Health Benefits (**FEHB**) Program, beginning January 1 next year.

The Act was incorporated into the Federal Acquisition Regulation (**FAR**) on September 6, 1990, and affects all Federal contracts and subcontracts exceeding \$100,000 and paid for by appropriated funds. The FAR clauses applicable to the FEHB contracts are: Sections 52.203-11 and 52.203-12.

The Act has two major provisions which may affect contractors. One, the Anti-Lobbying Act prohibits Federal contractors from using appropriated funds to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, or an employee or officer of the Congress. Two, the Act requires disclosure of any lobbying activities paid for by any other funds (*including fees or profit*). This disclosure must be made to the responsible FEHB Program Contracting Officer on OMB Form LLL (*Disclosure of Lobbying Activities*).

Disclosure forms must be updated on a quarterly basis if a material event occurs that would affect the accuracy of the form on file. Material events include:

1. A cumulative increase of \$25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or
2. A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or
3. A change in the officer(s), employee(s), or member(s) contacted to influence or attempt to influence a covered Federal action.

Any person who makes an expenditure prohibited under this provision or fails to file or amend the disclosure form required by this law, shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Enclosed are 1) A certification form to be signed by an authorized Contracting Official of the Plan, and 2) OMB Standard Form LLL (*NOTE: copy as necessary*). Please include a completed and signed certification form, and Form LLL, if applicable, to the responsible FEHB Contracting Officer in your Plan's application for participation in the FEHB Program.

CERTIFICATION AND DISCLOSURE REGARDING
PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS

- (A) The definitions and prohibitions contained in the clause at FAR Section 52.203-12, Limitation on Payments to Influence Certain Federal Transactions are hereby incorporated by reference in paragraph (B) of this certification.
- (B) The applicant plan, signing its application, hereby certifies to the best of his/her knowledge and belief that on or after December 23, 1989:
1. No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with the awarding of any Federal Contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan, or cooperative agreement;
 2. If any funds other than Federal appropriated funds (including profits or fees received under a covered Federal Transaction), have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with this application, the applicant plan shall complete and submit, with its application, OMB Standard Form LLL to the responsible Contracting Officer; and
 3. He/She will include the language of this certification in all subcontract award at any tier and require that all recipients of subcontract awards in excess of \$100,000 shall certify and disclose accordingly.
- (C) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by Section 1352, Title 31, United States Code. Any person who makes an expenditure prohibited under this provision, or who fails to file or amend the disclosure form to be filed or amended by this provision, shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000, for each such failure.

Signature of Certifier

Date

Typed Name of Certifier

Title of Certifier

Disclosure of Lobbying Activities

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure)

<p>1. Type of Federal Action:</p> <p>a. contract _____ b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance</p>	<p>2. Status of Federal Action:</p> <p>a. bid/offer/application _____ b. initial award c. post-award</p>	<p>3. Report Type:</p> <p>a. initial filing _____ b. material change</p> <p>For material change only: Year _____ quarter _____ Date of last report _____</p>
<p>4. Name and Address of Reporting Entity:</p> <p>_____ Prime _____ Subawardee Tier _____, if Known:</p> <p style="text-align: center;">Congressional District, if known:</p>		<p>5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime:</p> <p style="text-align: center;">Congressional District, if known:</p>
<p>6. Federal Department/Agency:</p>	<p>7. Federal Program Name/Description:</p> <p style="text-align: right;">CFDA Number, if applicable: _____</p>	
<p>8. Federal Action Number, if known:</p>	<p>9. Award Amount, if known:</p> <p style="text-align: center;">\$ _____</p>	
<p>10. a. Name and Address of Lobbying Registrant (if individual, last name, first name, MI):</p>	<p>b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI):</p>	
<p>11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.</p>		
<p>Federal Use Only</p>		<p>Signature: _____</p> <p>Print Name: _____</p> <p>Title: _____</p> <p>Telephone No.: _____ Date: _____</p> <p style="text-align: center;">Authorized for Local Reproduction Standard Form - LLL (Rev. 7-97)</p>

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitations for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Included prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.

(b) Enter the full names of the individual(s) performing services, and include full address if different from 10(a). Enter Last Name, First Name, and Middle Initial (MI).
11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503

AFFIDAVIT REQUIRED UNDER SECTION 112(c)
of Title 23 United States Code, Act of August 27, 1958
and
Part 29 of Title 49, Code of Federal Regulations,
November 17, 1987.

STATE OF _____

SS

COUNTY OF _____

I, _____ (Name of party signing
this affidavit and the Proposal Form) _____ (title)

being duly sworn do depose and say: That _____

(name of person, firm, association, or corporation) has not, either directly or indirectly, entered into agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this contract; and further that, except as noted below to the best of knowledge, the above named and its principals:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and
- (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

(Insert Exceptions, attach additional sheets)

The above exceptions will not necessarily result in denial of award, but will be considered in determining bidder responsibility and whether or not the Department will enter into contract with the party. For any exception noted, indicate on an attached sheet to whom it applies, initiating agency, and dates of action. Providing false information may result in criminal prosecution or administrative sanctions. The failure to furnish this affidavit and required exceptions if any shall disqualify the party.

Signature

Title

Sworn to before me this _____ day of _____, 20 _____

Signature

(SEAL)

Notary Public, Judge or other Official

**SPECIAL TERMS AND CONDITIONS SPECIFIC TO PROJECTS FUNDED IN
WHOLE OR IN PART BY THE US DEPARTMENT OF HOUSING AND URBAN
DEVELOPMENT COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG), CFDA
NO. 14.218**

EXHIBIT B

DAVIS BACON WAGE DETERMINATION

"General Decision Number: NV20220013 10/21/2022

Superseded General Decision Number: NV20210013

State: Nevada

Construction Type: Highway
 HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Counties: Storey and Washoe Counties in Nevada.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

<p>If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:</p>	<ul style="list-style-type: none"> . Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2022.
<p>If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:</p>	<ul style="list-style-type: none"> . Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Modification Number	Publication Date
0	01/07/2022
1	02/18/2022
2	02/25/2022
3	03/11/2022
4	06/10/2022
5	07/08/2022
6	08/12/2022
7	08/19/2022
8	08/26/2022
9	10/21/2022

CARP0971-001 07/01/2022

	Rates	Fringes
CARPENTER (Form Work Only).....	\$ 34.13	19.53

ELEC0401-001 01/01/2022

	Rates	Fringes
ELECTRICIAN.....	\$ 42.50	20.95

ENGI0003-033 07/01/2018

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
Backhoe Loader Combo.....	\$ 37.83	24.80
Backhoe/Excavator/Trackhoe..	\$ 38.37	24.80
Bobcat/Skid Steer/Skid Loader.....	\$ 35.46	24.80
Grade Setter.....	\$ 38.18	24.80
Grader/Blade.....	\$ 38.37	24.80
Loader.....	\$ 37.51	24.80
Paver (Asphalt, Aggregate and Concrete).....	\$ 36.92	24.80
Roller (Asphalt).....	\$ 36.92	24.80
Roller (Except Asphalt).....	\$ 36.67	24.80
Screed.....	\$ 36.92	24.80

ENGI0012-013 10/01/2018

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
(1) Forklift.....	\$ 44.99	24.70
(6) Drill.....	\$ 47.94	24.70
(8 A) Grade Checker; Mechanic; Scraper;.....	\$ 48.05	24.70
(8 B) Oiler.....	\$ 48.67	24.70

IRON0118-002 10/01/2019

	Rates	Fringes
IRONWORKER, REINFORCING.....	\$ 40.14	33.01

LAB00169-008 10/01/2021

Rates Fringes

LABORER

(1) Common or General; Cones/ Barricades/ Barrels- Setter/Mover/Sweeper.....	\$ 28.55	14.77
(1A) Flagger.....	\$ 25.68	14.77
(3) Asphalt Shoveler, Spreader and Distributor; Concrete Saw; Mason Tender- Cement/Concrete.....	\$ 28.80	14.77
(4) Asphalt Raker; Pipelayer.....	\$ 29.05	14.77
(5A) Highway/Parking Lot Striping.....	\$ 31.30	14.77

LAB00872-001 07/01/2022

Rates Fringes

LABORER

(3) Jackhammer.....	\$ 32.79	30.36
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* PAIN0159-008 07/01/2022

Rates Fringes

PAINTER: Brush and Roller Only...	\$ 45.39	21.28
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PLAS0797-001 07/01/2022

Rates Fringes

CEMENT MASON/CONCRETE FINISHER...	\$ 45.87	17.61
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TEAM0631-003 07/01/2018

Rates Fringes

TRUCK DRIVER: Dump Truck (All Types).....	\$ 29.45	26.72
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* UAVG-NV-0001 10/01/2018

Rates Fringes

OPERATOR: Crane.....	\$ 52.37	24.70
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SUNV2017-012 10/01/2018

Rates Fringes

IRONWORKER, STRUCTURAL.....	\$ 34.75	29.20
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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any

solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates

the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor

200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISIO"

NEVADA PREVAILING WAGE RATES

STATE OF NEVADA

STEVE SISOLAK
GOVERNOR

TERRY REYNOLDS
DIRECTOR

BRETT HARRIS
LABOR COMMISSIONER



OFFICE OF THE LABOR COMMISSIONER
3300 WEST SAHARA AVENUE, SUITE 225
LAS VEGAS, NEVADA 89102
PHONE: (702) 486-2650
FAX (702) 486-2660

OFFICE OF THE LABOR COMMISSIONER
1818 COLLEGE PARKWAY, SUITE 102
CARSON CITY, NV 89706
PHONE: (775) 684-1890
FAX (775) 687-6409

2023 PREVAILING WAGE RATES WASHOE COUNTY

DATE OF DETERMINATION: October 1, 2022

**APPLICABLE FOR PUBLIC WORKS PROJECTS OVER \$100,000 BID/AWARDED
OCTOBER 1, 2022 THROUGH SEPTEMBER 30, 2023**

Pursuant to Nevada Revised Statutes (NRS) section 338.030(9)(a), "If the contract for a public work: (a) Is to be awarded pursuant to a competitive bidding process, the prevailing wages in effect at the time of the opening of the bids for a contract for a public work must be paid until the completion or termination of the contract or for the 36 months immediately following the date on which the bids were opened, whichever is earlier." For contracts not awarded pursuant to competitive bidding, please see NRS section 338.030(9)(b). However, if a project exceeds 36 months new wage rates may apply pursuant to NRS section 338.030(9)(10). Prevailing Wage Rates may be adjusted based on Collective Bargaining Agreements (CBA's) and adjustments to those agreements. (See NRS 338.030)

PREVAILING WAGE DETERMINATIONS - NRS 338.030 subsection 7, the wages so determined must be:

- (a) Issued by the Labor Commissioner on October 1 of the odd-numbered year in which the survey was conducted and, except as otherwise provided in subsection 8, remain effective for 2 years after that date; and
- (b) Made available by the Labor Commissioner to any public body which awards a contract for any public work.

Senate Bill 243 passed during the 80th Nevada Legislative Session (2019) and set forth in NRS section 338.025, now requires the Labor Commissioner to calculate the Prevailing Wage Rates by region. NRS section 338.025 Prevailing wage regions. For the purpose of determining the prevailing rate of wages pursuant to NRS section 338.030, four prevailing wage regions are hereby established in this State as follows:

1. The Washoe Prevailing Wage Region consisting of Washoe County;
2. The Northern Rural Prevailing Wage Region consisting of Carson City and the counties of Churchill, Douglas, Elko, Eureka, Humboldt, Lander, Lyon, Mineral, Storey, Pershing and White Pine;
3. The Clark Prevailing Wage Region consisting of Clark County; and
4. The Southern Rural Prevailing Wage Region consisting of the counties of Esmeralda, Lincoln and Nye.

OBJECTIONS TO PREVAILING WAGE DETERMINATIONS – NRS section 338.030 subsection 2. Objections to the Prevailing Wage Determinations must be submitted within 30 days after the Prevailing Wage Determinations are issued.

Pursuant to NRS section 338.030 subsection 8, the Labor Commissioner will review the prevailing wage rates in each even-numbered year to determine if adjustments should be made.

As Amendments/Revisions are made to the wage rates, they will be posted on the website for each respective Region. Please review regularly for any Amendments/Revisions that are posted or contact our offices directly for further assistance.

Air Balance Technician	4
Alarm Installer	5
Boilermaker	6
Bricklayer	7
Carpenter	8
Cement Mason	9
Electrician – Communication Technician	10
Electrician - Lineman	12
Electrician – Neon Sign	14
Electrician - Wireman	15
Elevator Constructor	16
Fence Erector	18
Flagperson	19
Floorcoverer	20
Glazier	21
Highway Striper	22
Hod Carrier-Brick Mason	23
Hod Carrier – Plasterer Tender	24
Ironworker	26
Laborer	29
Lubrication And Service Engineer (Mobile And Grease Rack)	46
Mechanical Insulator	31
Millwright	32
Operating Engineer	34
Operating Engineer – Steel Fabricator & Erector	34
Operating Engineer – Piledriver	35
Painter	37
Piledriver (Non-Equipment)	39
Plasterer	40
Plumber/Pipefitter	41
Refrigeration	42
Roofer	43
Sheet Metal Worker	45
Soils and Material Tester	46
Sprinkler Fitter	46
Surveyor	46
Taper	47
Tile/Terrazzo Worker/Marble Mason Finisher	49
Tile/Terrazzo Worker/Marble Mason	49
Traffic Barrier Erector	51
Truck Driver	52
Well Driller	54
Group Classifications	
Labor Group Classifications	55
Operating Engineers	59

NRS section 338.010 subsection (25) “Wages” means:

- a) The basic hourly rate of pay; and
- b) The amount of pension, health and welfare, vacation and holiday pay, the cost of apprenticeship training or other similar programs or other bona fide fringe benefits which are a benefit to the worker.

NRS section 338.035 Bona Fide Fringe Benefits - Discharge of part of obligation of contractor or subcontractor engaged on public work to pay wages by making certain contributions in name of workman. “Bona fide fringe benefit” means a benefit in the form of a contribution that is made not less frequently than monthly to an independent third party pursuant to a fund, plan or program: (a) Which is established for the sole and exclusive benefit of a worker and his or her family and dependents; and (b) For which none of the assets will revert to, or otherwise be credited to, any contributing employer or sponsor of the fund, plan or program. The term includes, without limitation, benefits for a worker that are determined pursuant to a collective bargaining agreement and included in the determination of the prevailing wage by the Labor Commissioner pursuant to NRS section 338.030.

Please see NRS sections 338.010, 338.020, and 338.035 and Nevada Administrative Code (NAC) sections 338.0097 and 338.092 through 338.100 for further details on “Bona fide fringe benefits” and reporting requirements and exceptions.

Job Descriptions for Recognized Classes of Workers

Regarding job descriptions for public works projects, please take notice of the following:

1. The job description links have been redacted to include ONLY the scope of work for the craft.
2. Pursuant to NAC section 338.0095(1)(a) - A worker employed on a public work must be paid the applicable prevailing rate of wage for the type of work that the worker actually performs on the public work and in accordance with the recognized class of the worker.
3. The work description for a particular class is not intended to be jurisdictional in scope.
4. Any person who believes that a type of work is not classified, or who otherwise needs clarification pertaining to the recognized classes or job descriptions, shall contact the Labor Commissioner in writing for a determination of the applicable classification and pay rate for a particular type of work.
5. The job descriptions set forth or referenced herein supersede any, and all descriptions previously agreed upon by the Labor Commissioner in any settlement agreements or stipulations arising out of contested matters.
6. The following specific provisions, where applicable, shall prevail over any general provisions of the job descriptions:
 - Amendments to the prevailing wage determinations.
 - Group Classifications and/or descriptions recognized by the Labor Commissioner and included with wage determinations for a particular type of work in a particular county.

Zone Rates

The zone rate has been added to each applicable craft.

Premium Pay Premium pay for hours worked in excess of a shift of 8 hours or 12 hours, or such other time increment set forth in the Collective Bargaining Agreement or on a weekend or holiday.

Craft: AIR BALANCE TECHNICIAN (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Air Balance Technician Journeyman.....	71.50
Air Balance Technician-Foreman.....	75.71
Air Balance Technician-General Foreman.....	79.93

ADD ZONE RATE

In addition to AIR BALANCE rates add the applicable amounts per hour, calculated based on a road from the courthouse in Reno, Nevada:

Zone 1	0 to 75 miles	\$0.00
Zone 2	75 to 100 miles	\$5.00
Zone 3	Over 100 miles	\$10.00 the employee shall be provided reasonable lodging and meal expenses.

ADD PREMIUM PAY

All hourly rates are subject to Over Time (One and one half 1 ½) of the Regular rate:

1. For all hours worked over Eight (8) Hours in one day or shift.
2. For the first Eight (8) Hours work on Saturday.

All hourly rates are subject to Double Time of the Regular Rate:

1. For all hours worked over Ten (10) Hours in one day or shift.
2. For all hours worked over Eight (8) Hours on Saturday.
3. For all hours worked on Sunday, New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Nevada Day, Thanksgiving Day, Day after Thanksgiving, Day before Christmas, and Christmas Day.

RECOGNIZED HOLIDAYS

New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Nevada Day, Thanksgiving Day, Day after Thanksgiving, Day before Christmas, and Christmas Day

JOB DESCRIPTION: Excerpt from Sheet Metal Local 26 Collective Bargaining Agreement

(a) manufacture, fabrication, assembling, handling, erection, installation, dismantling, conditioning, adjustment, alteration, repairing and servicing of all ferrous or nonferrous metal work and all other materials used in lieu thereof and of all HVAC systems, air veyor systems, exhaust systems, and air-handling systems regardless of material used including the setting of all equipment and all reinforcements in connection therewith; (b) all lagging over insulation and all duct lining; (c) testing and balancing of all air-handling equipment and duct work; (d) the preparation of all shop and field sketches whether manually drawn or computer assisted used in fabrication and erection, including those taken from original architectural and engineering drawings or sketches; (e) metal roofing; and (f) all other work included in the jurisdictional claims of International Association of Sheet Metal, Air, Rail and Transportation Workers.

Craft: ALARM INSTALLER (Non-Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Alarm Installer.....33.79

JOB DESCRIPTION:

Includes but is not limited to:

1. Installing or testing electrical protective signaling systems used to provide notification of fire, burglary or other irregularities on the premises of the subscriber of the system;
2. Installing of wiring and signaling units;
3. Repairing electrical protective signaling systems
4. Starting up, programming and documenting systems;

Craft: BOILERMAKER (Union Rate)
Prevailing wage rates include the base rate as well as all applicable fringes

Boilermaker.....	65.94
Boilermaker Foreman.....	65.94
Boilermaker General.....	65.94

ADD PREMIUM PAY

Premium pay for hours worked in excess of a shift of 8 hours or 12 hours or such other time increment set forth in the Collective Bargaining Agreement or on a weekend or holiday.

JOB DESCRIPTION:

Includes but is not limited to:

1. Constructing, assembling, maintaining and repairing stationary steam boilers and boiler house auxiliaries;
2. Aligning structures or plate sections to assemble boiler frame tanks or vats;
3. Assisting in the testing of assembled vessels, directing cleaning of boilers and boiler furnaces;
4. Inspecting and repairing boiler fittings, including, without limitation, safety valves, regulators, automatic-control mechanisms, water columns and auxiliary machines.

Craft: BRICKLAYER (Union Rate)
Prevailing wage rates include the base rate as well as all applicable fringes

Bricklayer Journeyman.....48.71
Bricklayer Foreman.....49.96

Add Zone pay

Zone	75 miles and Over	\$8.13
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ADD PREMIUM PAY

One and one half (1 ½) the regular straight time hourly rate shall be paid:

1. For all hours worked over eight (8) hours in one day or shift.
2. For any hours worked on Saturday from midnight to midnight.

Double the regular straight time hourly rate shall be paid for all time:

1. For all hours worked over twelve (12) hours in one day or shift.
2. For any hours worked on Sunday from midnight to midnight.
3. For any hours worked on holidays from midnight to midnight.

RECOGNIZED HOLIDAYS

If any of these holidays fall on Sunday, the Monday following shall be considered a Holiday.
New Year's Day, President's Day, Memorial Day, Fourth of July, Labor Day, Admission Day,
Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

JOB DESCRIPTION: Excerpt from Agreement between No, NV Masonry Contractors and LIUNA
Local 169

This shall apply to and cover the work of Brick/Block Masonry, Stone Masonry, Artificial Masonry
Marble Masonry.

Craft: CARPENTER (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Carpenter Journeyman.....	54.91
Carpenter Foreman.....	58.32
Carpenter General Foreman.....	62.07

ADD ZONE RATE

(Building and Heavy Highway and Dam Construction)

In addition to CARPENTER rates add the applicable amounts per hour, calculated from the Washoe County Courthouse:

Zone 1	0 to 75 miles	\$0.00 (Road miles from the Washoe County Courthouse)
Zone 2	75 to 150 miles	\$4.00
Zone 3	150 to 300 miles	\$5.00
Zone 4	Over 300 miles	\$6.00

ADD PREMIUM PAY

Any work performed over eight (8) hours per day and on Saturdays shall be compensated at time and one-half (1-1/2x) the appropriate hourly rate. All work performed on Sundays, holidays and over twelve (12) hours in one (1) day shall be compensated at two times (2x) the appropriate hourly rate. In the event a day's work is lost because of severe weather conditions or major mechanical breakdown, work may be performed on a voluntary basis on a Saturday at the straight time hourly rate for eight (8) hours provided the straight time hours worked in one (1) week do not exceed forty (40) hours.

RECOGNIZED HOLIDAYS

New Year's Day, Memorial Day, 4th of July, Labor Day, Admission's Day, Thanksgiving Day, the Friday after Thanksgiving, Christmas Day.

JOB DESCRIPTION Excerpt from Southwest Regional Council of Carpenters and Affiliated Local Unions Master Labor Agreement

(1) All building construction, including but not limited to the construction, erection, alteration, repair, modification, demolition, addition, or improvement in whole or in part of any building structure. All rigging of Carpenters', and Piledrivers' materials.

(2) All heavy, highway and engineering construction, including but not limited to the construction, improvement, modification and demolition of all or any part of the streets, highways, bridges, viaducts, railroads, tunnels, airports, water supply, irrigation, flood control and draining systems, sewers and sanitation projects, dams, power houses, refineries, aqueducts, canals, river and harbor projects, wharves, docks, breakwaters, jetties, quarrying of breakwaters or rip rap stone or operations incidental to such heavy construction work and whether such work is above or below the water line level.

(3) The character of such work covered by this Agreement shall include but not be limited to all carpenter, concrete form work, shoring, drywall, metal stud, drywall finishing, plaster, scaffold, modular furniture, trade show work, insulation, acoustical, and lathing work on such construction

(4) All interior and/or exterior wall finish work, including EIFS and other wet wall finish work.

Craft: CEMENT MASON (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Cement Mason - Journeyman.....	48.92
Cement Mason - Foreman.....	52.55

ADD ZONE RATE

In addition to CEMENT MASON rates add the applicable amounts per hour, calculated from the Reno Post Office, 50 So. Virginia St., Reno, Nevada:

Zone 1	0 to 90 miles	\$0.00
Zone 2	over 90 miles	\$6.00

ADD PREMIUM PAY

OVERTIME – Any worked performed over eight (8) hours per day shall be compensated at time and one half the hourly rate. All work performed after twelve (12) consecutive hours shall be paid at double the hourly rate. All worked performed on Saturdays shall be compensated at time and one half the hourly rate. All Sunday and Holiday work shall be paid for at double time.

RECOGNIZED HOLIDAYS

New Year’s Day, Memorial Day, Independence Day, Labor Day, Admissions Day, Thanksgiving Day and the following Friday following Thanksgiving Day, and Christmas

JOB DESCRIPTIONS

1. All building construction, including but not limited to the construction, erection, alteration, repair, modification, demolition, addition, or improvement in whole or in part of any building structure.
2. All heavy, highway and engineering construction, including but not limited to construction, improvement, modification, demolition, of all or any part of streets and highways (including sidewalks, curbs and gutters), bridges, viaducts, rail roads, tunnels, airports, water supply, irrigation, flood control and drainage systems, sewers and sanitation projects, dams, power houses, refineries, aqueducts, canals, river and harbor projects, wharves, docks, breakwaters, jetties, quarrying of breakwater or rip-rap stone, or operation incidental to such heavy construction work.
3. The work to be performed by Cement Masons shall include but not be limited to the following, when tools of the Cement Masons trade are used or required:

Setting screeds, screed pins, curb forms and curb and gutter forms, rodding, spreading and tamping concrete, hand application of curing compounds, applying topping (wet or dry) colors or grits; using Darby and push floats, hand troweling or hand floating; marking edging, brooming or brushing, using base cove or step tools; chipping, and stoning, patching or sacking; dry packing; spreading and finishing gypsum, operating mechanical finishers (concrete) such as Clary, Jackson, Bidwell Bridge Deck Paver or similar types; grinding machines; troweling machines, floating machines powered concrete saws; finishing of epoxy and resin materials, bush hammering and exposed finishes for architectural work.

Operation of skill saw, chain saw, Laser Screed, Laser Level, Curb and Slipform machines, Epoxy Type Injection pumps, stamps or other means of texturing, any new devices, which are beneficial to the construction of or with concrete or related products.

Craft: ELECTRICIAN COMMUNICATION TECHNICIAN (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Communication Installer.....	44.79
Communication Technician.....	49.66
Senior Technician	52.91

ADD ZONE RATE

In addition to Electrician Communication Tech rates add the applicable amounts per hour, calculated from the Washoe County Courthouse:

Zone 1	0 to 70 miles	\$0.00
Zone 2	70 to 90 miles	\$8.00
Zone 3	90 miles and over	\$10.00

ADD PREMIUM PAY

One and one half (1 ½) the regular straight time hourly rate shall be paid:

1. For all hours worked over eight (8) hours in one day or shift.
2. For the first eight (8) hours worked on Saturday

Double the regular straight time hourly rate shall be paid for all time:

1. For all hours worked over eight (10) hours in one day or shift.
2. For any hours worked on Sunday
3. For any hours worked on Holidays

Shift Rates

1. Swing shift to be paid at seventeen-point three (17.3) percent the regular straight time rate for hours between 4:30 p.m. and 1:00 a.m.
2. Graveyard shift to be paid at thirty-one-point four (33.4) percent the regular straight time rate for hours between 12:30 a.m. and 9:00 a.m.
3. Shifts are established for at least five (5) consecutive days or double the regular straight time rate shall be paid.

**Note – Double the straight time rate is the max rate paid. (No pyramiding of overtime rates)

JOB DESCRIPTION:

The work covered by this Agreement shall include the installation testing, service and maintenance, of the following systems which utilize the transmission and/or transference of voice, sound, vision and digital for commercial, education, security and entertainment purposes for the following: TV monitoring and surveillance, background-foreground music, intercom and telephone interconnect, inventory control systems, microwave transmission, multi-media, multiplex, nurse call system, radio page, school intercom and sound, burglar alarms and low voltage master clock systems.

- A. SOUND AND VOICE TRANSMISSION/TRANSFERENCE SYSTEMS 1. Background-foreground music 2. Intercom and telephone interconnect systems 3. Telephone systems 4. Nurse call systems 5. Radio page systems 6. School intercom and sound systems 7. Burglar alarm systems 8. Low-voltage

master clock systems 9. Multi-media/multiplex systems 10. Sound and musical entertainment systems
11. RF Systems 12. Antennas and Wave Guide

B. FIRE ALARM SYSTEMS * 1. Installation, wire pulling and testing

C. Television and Video Systems 1. Television monitoring and surveillance systems 2. Video security systems 3. Video entertainment systems 4. Video educational systems 5. Microwave transmission systems 6. CATV and CCTV

D. Security Systems 1. Perimeter security systems 2. Vibration sensor systems 3. Card access systems 4. Access control systems 5. Sonar/Infrared monitoring equipment

E. COMMUNICATION SYSTEMS THAT TRANSMIT OR RECEIVE INFORMATION AND/OR CONTROL SYSTEMS THAT ARE INTRINSIC TO THE ABOVE LISTED SYSTEMS (IN THE SCOPE)
1. SCADA (Supervisory Control and Data Acquisition) 2. PCM (Pulse Code Modulation) 3. Inventory Control Systems 4. Digital Data Systems 5. Broadband and Baseband and Carriers 6. Point of Sale Systems 4 7. VSAT Data Systems 8. Data Communication Systems 9. RF and Remote-Control Systems 10. Fiber Optic Data Systems

Craft: ELECTRICIAN LINEMAN/GROUNDMAN/HEAVY EQUIPMENT OPERATOR
(Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Electrician-Groundman.....	56.09
Lineman-Journeyman.....	81.13
Lineman-Foreman.....	87.80
Lineman-General Foreman.....	94.54
Lineman-Equipment Man.....	67.81

ADD PREMIUM PAY

Premium pay for hours worked in excess of a shift of 8 hours or 12 hours or such other time increment set forth in the Collective Bargaining Agreement or on a weekend or holiday.

RECOGNIZED HOLIDAYS

New Year's Day, Martin Luther King Holiday, President's Day, Memorial Day, Independence Day, Labor Day, Nevada Day, Veteran's Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

JOB DESCRIPTION:

Outside, overhead and underground construction and maintenance work on electrical transmission lines, switch yards, substations and distribution systems which shall include:

1. Pole line work (whether built of wood, metal or other material): the digging and back-filling of holes for poles or anchors (by hand or mechanical equipment); the loading or unloading, handling, sorting and moving of materials; the assembly or erection of all materials including the guying, stringing of conductors and fiber optics or other work necessary on through to the ultimate completion of such pole work.

2. Steel or metal structures used for the purpose of carrying electrical wire, conductors, or equipment (this includes transmission towers, outdoor substations, switch racks, or similar electrical structures); the moving of men, tools or equipment; the loading or unloading, handling, sorting and moving of materials; the assembly and erection of all materials used on the job site, including the assembly of the grillage and foundations, on through to the ultimate completion of such structures. Work covered shall include the grounding of all such structures except the bonding of stub-angle to rebar cage; the stringing and installation of wires, cables and insulators or other electrical equipment suspended from structure; also the handling and placing of transformers or O.C.B.'s and other related electrical equipment.

The moving of men, tools or equipment; the loading or unloading, handling, sorting and moving of materials; the assembly of all electrical materials on race-ways such as ducts, shall be performed by workmen under the Agreement. This shall also include CIC (cable in conduit), CC (coillable conduit), the placing of fish wire, the pulling of cables or wires through such race-ways, installing and making up of termination and the splicing of such conductors.

Street lighting systems where such work properly comes under the outside jurisdiction shall be handled in the same manner as pole line construction.

Installing and maintaining the catenary and trolley work and bonding of rails shall be handled in the same manner as pole line, and steel construction.

In connection with all of the above items, it is understood the scope of this Agreement shall include not only new installation work but shall also govern the repair, maintenance or dismantling of such structures, lines or equipment; the handling and operating of all equipment used to transport men, tools and/or materials on the job site as well as the equipment used to move, raise or place materials used in the Outside Branch of the Electrical Industry shall be performed by workmen under this Agreement unless otherwise excluded herein.

Craft: ELECTRICIAN – NEON SIGN
(Non-Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Electrician Neon Sign Journeyman.....37.06

ELECTRICIAN-NEON SIGN, includes but is not limited to:

- 1. Installing, servicing and repairing plastic, neon and illuminated signs;
- 2. Ascending ladders or operating hydraulic or electric hoist to install, service, or examine sign to determine cause of malfunction;
- 3. Wiring, rewiring or removing defective parts and installing new parts using electrician's tools;
- 4. Removing sign or part of sign for repairs, such as structural fabrication, scroll repair, or transformer repair;

Craft: ELECTRICIAN WIREMAN (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Wireman.....	69.61
Wireman-Cable Splicer.....	75.41
Wireman Foreman.....	75.41
Wireman General Foreman.....	81.21

ADD ZONE RATE

In addition to ELECTRICIAN-Wireman, rates, add the applicable amounts per hour, calculated from Washoe County Courthouse, Reno Nevada:

Zone 1	0 to 70 miles	\$0.00
Zone 2	70 to 90 miles	\$8.00
Zone 3	90 miles and over	\$10.00

ADD PREMIUM PAY

Premium pay for hours worked in excess of a shift of 8 hours or 12 hours or such other time increment One and one half (1 ½) the regular straight time hourly rate shall be paid:

1. For all hours worked over eight (8) hours in one day or shift.
2. For the first eight (8) hours worked on Saturday

Double the regular straight time hourly rate shall be paid for all time:

3. For all hours worked over ten (10) hours in one day or shift.
4. For any hours worked on Sunday
5. For any hours worked on Holidays

Shift Rates

1. Swing shift to be paid at seventeen-point three (17.3) percent the regular straight time rate for hours between 4:30 p.m. and 1:00 a.m.
2. Graveyard shift to be paid at thirty-one-point four (31.4) percent the regular straight time rate for hours between 12:30 a.m. and 9:00 a.m.
3. Shifts are established for at least five (5) consecutive days or double the regular straight time rate shall be paid.

**Note – Double the straight time rate is the max rate paid. (No pyramiding of overtime rates)

RECOGNIZED HOLIDAYS

New Year’s Day, Memorial Day, Independence Day, Labor Day, Admission Day, Veteran’s Day, Thanksgiving Day, Friday following Thanksgiving Day, Christmas Day.

JOB DESCRIPTION: Excerpt from Agreement between NECA and Local Union 401, IBEW

All electrical construction, installation, or erection work including fabrication or prefabrication of boxes, brackets, bends and nipples and all electrical maintenance thereon including the final running tests. This shall include the installation and maintenance of temporary wiring and the installation of all electrical lighting, heat and power equipment, installation of all raceway systems, including underground conduits and all supports, underground utility conduits, photovoltaic power generation systems, wind power generation systems and geothermal power generating systems. Further all salvage of electrical work shall be included.

Craft: ELEVATOR CONSTRUCTOR (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Elevator Constructor-Journeyman Mechanic.....	117.95
Elevator Constructor-Journeyman Mechanic In Charge.....	128.06

ADD PREMIUM PAY

Work performed on Construction Work on Saturdays, Sundays and before and after 30 the regular working day on Monday to Friday, inclusive, shall be classed as overtime, and paid for at double the rate of single time.

RECOGNIZED HOLIDAYS

New Year's Day, Memorial Day, Independence Day, Labor Day, Nevada Day, Veteran's Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

JOB DESCRIPTION: Excerpt from Agreement of International Union of Elevator Constructors

The handling and unloading of all equipment coming under the jurisdiction of the Elevator Constructor, from the time such equipment arrives at or near the building site, shall be handled and unloaded by the Elevator Constructors. Mechanical equipment such as a forklift or truck mounted swing boom may be used by the Elevator Constructors. A derrick, crane or material hoist can be used under the supervision of Elevator Constructors to handle and unload the heavy material described in Par. 5(a). Where unusual conditions are expected to exist prior to delivery of equipment at or near the building site in regard to handling and unloading of equipment in the primary or secondary jurisdiction of the local union, the Company shall contact the Local's Business Representative to make appropriate arrangements for the handling and unloading of such equipment. In areas outside the jurisdiction of the local union, the Company shall contact the Regional Director.

(b) The erecting and assembling of all elevator equipment to wit: electric, hydraulic, steam, belt, dumbwaiters, residence elevators, parking garage elevators (such as Bowser, Pigeon Hole, or similar types of elevators), shuttles, compressed air and handpower, automatic people movers, monorails, airport shuttles and like-named devices used in the transportation of people for short distances of travel (less than 5 miles), as well as vertical reciprocating conveyor systems.

(c) It is understood and agreed that the preassembly of all escalators, moving stairways and link belt carriers that may be done in the factory shall include the following:

1. Truss or truss sections with tracks, drive units, machines, handrail drive sheaves, drive chains, skirts on the incline sections but not curved sections, step chains and steps installed and permanently aligned.
2. Balustrade brackets may be shipped attached but not aligned.
3. Setting of all controllers and all wiring and conduit from the controller.

All other work on escalators, moving stairways and link belt carriers shall be performed in the field before or after the truss or truss sections are joined and/or hoisted and placed in permanent position. This includes any and all work not done in the factory. The erecting and assembly of all theater stage and curtain elevator equipment and guides and rigging thereto, organ consoles and orchestra elevators

- (d) All wiring, conduit, and raceways from main line feeder terminals on the controller to other elevator apparatus and operating circuits. Controllers are not to be shipped from the factory with extended wiring attached thereto.
- (e) The erecting of all guide rails.
- (f) The installation of all grating under the control of the Company. The installation of all counterweight screens, overhead work, either wood or iron, and all material used for mounting of elevator apparatus in machine room, overhead or below.
- (g) The drilling of overhead beams for attaching machines, sheaves, kick angles, and all other elevator equipment.
- (h) The setting of all templates.
- (i) All foundations, either of wood or metal, that should take the place of masonry.
- (j) The assembly of all cabs complete.
- (k) The installation of all indicators.
- (l) The erecting of all electrical or mechanical automatic or semi-automatic gates complete.
- (m) The hanging of all automatic or semi-automatic elevator hoistway doors, together with the installation of hangers and tracks.
- (n) The installation of all devices for opening and closing and locking of elevator car and hoistway doors and gates.
- (o) The drilling of doors for mounting of closing devices.
- (p) The drilling of angle supports for mounting of closing devices except one template hole.
- (q) The drilling of sills for sill trips.
- (r) The operating of temporary cars.
- (s) The setting of all elevator pressure open or pit tanks.
- (t) The setting of hydraulic power units (power units include: motor, pump, drive valve system, internal piping, muffler, internal wiring, controller and tank). Where power units arrive in parts, they shall be assembled at the job site. The wiring and piping to and between multiple hydraulic power units shall be performed at the job site.
- (u) All air cushions with the exception of those built of brick or those put together with hot rivets.
- (v) Landing door entrances.

Craft: FENCE ERECTOR (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

SEE AMENDMENT 3A

Fence Erector.....45.78

ADD ZONE RATE

In addition to FENCE ERECTOR rates add the applicable amounts per hour, calculated based on a road miles from either the Carson City Courthouse or the Washoe County Courthouse:

Zone 1	0 to 75 miles	\$0.00
Zone 2	75 to 150 miles	\$4.00
Zone 3	150 to 300 miles	\$5.00
Zone 4	300 miles or over	\$6.00

ADD PREMIUM PAY

One and one half (1 ½) the regular straight time hourly rate shall be paid:

1. For all hours worked over eight (8) hours in one day or shift.
2. For any hours worked on Saturday from mid night to midnight.

Double the regular straight time hourly rate shall be paid for all time:

1. For all hours worked over twelve (12) hours in one day or shift.
2. For any hours worked on Sunday from midnight to midnight.
3. For any hours worked on holidays from midnight to midnight.

RECOGNIZED HOLIDAYS

If any of these holidays fall on Sunday, the Monday following shall be considered a Holiday. New Year's Day, President's Day, Memorial Day, Fourth of July, Labor Day, Admission Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

JOB DESCRIPTION:

Includes but is not limited to:

1. Erecting or repairing chain link, wooden, tortoise, wire/wire mesh, or temporary fencing;
2. Mixing and pouring concrete around bases of posts and tamping soil into post hole to embed post;
3. Digging post holes with a spade, post hole digger or power-driven auger;
4. Aligning posts through the use of lines or by sighting;
5. Verifying vertical alignment of posts with a plumb bob or spirit level;

Craft: FLAG PERSON (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

SEE AMENDMENT 3A

Flag Person.....42.66

ADD ZONE RATE

In addition to FLAG PERSON add the applicable amounts per hour, calculated based on a road miles from either the Carson City Courthouse or the Washoe County Courthouse:

Zone 1	0 to 75 miles	\$0.00
Zone 2	75 to 150 miles	\$4.00
Zone 3	150 to 300 miles	\$5.00
Zone 4	300 miles or over	\$6.00

ADD PREMIUM PAY

One and one half (1 ½) the regular straight time hourly rate shall be paid:

1. For all hours worked over eight (8) hours in one day or shift.
2. For any hours worked on Saturday from mid night to midnight.

Double the regular straight time hourly rate shall be paid for all time:

1. For all hours worked over twelve (12) hours in one day or shift.
2. For any hours worked on Sunday from midnight to midnight.
3. For any hours worked on holidays from midnight to midnight.

RECOGNIZED HOLIDAYS

If any of these holidays fall on Sunday, the Monday following shall be considered a Holiday. New Year’s Day, President’s Day, Memorial Day, Fourth of July, Labor Day, Admission Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

JOB DESCRIPTION

FLAG PERSON, includes but is not limited to:

1. Directing movement of vehicular traffic through construction projects;
2. Distributing traffic control signs and markers along site in designated pattern;
3. Informing drivers of detour routes through construction sites;

Craft: FLOOR COVERER (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Floor Coverer Journeyman.....	50.69
Floor Coverer Foreman.....	54.12

ADD PREMIUM PAY

Shift work

1. \$2.00 per hour will be added to the taxable net wage to shift schedule of hours worked between 6:00 p.m. and 6:00 a.m.

One and one half (1 ½) time -shall be calculated using one (1) hour of the taxable net wage and one half (1/2) the base wage, to be paid for all time:

1. For all hours worked over ten (10) hours in one day or shift.
2. For any hours worked on Saturday from midnight to midnight

Double time -shall be calculated using one (1) hour of the taxable net wage and one (1) of the base wage, to be paid for all time:

1. For any hours worked on Sunday from midnight to midnight
2. For any hours worked on holidays from midnight to midnight

RECOGNIZED HOLIDAYS

New Year's Day, Memorial Day, Independence Day, Labor Day, Admissions Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

JOB DESCRIPTION: Excerpt from Agreement between Painters and Allied Trades DC 16 and Independent Flooring Contractors of No Nevada

Measuring, cutting, fabricating, fitting, installing to be cemented, tacked or otherwise applied to its base wherever it may be, all materials whether used either as a decorative covering or as an acoustical appliance such as carpets of all types and designs, wall carpets, sheet rubber, sheet vinyl, cork carpet, rubber tile, asphalt tile, tile, cork tile, linoleum tile, mastic in sheets or the tile from vinyl tile, interlocking tile, laminate flooring, engineered wood, hardwood, composition in sheet or tile form and all derivatives of above; the fittings of all devices for the attachment of the above materials and the fitting of all decorative or protective trim to and adjoining the above materials which shall include the drilling and plugging of holes and attaching of strips, slats, nosing, etc. on any base where the above materials are to be installed, or applied, such as drilling, plugging, slating, and slating for installing or fastening of carpet, the installing of all nosing, cap strips, corner beads and edging of any material and the preparatory work of the craft for all of the aforesaid. Also, the cleaning of rugs, carpets, and drapery hanging, make-up and the installation of drapes, the spraying and/or rolling of adhesives as required for double stick installation and carpet tiles.

Craft: GLAZIER (Non-Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Glazier Journeyman.....25.25

JOB DESCRIPTION:

Includes but is not limited to:

- 1. Installing, setting, cutting, preparing, or removal of glass, or materials used in lieu thereof, including, without limitation, in windows, doorways, showers, bathtubs, skylights and display cases;
- 2. Installing glass on surfaces, including, without limitation, fronts of buildings, interior walls and ceilings;
- 3. Installing pre-assembled framework for windows and doors designed to be fitted with glass panels, including stained glass windows by using hand tools;
- 4. Loading and arranging of glass on trucks at the site of the public work;

Craft: Highway Striper (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

SEE AMENDMENT 3A

Highway Striper.....	48.28
Highway Striper Foreman.....	48.78

ADD ZONE RATE

In addition to HIGHWAY STRIPER rates add the applicable amounts per hour, calculated based on a road miles from either the Carson City Courthouse or the Washoe County Courthouse:

Zone 1	0 to 75 miles	\$0.00
Zone 2	75 to 150 miles	\$4.00
Zone 3	150 to 300 miles	\$5.00
Zone 4	300 miles or over	\$6.00

ADD PREMIUM PAY

One and one half (1 ½) the regular straight time hourly rate shall be paid:

1. For all hours worked over eight (8) hours in one day or shift.
2. For any hours worked on Saturday from midn ight to midnight.

Double the regular straight time hourly rate shall be paid for all time:

1. For all hours worked over twelve (12) hours in one day or shift.
2. For any hours worked on Sunday from midnight to midnight.
3. For any hours worked on holidays from midnight to midnight.

RECOGNIZED HOLIDAYS

If any of these holidays fall on Sunday, the Monday following shall be considered a Holiday. New Year’s Day, Memorial Day, 4th of July, Labor Day, Admission Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

JOB DESCRIPTION:

Includes but is not limited to:

1. Painting highways, streets and parking surfaces by using manually propelled or mechanically propelled machines, brushes, rollers or spray guns;
2. Installing any device or application of any material used in lieu of paint for traffic direction, including, without limitation, buttons, tapes, plastics, rumble bars and other similar materials;

Craft: Hod Carrier-Brick Mason Tender (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Brick Mason Journeyman.....	46.03
Brick Mason Foreman.....	46.43

ADD ZONE RATE

In addition to Hod Carrier Brick Mason Tender rates add the applicable amounts per hour, calculated based on road miles from the Washoe County Courthouse:

Zone	75 miles and Over	\$8.13
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ADD PREMIUM PAY

One and one half (1 ½) the regular straight time hourly rate shall be paid:

1. For all hours worked over eight (8) hours in one day or shift.
2. For any hours worked on Saturday from midnight to midnight.

Double the regular straight time hourly rate shall be paid for all time:

1. For all hours worked over twelve (12) hours in one day or shift.
2. For any hours worked on Sunday from midnight to midnight.
3. For any hours worked on holidays from midnight to midnight.

RECOGNIZED HOLIDAYS

If any of these holidays fall on Sunday, the Monday following shall be considered a Holiday. New Year's Day, President's Day, Memorial Day, Fourth of July, Labor Day, Admission Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

JOB DESCRIPTION: Excerpt from Agreement between No, NV Masonry Contractors and LIUNA Local 169

Conveying of all materials used by the Brick and Stone Masons from the first point of delivery to the Mechanic whether done manually or by a piece of machinery or equipment devised to replace the wheelbarrow or buggy, including but not limited to the forklift. The handling of Bricks, Blocks, mortar, or any other material to serve the bricklayer in any capacity building and dismantling scaffolds of any kind or type used by Bricklayers for masonry work including but not limited to tower scaffolds, access scaffolds, or other specialty scaffolds, mixing and tempering mortar by hand and/or machine, mixing grout and cleaning up after the bricklayer, the repairing and maintenance of all equipment, either on the job or in the yard.

Craft: Hod Carrier-Plasterer Tender (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Plasterer Tender-Journeyman.....	46.37
Plasterer Tender- Gun Tender.....	47.37
Plasterer Tender-Foreman.....	47.73

ADD ZONE RATE

In addition to: HOD CARRIER-PLASTERER TENDER rates add the applicable amounts per hour, calculated based on road miles from So. Virginia St., Reno, Nevada:

Zone 1	0 to 70 miles	\$0.00
Zone 2	70 miles and Over	\$8.00

ADD PREMIUM PAY

One and one half (1 ½) the regular straight time hourly rate shall be paid:

1. For all hours worked over eight (8) hours in one day or shift.
2. For any hours worked on Saturday from mid night to midnight.

Double the regular straight time hourly rate shall be paid for all time:

1. For all hours worked over twelve (12) hours in one day or shift.
2. For any hours worked on Sunday from midnight to midnight.
3. For any hours worked on holidays from midnight to midnight.

RECOGNIZED HOLIDAYS

If any of these holidays fall on Sunday, the Monday following shall be considered a Holiday. New Year’s Day, President’s Day, Memorial Day, Fourth of July, Labor Day, Admission Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

JOB DESCRIPTION: Excerpt from Agreement between Plasterers Contractors and LIUNA Local Union 169

Any Employee within the scope of this division tending or serving any other worker performing plasterers work, any plasterer, plasterers, or apprentices in any capacity performing plasterers work including but not limited to, handling and conveying of all materials after delivery used by plasters, including but not limited to, inside finish coat, outside finish coat, brown coat, scratch coat, sprayed or trowled on fireproofing, EIFS systems, and other materials or systems for the same or similar purpose whether done manually or by a piece of machinery or equipment devised to replace the wheelbarrow or buggy, including but not limited to the forklift, tusk hoist, and rigging and signaling for cranes to the point or points of application or installation, making mixing and preparing after delivery all materials used by plasters, whether by hand or machine including but not limited to mixers, pumps for plaster or fire proofing, plaster, finish coats, fireproofing, including Monocoat, Cafco or other materials for the same or similar use, moving any rolling scaffolding, building and handling all necessary trestle, scaffolding and planking of scaffolding for plasterers and lathers, building mortar boxes, mortar boards and stands, and the repairing and maintenance of all equipment either on the job or in the yard, the spreading of all temporary protective drop cloths, building paper or plastic covers and taping of same (in a composite crew with the plasterers when necessary), the cleaning of all floors, and debris, behind the plasterers or any other worker performing plasterers work in connection with the work performed all work necessary for cold weather protection and cure including but not limited to handling installing or tending to blankets, visqueen, and space heaters, and running putty.

Tending to plasterers or any other worker performing plasterers work on EFIS system work shall include all work after the wallboard is installed including but not limited to any preparatory sealing or leveling, placing foam, mesh, and plaster including any rough, finish, and color coats.

For sprayed on fire proofing work only, including Monocoat, Cafco or other materials for the same or similar use an Employer signatory to this Agreement and the Local 169, Laborers Master Agreement may employ Laborers at the Group 1 wage rate to perform overspray protection, the spreading of all temporary protective drop cloths, building paper or plastic covers and taping of same, the cleaning of all floors, and debris, cold weather protection and cure including but not limited to handling installing or tending to blankets, visqueen, and space heaters and moving rolling scaffolding.

Craft: Ironworker (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Ironworker-Journeyman.....	78.74
Ironworker - Foreman.....	83.21
Ironworker -General Foreman.....	88.13

ADD ZONE RATE

In addition to Iron Worker rates add the applicable amounts per day, calculated based on a road mile from the Reno City Hall.

Zone 1	60 to 75 miles	\$20.00
Zone 2	75 to 100 miles	\$25.00
Zone 3	100 miles and over	\$75.00

ADD PREMIUM PAY

One and one half (1X) the regular straight time hourly rate shall be paid:

1. For the first two (2) hours worked in excess of eight (8) on a regular workday Monday-Friday
2. For the first eight (8) hours on Saturday

Double the regular straight time hourly rate shall be paid for all time:

1. For all hours worked over ten (10) hours in one day or shift.
2. For any hours worked on Sunday.
3. For all hours worked over eight (8) on Saturday
4. For all hours worked on Holidays

Shift Pay

1. 2nd shift add 6% of hourly wage
2. 3rd shift add 13% of hourly wage
3. Dedicated shift add 6% of hourly wage

RECOGNIZED HOLIDAYS

New Year’s Day, President’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

JOB CLASSIFICATION: Excerpt from Agreement between NV AGC and DC of Ironworkers

Field fabrication and/or erection or deconstruction of structural, ornamental and reinforcing steel, including but not limited to the fabrication, rigging and signaling, erection and construction of all iron and steel, ornamental lead, bronze, brass, copper and aluminum, plastics and all other substitute materials, including, but not limited to, composites, carbon fiber and fiberglass, all barrier railings, handrail, aluminum, steel, glass and plastic, reinforced concrete structures or parts thereof; bridges, viaducts, inclines, dams, docks, dredges, vessels, locks, gates, guides, aqueducts, reservoirs, spillways, flumes, caissons, cofferdams, subways, tunnels, cableways, tramways, monorails, blast furnaces, stoves, kilns, coolers, crushers, agitators, pulverizers, mixers, concentrators, ovens, cupolas, roof decking such as but not limited to “Cofar”, “Trusdeck”, Mahon “M”; smoke conveyors, penstocks, flag poles, drums, shafting, shoring, fur and storage rooms, fans and hot rooms, stacks, bunkers, conveyors, dumpers, elevators, vats, tanks, enamel tanks, enamel vats, towers, pans, hoppers, plates, anchors, caps, corbels, lintels, Howe and combination trusses, grillage and foundation work, grating, bucks, partitions, hanging ceilings, hangers, clips, brackets, flooring, floor construction and domes, rolling shutters, curtains, frames; aluminum, rolling fire, won and iron doors, including supports; cast

tiling, air ducts, duct and trench frames and plates; wire work, railings, wire cable including pipe, guards, fencing, grill work, sidewalk and vault lights, skylights, roofs, canopies, light steel framing, marquees, awnings and other related equipment elevator and dumb waiter enclosures, elevator cars, tracks, fascias, aprons, operating devices, steel and aluminum sash, hardware and screens, frames, fronts, lockers, racks, book stacks, tables, shelving, metal furniture, seats, chutes, escalators, stairways including pre-engineered stairs, ventilators, boxes, fire escapes, signs, jail and cell work, safes, vaults, vault doors, safe deposit boxes, corrugated sheets when attached to steel frames, including insulation; frames in support of boilers; materials altered in field such as framing, cutting, bending, drilling, burning and welding including by acetylene gas and electric machines; metal forms and false work pertaining to concrete construction; seismic isolation systems and dampening systems including base isolators, sectional water tube and tubular boilers and stokers; traveling sheaves, vertical hydraulic elevators, bulkheads, skip hoists, making and installation of articles made of wire and fibrous rope, rigging in connection with pumps, compressors, forced and induced draft fans, air meters, Bailey meters, agitators, oxygen converters, cinder machines, pelletizing machines, reactor vessels, reactor spheres, completed tanks and assembled sections of completed tanks, scroll cases, refineries, hydroelectric power houses and steam plants, cogeneration plants, vessels and government departments; false work, travelers, scaffolding, pile drivers, sheet piling, derricks and powered derrick swinger including the erection, installation, handling and operating. Cranes erection, installation, handling and operating of same on all forms and types of construction work. The operation of Valla and Spider type battery and/or propane powered portable floor cranes having no operator seat utilized to install ironworker scope of work and the same on all forms and types of construction work. Crane work at the ports, including hammer-head cranes, container cranes and rubber tire cranes. Offloading, relocations, and commissioning of all burning and removal of sea bracing track layout; erection of apex boom extensions, back reach extensions, and rail replacement. Includes all welding, containment and structural modifications of the aforementioned items; railroad bridge work including maintenance thereof; moving, hoisting and lowering of machinery, modules, skid modules and placing of same on foundation, including bridges, cranes, intermittent use forklifts, derricks, buildings, piers and vessels; loading, unloading, necessary maintenance, erection, installation, removal, wrecking and dismantling of all of the above and all reinforcing work and submarine diving in connection with or about same; erection of steel towers, chutes and spouts for concrete where attached to towers and handling and fastening of cables and guys for same; unloading, racking, sorting, cutting, bending, hoisting, placing and tying including the use of any and all mechanical tying devices, burning and welding including stud welding of all iron, steel and metal in reinforced concrete construction including mesh for floor arches and the making of hoops and stirrups, metal forms and metal supports thereof; jacking of slip forms, installation of all wire, cable, parabolic cans, steel and all other materials, including, but not limited to, composites, carbon fiber and fiberglass, used for the purposes of prestressing including grouting of ducts, post stressing concrete girders, beams, columns, etc.; loading, unloading, hoisting, handling, signaling, placing and erection of all prestressed, post stressed, precast materials, G.F.R.C., Dryvit System, including the securing by bolting and/or welding and the installation of steeltex and wire mesh of any type when used for reinforced concrete construction; erection of all curtain wall; glass handrail; stay in place deck; automated and/or mechanical parking structures; offloading, staging, hoisting and setting of modular structures and micro-units; curtain wall systems and associated sealants. Window wall and entrances, panels, insulated and non-insulated, factory and field assembled, porcelain enameled panels, ceramic, laminated spandrelite, louvers and sunscreens; application of thiokol, neoprene and other sealants used to seal materials installed by Iron Workers; installation and handling of phenolic panels, including but not limited to, Trespa products and all similarly related materials and/or systems; installation of metal window stools and sills; installation of aluminum, bronze and steel thresholds; erection and dismantling of all types of cranes and changing of booms; erection of rock, sand and gravel plants, dismantling and loading out conveyors, aggregate plants, batch plants, abeleways, refrigeration plants, etc.; erection and dismantling of Monigan walking dragline, launchhammer bucket wheel excavator and other trenching equipment; signaling on highlines, whirley cranes and derricks, buck hoists, man hoists, fork lifts, material towers and scanning antennae; metal

and steel supports of all types; fabrication, assembling and erection of offshore drilling platforms or similar installations; dust collectors, precipitators, multi-plate, specialty welding processes, unloading, loading, hoisting, handling and rigging of all building materials delivered to the job site; hanging ceilings, tees, channels, beams, acoustical elements, sound barriers, computer floors, etc.; installation of stage rigging (including counterweights), curtains, draperies, traverse rods, tracks, cables, window cleaning equipment, powered work platforms, including and loading and unloading, erection installation and removal of powered chassis mounted elevating mast climbing work platforms, rigging in connection with display shows; ski lifts, etc.; wrecking of bridges, viaducts, elevated roads and structural steel and iron in buildings; all steel frames for openings, all porches, verandas, canopies and balconies; all overhead travelers, duo rails, tram rails; erection, setting, repairing of guard or collision rails on bridges and approaches, road ways or any other structures; handling and setting of all types of steel and metal joists, including metal box joists for truss lab and preformed keystone shaped metal joists; erection of steel and metal houses and packaged buildings; all translucent and plastic material on steel frame construction; the erection of solar energy systems, including but not limited to, photo voltaic, heliostat and parabolic systems, energy producing windmill type towers, wind turbine erection to included, but not limited to, prep work, boltup, tensioning or torque of bolts on base and all tower section turbine and blade assemblies; nuclear reactors, electromagnetic shielding plates and atomic vessels including all component parts; the plumbing, aligning and leveling of all materials and equipment through the use of optical instruments, LASER beams, etc., and the use of instruments to establish layout, installation and disposition of ironworker installed scope of work; the unloading, distributing, stockpiling and handling of all materials coming under the jurisdictional claims of the UNION such as to rail heads, storage yards, loading and unloading, hoisting, handling, signaling of all fabricated material and equipment at the jobsite (except FOB deliveries) related to the Iron Workers jurisdiction that is within the individual employers' contractual scope of work including from and to barge and ships to a lay down yard or construction project, etc., shall be done by the Iron Workers.

All reinforcing work in connection with field fabrication, including but not limited to the pre-assembly of reinforcing cages, loading and unloading, handling, racking, sorting, cutting, bending, hoisting, intermittent use of forklifts, placing, burning, welding and tying of all material including the use of any and all mechanical tying devices, or substitute materials, including but not limited to, composites, carbon fiber and fiberglass, stainless steel, used to reinforce concrete construction shall be done by Iron Workers within the individual employers' scope of work at the jobsite, excluding FOB deliveries. A working Iron Worker shall be employed for maintenance on jobs of substantial size while concrete is being poured on reinforcing steel, wire mesh and paper back steeltex but will not be required as a stand-by man. All work in connection with the installation, alignment, repair & modification of panelized roofing systems, pre-engineered fabric structures, aluminum clarifier coverings, carports, ministorages, and dock planks. All work in connection with the installation, alignment, repair and modification of bleachers, planking and stadium seating. All work in connection of installation of amusement rides including, but not limited to, the erection and alignment of all track, machinery and related components.

Craft: Laborer (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

SEE AMENDMENT 3

Landscaper	40.37
Furniture Mover	41.87
Group 1.....	45.53
Group 1A.....	42.66
Group 2.....	45.63
Group 3.....	45.78
Group 3A.....	48.21
Group 4.....	46.03
Group 4A.....	48.53
Group 5.....	46.33
Group 6	
Nozzlemen, Rodmen.....	45.33
Gunmen, Materialmen.....	46.03
Reboundmen.....	45.68
Gunite Foreman.....	46.73

ADD ZONE RATE

In addition to LABORER rates add the applicable amounts per hour, calculated based on a road miles from either the Carson City Courthouse or the Washoe County Courthouse:

Zone 1	0 to 75 miles	\$0.00
Zone 2	75 to 150 miles	\$4.00
Zone 3	150 to 300 miles	\$5.00
Zone 4	300 miles or over	\$6.00

ADD PREMIUM PAY

One and one half (1 ½) the regular straight time hourly rate shall be paid:

1. For all hours worked over eight (8) hours in one day or shift.
2. For any hours worked on Saturday from midn ight to midnight.

Double the regular straight time hourly rate shall be paid for all time:

1. For all hours worked over twelve (12) hours in one day or shift.
2. For any hours worked on Sunday from midnight to midnight.
3. For any hours worked on holidays from midnight to midnight.

RECOGNIZED HOLIDAYS

If any of these holidays fall on Sunday, the Monday following shall be considered a Holiday. New Year’s Day, President’s Day, Memorial Day, Fourth of July, Labor Day, Admission Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

JOB DESCRIPTION: Excerpt from Agreement between AGC and LIUNA Local 169

The construction, erection, alteration, repair, modification, demolition, addition, improvement of all building, heavy and highway, utility, industrial and all other type(s) of construction.

SEE GROUP CLASSIFICATIONS

Craft: LUBRICATION AND SERVICE ENGINEER (MOBILE AND GREASE RACK) (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

SEE AMENDMENT 2

Lubrication and Service Engineer (mobile and grease rack).....65.08

ADD ZONE RATE

In addition to: **LUBRICATION AND SERVICE ENGINEER (MOBILE AND GREASE RACK)** rates add the applicable amounts per hour calculated based on a road miles from the Carson City Courthouse or Washoe County Courthouse.

Zone 1	0 to 75 miles	\$0.00
Zone 2	75 to 150 miles	\$4.00
Zone 3	150 to 300 miles	\$5.00
Zone 4	300 miles and over	\$6.00

ADD PREMIUM PAY

1. One and one-half (1-1/2) times the applicable straight-time rate for the day, shift, work, equipment and classification shall be paid for all work (including repair work and field survey work) performed on Saturday and before a shift begins and after it ends, except when operating equipment servicing a craft that is receiving double time on commercial building construction, in which case double time shall be paid.

2. Overtime. The following rates shall apply on Sundays and holidays and all work before a shift begins and after it ends:

RECOGNIZED HOLIDAYS

Holidays. Double the applicable straight-time rate shall be paid for all work (including repair, maintenance and field survey work) performed on Sundays and the following holidays: New Year's Day (January 1); Memorial Day (last Monday in May); Independence Day (July 4); Labor Day (1st Monday in September); Nevada Admission Day (last Friday in October); Thanksgiving Day (4th Thursday in November); the day after Thanksgiving Day; and Christmas Day (December 25). Holidays falling on Sunday shall be observed on the following Monday. Holiday hours shall be reckoned on the same basis as Sunday hours.

Saturday Shift Period. On any shift, Saturday shall be the twenty-four-hour period commencing at 12:00 midnight Friday.

Sunday Shift Period. On any shift, Sunday shall be the twenty-four-hour period commencing at 12:00 midnight Saturday.

3. For hours worked in excess of 12) on any such workday, an Employee shall be paid two (2) times the regular straight-time rate of pay for each hour so worked.

Craft: Mechanical Insulator (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Mechanical Insulator-Mechanic.....	72.11
Mechanical Insulator-Foreman.....	76.11
Mechanical Insulator-General Foreman	78.11

ADD ZONE RATE

In addition to MECHANICAL INSULATOR rates add the applicable amounts per DAY, calculated based on a radius figured from Reno City Hall:

Zone 1	0 to 20 miles	\$11.00
Zone 2	21 to 40 miles	\$21.00
Zone 3	41 to 60 miles	\$31.00
Zone 4	Over 60 miles	\$85.00

ADD PREMIUM PAY

One and one half times the minimum hourly wage rate shall be paid for the first two (2) hours of overtime work, directly following eight (8) hours Monday through Friday, and for the first ten (10) hours worked on Saturdays. Double the minimum hourly wage rate shall be paid for all other overtime worked Monday through Friday and in excess of ten (10) hours on Saturdays.

RECOGNIZED HOLIDAYS

New Year's Day, President's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

JOB DESCRIPTION: Excerpt from the Int'l Assoc. of Heat and Frost Insulators and Allied Workers Local 16 and the No. CA Chapter. Western Insulation Contractors Assoc.

- 65. Lining of all mechanical room surfaces and air handling shafts.
- 66. The filling and damming of fire stops and penetrations including, but not limited to, electrical and mechanical systems.
- 67. All foam applications for the purpose of thermal, acoustical, or fire protective purposes, including RTV foams or equivalent, applied to mechanical or electrical systems.
- 68. All duct lining, and duct wrapping, done on the job site, direct application and installation of fire protection of grease ducts, exhaust systems, or any other ductwork for acoustical or thermal purposes.
- 69. The insulation of all field joints on pre-insulated underground piping, and the pouring of Gilsilite or its equivalent.
- 70. Any finish material which is contiguous to the thermal or acoustical application.
- 71. The preparation, distribution of materials on job sites, assembling, molding, spraying, pouring, mixing, hanging, adjusting, repairing, dismantling, reconditioning, maintaining, finishing, and weather proofing of hot or cold thermal or acoustical insulation with such materials as may be specified.
- 72. The application of any material, including metal and PVC jacketing, Alumaguard or equivalent, on piping, fittings, valves, flanges, boilers, ducts, plenums, flues, tanks, vats, equipment and any other hot or cold surface for the purpose of thermal control.
- 73. The Agreement shall cover all other work of a specialty nature.

Craft: Millwright (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Millwright Journeyman.....	71.01
Millwright Welder.....	72.01
Millwright Foreman.....	75.30
Millwright General Foreman.....	80.02

ADD ZONE RATE

In addition to MILLWRIGHT rates, add the applicable amounts per hour, calculated on road miles from the Washoe County Courthouse:

Zone 1	0 to 15 Miles	\$0.00
Zone 2	15 to 35 Miles	\$2.50
Zone 3	Over 35 Miles	\$4.25

ADD PREMIUM PAY

First two (2) hours outside the regular constituted shift shall be at the rate of time and one-half (1½X).

Saturdays up to the first ten (10) hours shall be at the rate of time and one-half (1½X). All additional hours and Sundays and holidays shall be the rate of double time (2X). When working on Sundays and holidays, there will be one dollar and fifty cents (\$1.50) per hour additional paid to Pension Annuity. Admission Day is a recognized holiday in lieu of Veterans' Day.

RECOGNIZED HOLIDAYS

New Year's Day, Washington's Birthday (President's Day), Memorial Day, 4th of July, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving, Christmas Day.

JOB DESCRIPTION Excerpt from Southwest Regional Council of Carpenters and Affiliated Local Unions Master Labor Agreement

5006.18

The work of the millwrights, as spelled out in the Jurisdictional Claims Handbook referenced in Paragraph 5006.17 above, is as follows: The term "MILLWRIGHTS AND MACHINE ERECTORS" shall mean the, unloading, hoisting, rigging, skidding, moving, dismantling, aligning, erecting, assembling, repairing, maintaining and adjusting of all machinery and equipment installed either in buildings, factories, structures, or processing areas, either undercover, underground or elsewhere required to process material, handle, manufacture or service, be it powered or receiving power manually, by steam, gas, electric, gasoline, diesel, nuclear, solar, water, air or chemically; and in industries such as and including but not limited to the following (which are identified for the purpose of description: woodworking plants, canning industries, steel, coffee roasting plants, paper and pulp, cellophane, stone crushing, gravel and sand washing and handling, refineries, grain storage and handling, asphalt plants, sewage disposal and water plants, laundry, bakery, mixing plants, can, bottle and bag packing plants, textile mills, paint mills, breweries and milk processing plants, power plants, aluminum processing or manufacturing plants, and the amusement or entertainment field.

5006.19

Also included are installation of mechanical equipment in atomic energy plants, installation of reactors in power plants, installation of control rods and equipment in reactors, installation of mechanical equipment in rocket missile bases, launchers, launching gantry, floating bases, hydraulic escape doors and any and all component parts thereto either assembled, semi-assembled or disassembled.

5006.20

Further included is the installation of, but not limited to the following: setting of all engines, motors, generators, air compressors and fans, pumps, scales, hoppers, conveyors of all types and sizes and their supports, escalators, man lifts, moving machinery, mechanical operator and/or automatic doors, roll-up doors, mechanical stage equipment, amusement devices, mechanical pin setters and spotters in bowling alleys, refrigeration equipment and installation of all types of equipment necessary and required to process material either in manufacturing or servicing, the handling and installation of pulleys, gears, sheaves, fly wheels, air and vacuum drives, worm drives and gear drives directly or indirectly coupled to motors, belts, chains, screws, legs, boots, guards, boot tanks, all bin valves, turn heads and indicators, shafting, bearing, cable sprockets, cutting all key seats in new and old work, troughs, chippers, filters, calendars, rolls, winders, reminders, slitters, cutters and wrapping machines; blowers, forging machines, rams, hydraulic or otherwise, planing, extruder, ball, dust collectors, equipment in meat packing plants and splicing of ropes and cables.

5006.21

Additionally included are the laying out, fabrication and installation of protection equipment, including machinery guards, the making and setting of templates for machinery, fabrication of bolts, nuts, pins and drilling of holes for any equipment which the millwrights install regardless of materials; all welding and burning regardless of type; fabrication of all lines, hose or tubing used in lubricating machinery installed by millwrights; grinding, cleaning, servicing and machine work necessary for any part of any equipment installed by the millwrights; and the breaking in and trial run, of any equipment or machinery installed by the millwrights

5006.22

When requested in writing by the Millwright Union, individual Employers who are parties to this Agreement shall furnish signed letters promptly on a date mutually agreed upon by both parties, but in no case more than thirty (30) days, on the letterhead of the individual Employer stating he is employing or had employed millwrights on a specific type of work and a specific job and paid the negotiated scale of wages and fringe benefits for such work.

5006.23

The individual Employer and the Local Union will cooperate promptly in attempting to resolve jurisdictional disputes that may arise on any job or project.

Craft: OPERATING ENGINEER (Union Rate)
Prevailing wage rates include the base rate as well as all applicable fringes

SEE AMENDMENT 2

Operating Engineers	(SEE GROUP CLASSIFICATIONS)
Group 1.....	63.11
Group 1A.....	65.82
Group 2.....	66.35
Group 3.....	66.62
Group 4.....	67.36
Group 5.....	67.66
Group 6.....	67.86
Group 7.....	68.08
Group 8.....	68.67
Group 9.....	68.99
Group 10.....	69.34
Group 10A.....	69.53
Group 11.....	69.77
Group 11A.....	71.41
Group 11B.....	72.22
Foreman.....	68.80
Add \$12.5% to base rate for "Special" Shift	

Add Operating Engineers Zone Pay
Add Premium Pay

Craft: OPERATING ENGINEER (Union Rate)
STEEL FABRICATOR & ERECTOR

Prevailing wage rates include the base rate as well as all applicable fringes

SEE AMENDMENT 2A

Operating Engineers	(SEE GROUP CLASSIFICATIONS)
Group 1.....	78.36
Group 1 Truck Crane Oiler.....	72.19
Group 1 Oiler.....	70.23
Group 2.....	76.85
Group 2 Truck Crane Oiler.....	71.94
Group 2 Oiler.....	70.02
Group 3.....	75.61
Group 3 Truck Crane Oiler.....	71.72
Group 3 Oiler.....	69.80
Group 3 Hydraulic.....	71.39
Group 4.....	73.88
Group 5.....	72.78
Add \$12.5% to base rate for "Special" Shift.....	

Add Operating Engineers Zone Pay
Add Premium Pay

Craft: OPERATING ENGINEER (Union Rate)
PILEDRIVER

Prevailing wage rates include the base rate as well as all applicable fringes

Operating Engineers	(SEE GROUP CLASSIFICATIONS)
Group 1.....	77.88
Group 1 Truck Crane Oiler.....	72.37
Group 1 Oiler.....	70.45
Group 2.....	76.29
Group 2 Truck Crane Oiler.....	72.16
Group 2 Oiler.....	70.25
Group 3.....	72.03
Group 3 Truck Crane Oiler.....	74.84
Group 3 Oiler.....	71.94
Group 4.....	73.33
Group 5.....	72.22
Group 6.....	68.94
Group 7.....	70.15
Group 8.....	69.19
Add \$12.5% to base rate for "Special" Shift.....	

ADD ZONE RATE

In addition to: **OPERATING ENGINEER, STEEL FABRICATOR & ERECTOR, and OPERATING ENGINEER PILED RIVER**, rates add the applicable amounts per hour calculated based on a road miles from the Carson City Courthouse or Washoe County Courthouse

Zone 1	0 to 75 miles	\$0.00
Zone 2	75 to 150 miles	\$5.00
Zone 3	150 to 300 miles	\$6.00
Zone 4	300 miles over	\$7.00

ADD PREMIUM PAY

1. One and one-half (1-1/2) times the applicable straight-time rate for the day, shift, work, equipment and classification shall be paid for all work (including repair work and field survey work) performed on Saturday and before a shift begins and after it ends, except when operating equipment servicing a craft that is receiving double time on commercial building construction, in which case double time shall be paid.

2. Overtime. The following rates shall apply on Sundays and holidays and all work before a shift begins and after it ends:

RECOGNIZED HOLIDAYS

Holidays. Double the applicable straight-time rate shall be paid for all work (including repair, maintenance and field survey work) performed on Sundays and the following holidays: New Year's Day (January 1); Memorial Day (last Monday in May); Independence Day (July 4); Labor Day (1st Monday in September); Nevada Admission Day (last Friday in October); Thanksgiving Day (4th Thursday in November); the day after Thanksgiving Day; and Christmas Day (December 25). Holidays falling on

Sunday shall be observed on the following Monday. Holiday hours shall be reckoned on the same basis as Sunday hours.

Saturday Shift Period. On any shift, Saturday shall be the twenty-four-hour period commencing at 12:00 midnight Friday.

Sunday Shift Period. On any shift, Sunday shall be the twenty-four-hour period commencing at 12:00 midnight Saturday.

3. For hours worked in excess of 12) on any such workday, an Employee shall be paid two (2) times the regular straight-time rate of pay for each hour so worked.

JOB DESCRIPTION, includes but is not limited to:

Operate one or several types of power construction equipment, such as motor graders, bulldozers, scrapers, compressors, pumps, derricks, shovels, tractors, or front-end loaders to excavate, move, and grade earth, erect structures, or pour concrete or other hard surface pavement.

Craft: PAINTER (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Brush/Roller Painter.....	47.34
Spray Painter/Paperhanger.....	49.00
Sandblaster.....	49.05
Structural Steel & Steeplejack.....	49.05
Swing Stage.....	49.34
Special Coating Application-Brush.....	49.39
Special Coating Application-Spray.....	49.39
Special Coating Application-Spray Steel.....	49.39
Foreman.....	\$1.00 above highest Journeyman

ADD PREMIUM PAY

One and one half (1 ½) the regular straight time hourly rate shall be paid:

1. For all hours worked over eight (8) hours in one day or shift unless the Union is notified when four (4) tens (10's) are instituted.
2. For any hours worked on Saturday from midnight to midnight
3. For any work performed in excess of the regular work week of forty (40) hours.

Double the regular straight time hourly rate shall be paid for all time:

1. For any hours worked on Sunday from midnight to midnight
2. For any hours worked on holidays from midnight to midnight

RECOGNIZED HOLIDAYS

New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

JOB DESCRIPTION: Excerpt from Agreement between Painters and Allied Trades DC 16 and Independent Flooring Contractors of No Nevada

a. All painting of residences, buildings, structures, industrial plants, tanks, vats, pipes, vessels, bridges, light poles, high tension poles, traffic and parking lines on highways, parking lots, playgrounds, factories, and air line strips; all sign, pictorial, coach, car automobile, carriage, aircraft machinery, ship and railroad equipment, mural and scenic painting; spackling of all surfaces where adhesive materials are used; and all drywall pointing, taping and finishing.

b. All decorators, paperhangers, hard wood finishers, grainers, glaziers, varnishers, enamellers

1. Paperhangers work shall be all material of whatever kind or quality applied to walls or ceilings with paste or adhesive; all tacking on the muslin or other materials which is used as wall or ceiling coverings or covered with material pasted on.

2. The scraping off of old paper, preparing of walls, etc., for paper hangers work.

3. The application of relief, stucco, plaster or decorative work shall not be considered paperhanger's work exclusively.

(c) All men engaged in applying or removing paints, pigments, extenders, metal primers and metal pigments, clear pigments, binders, thinners and dryers, primers and sealers, oil paints and enamels,

water colors and emulsions, clear coatings, waxes, stains, mastics, cement enamels and other special coatings, plastics, adhesives, coatings and sheet rubber and other linings, oils, varnishes, water colors, wall paper, wall coverings or other materials used in the various branches of the trade, and the cleaning and bleaching of all interior and exterior walls and surfaces with liquid, steam, sandblast or any other process and all work incidental thereto.

Craft: PILEDRIVER (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Piledriver-Journeyman.....	55.41
Piledriver-Welder.....	56.41
Piledriver-Foreman.....	58.87
Piledriver-General Foreman.....	62.68
Tender.....	58.87
Stand-By Diver.....	59.87
Diver-Diving (Wet Pay).....	98.96

ADD ZONE RATE

In addition to PILEDRIVER rates add the applicable amounts per hour, calculated from the Washoe County Courthouse:

Zone 1	0 to 75 miles	\$0.00
Zone 2	75 to 150 miles	\$4.00
Zone 3	150 to 300 miles	\$5.00
Zone 4	Over 300 miles	\$6.00

ADD PREMIUM PAY

First two (2) hours outside the regular constituted shift shall be at the rate of time and one-half (1½X).

Saturdays up to the first ten (10) hours shall be at the rate of time and one-half (1½X). All additional hours and Sundays and holidays shall be the rate of double time (2X). When working on Sundays and holidays, there will be one dollar and fifty cents (\$1.50) per hour additional paid to Pension Annuity.

RECOGNIZED HOLIDAYS

New Year's Day, Memorial Day, 4th of July, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving, Christmas Day.

JOB DESCRIPTION

In addition, the operation of the power pack and vibratory hammer controls when driving or pulling, sheet pile, pile, soldier beams, cassinis or casing.

(1) In the construction of waterfront and marine facilities, such as docks, piers, wharves, bulkheads, jetties, and similar structures, the pile driver classification should continue to apply, up to and including the decking thereof.

(2) On all pile driving and caisson work on both land and water, the Pile Driver classification should apply.

(3) In the construction of wooden bridges whether over land or over water, when composed of heavy timber, the Pile Driver classification should apply.

(4) In the construction of concrete or steel bridges over land, the Pile Driver classification shall apply to the driving of piles and/or caisson work including the forms required for the capping of the piles or caissons immediately top of the piles or caissons. The capping of the piles is herein interpreted as being that concrete, wood, or other material resting on the top of the piles where driven or placed and does not include any further form work above the capping. In many instances it has been found that the capping is called the girder. The above shall apply on such concrete or steel bridges constructed over land, highways, railroads, overpasses and include cloverleaves, interchanges, etc.

(5) In the construction of concrete or steel bridges over water, the Pile Driver classification shall apply up to and including all of the form work to the top of the column, piers, or abutments supporting the steel and/or any other superstructures.

(6) In the erection of false work, when necessary for the support of work under the Pile Driver classification, then such false work shall fall within their classification. False work necessary for the support of work under the Carpenter classification shall be done within such Carpenter classification, with the exception that where pile driving or power equipment is used for heavy timber false work, then such work shall come under the Pile Driver classification. This would include all rigging, signaling and tagging incidental to the placing of the heavy timber.

(7) In the construction of open-cut sewers, the Pile Driver classification shall apply on all piling including wood, steel or concrete sheet piling, all bracing timber and form work incidental to the construction thereof.

Craft: PLASTERER (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Plasterer-Journeyman.....	48.82
Plasterer-Foreman.....	52.13

ADD ZONE RATE

In addition to PLASTERER rates add the applicable amounts per hour, calculated from the South Virginia and Mill Street, Reno, Nevada:

Zone 1	0 to 70 miles	\$0.00
Zone 2	70 miles and over	\$8.00

ADD PREMIUM PAY

OVERTIME Eight (8) consecutive hours (exclusive of a meal period) shall constitute a day's work at straight time. Five (5) consecutive days of eight (8) consecutive hours (exclusive of a meal period), Monday through Friday, shall constitute a week's work. One and one half (1 ½) the regular straight time hourly rate shall be paid for all work over eight (8) hours. Sunday will be paid at double the regular straight time rate.

RECOGNIZED HOLIDAYS

All work performed on the following holidays shall be paid for at double the regular straight time rate: New Year's Day, Memorial Day, Fourth of July, Labor Day, Admissions Day, Thanksgiving Day and the Friday after Thanksgiving and also Christmas Day.

If any of the above holidays fall on Sunday, the Monday following shall be considered a holiday.

No work shall be permitted on the Fourth of July or Labor Day, regardless of compensation or donation, except in case of emergency or to protect life and property. Permission to work shall be granted by the representative of the Union or its officer.

JOB DESCRIPTION: Excerpt from Agreement No NV. Plasterers Master Labor Agreement

This includes but is not limited to:

1. All building construction, including but not limited to the construction, erection, alteration, repair, modification, demolition, addition, or improvement in whole or in part of any building structures,
2. All interior or exterior plastering construction, restoration, repair and inspection of cement, stucco, stone imitation or any patent material when ornamental molded plaster, and the setting of same. All specialty finishes such as veneer, venetian, marmoreno and grasello. All custom and specialty finishes, including but not limited to custom rock, carved plaster, brick and block veneer, stone and wood. Smooth and finish surfaces of full system E.I.F.S. including sticking and shaping of foam pieces or surfaces by adhesive or mechanical installation. All spray or toweled on fireproofing, including cementitious and intumescent products. All plaster acoustical finish systems including, but not limited to, BASWA Phon and Fellert.
3. All work processes which represent technological change, replacement, modification or substitution for the work described above. In addition, all work and use of new materials or *2020-2024 Reno Plasterers Master Labor Agreement* 4 techniques involved in plaster construction including but not limited to what is known as green or sustainable construction technology.

Craft: PLUMBER/PIPEFITTER (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Plumber/Pipefitter-Journeyman.....	66.95
Plumber/Pipefitter-Foreman.....	71.48
Plumber/Pipefitter-General Foreman.....	76.01

ADD ZONE RATE

In addition to PLUMBER/PIPEFITTER rates add the applicable amounts per statute air mile radius from the Nevada freeway interchange of Interstate 80 and 580.

Zone 1	0 to 75	\$0.00
Zone 2	Over 75 miles	\$8.00

A separate free zone will be established for employees permanently residing and working within a seventy-five (75) statute air mile radius of the Elko, Nevada Post Office.

Zone 1	0 to 75	\$0.00
Zone 2	Over 75 miles	\$8.00

ADD PREMIUM PAY

Premium pay for hours worked in excess of a shift of 8 hours or 12 hours or such other time increment set forth in the Collective Bargaining Agreement or on a weekend or holiday.

RECOGNIZED HOLIDAYS

New Year's Day, Memorial Day, Fourth of July, Labor Day, Nevada Admission Day, Thanksgiving Day, the Friday after Thanksgiving Day, Day Before Christmas and Christmas Day and any Friday preceding a Holiday falling on a Saturday, if worked, holidays shall be compensated at the double time rate.

JOB DESCRIPTION Excerpt from Agreement between LU 350 of United Assoc. of Journeymen and Apprentices of the Plumbing and Pipefitting Industry of United States and Canada

Installation of all heating and refrigeration systems and competent parts thereof, including fabrication, assembling, erection installation, dismantling, repairing, reconditioning, adjusting, altering servicing, handling, distributing, and tying on all piping materials appurtenances and equipment by method, including all hangars and supports of every description, all other work including the the trade relevant to oil burner and all other types of heating and refrigeration equipment including low voltage controls.

Craft: REFRIGERATION MECHANIC (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Refrigeration-Journeyman.....	59.34
Refrigeration -Foreman.....	62.81
Refrigeration -General Foreman	66.27

ADD PREMIUM PAY

Premium pay for hours worked in excess of a shift of 8 hours or 12 hours or such other time increment set forth in the Collective Bargaining Agreement or on a weekend or holiday.

RECOGNIZED HOLIDAYS

New Year's Day, Memorial Day, Fourth of July, Labor Day, Nevada Admission Day, Thanksgiving Day, the Friday after Thanksgiving Day, Day Before Christmas and Christmas Day and any Friday preceding a Holiday falling on a Saturday, if worked, holidays shall be compensated at the double time rate.

JOB DESCRIPTION Excerpt from Agreement between LU 350 of United Assoc. of Journeymen and Apprentices of the Plumbing and Pipefitting Industry of United States and Canada

Installation of all heating and refrigeration systems and competent parts thereof, including fabrication, assembling, erection installation, dismantling, repairing, reconditioning, adjusting, altering servicing, handling, distributing, and tying on all piping materials appurtenances and equipment by method, including all hangars and supports of every description, all other work including the trade relevant to oil burner and all other types of heating and refrigeration equipment including low voltage controls.

Craft: ROOFER (Non-Union Rate)
(Does not include sheet metal roofs)

Prevailing wage rates include the base rate as well as all applicable fringes

Roofer-Journeyman.....33.64

ROOFER

Includes but is not limited to:

1. Installing and covering roofs and structures with slate, asphalt, wood and other related materials, other than sheet metal, by using brushes, knives, punches, hammers and other tools;
2. Spraying roofs, sidings and walls with material to bind, seal, insulate or soundproof sections of a structure;
3. Installation of all plastic, slate, slag, gravel, asphalt and composition roofing, and rock asphalt mastic when used for damp and waterproofing;
4. Installation of all damp resisting preparations when applied on roofs with mop, three-knot brush, roller, swab or spray system;
5. All types of preformed panels used in waterproofing;
6. Handling, hoisting and storing of all roofing, damp and waterproofing materials;
7. The tear-off and/or removal of roofing and roofing materials;

Craft: SHEET METAL WORKERS (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Sheet Metal Worker Journeyman.....	71.50
Sheet Metal Worker -Foreman.....	75.71
Sheet Metal Worker -General Foreman.....	79.93

ADD ZONE RATE

In addition to SHEET METAL rates add the applicable amounts per hour, calculated based on a road from the courthouse in Reno, Nevada:

Zone 1	0 to 75 miles	\$0.00
Zone 2	75 to 100 miles	\$5.00
Zone 3	Over 100 miles	\$10.00 the employee shall be provided reasonable lodging and meal expenses.

ADD PREMIUM PAY

All hourly rates are subject to Over Time (One and one half 1 ½) of the Regular rate:

1. For all hours worked over Eight (8) Hours in one day or shift.
2. For the first Eight (8) Hours work on Saturday.

All hourly rates are subject to Double Time of the Regular Rate:

1. For all hours worked over Ten (10) Hours in one day or shift.
2. For all hours worked over Eight (8) Hours on Saturday.
3. For all hours worked on Sunday, New Year’s Day, President’s Day, Memorial Day, Independence Day, Labor Day, Nevada Day, Thanksgiving Day, Day after Thanksgiving, Day before Christmas, and Christmas Day.

RECOGNIZED HOLIDAYS

New Year’s Day, President’s Day, Memorial Day, Independence Day, Labor Day, Nevada Day, Thanksgiving Day, Day after Thanksgiving, Day before Christmas, and Christmas Day

JOB DESCRIPTION: Excerpt from Sheet Metal Local 26 Collective Bargaining Agreement

(a) manufacture, fabrication, assembling, handling, erection, installation, dismantling, conditioning, adjustment, alteration, repairing and servicing of all ferrous or nonferrous metal work and all other materials used in lieu thereof and of all HVAC systems, air veyor systems, exhaust systems, and air-handling systems regardless of material used including the setting of all equipment and all reinforcements in connection therewith; (b) all lagging over insulation and all duct lining; (c) testing and balancing of all air-handling equipment and duct work; (d) the preparation of all shop and field sketches whether manually drawn or computer assisted used in fabrication and erection, including those taken from original architectural and engineering drawings or sketches; (e) metal roofing; and (f) all other work included in the jurisdictional claims of International Association of Sheet Metal, Air, Rail and Transportation Workers.

Craft: SPRINKLER FITTER (Non-Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Sprinkler Fitter-Journeyman.....27.08

JOB DESCRIPTION

Installing, dismantling, maintenance, repairs, adjustments and corrections of all fire protection and fire control systems Including the unloading, handling by hand, power equipment and installation of all piping or tubing, appurtenances and equipment pertaining thereto, including both overhead and underground water mains, fire hydrants and hydrant mains, standpipes, and hose connections to sprinkler systems, sprinkler tank heaters, air lines and thermal systems used in connection with sprinkler and alarms systems, also all tanks and pumps connected thereto. Also including shall be CO2 and Cardox Systems, Dry Chemical Systems, Foam Systems and all other fire protection systems, but excluding steam fire protection systems.

Craft: SOILS and MATERIAL TESTER (Non-Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Soil Tester (Certified).....44.17
Soils and Materials Tester.....44.17

Craft: SURVEYOR (Non-Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Surveyor.....38.81

SURVEYOR, includes but is not limited to:

1. Planning ground surveys designed to establish base lines, elevation and other geodetic measurements;
2. Compiling data relevant to the shape, contour, gravitation, location, elevation and dimension of land and land features on or near the surface of the Earth for engineering, map making, mining, land evaluation, construction and other purposes;
3. Surveying bodies of water to determine navigable channels and to secure data for construction of breakwaters, piers and other marine structures;
4. Computing data necessary for driving and connecting underground passages, underground storage and volume of underground deposits.

Craft: TAPER (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Taper-Journeyman.....	53.86
Taper-Foreman.....	57.75

ADD ZONE RATE

In addition to: TAPER rates add the applicable amounts per hour Zone Pay shall commence from Maryland Parkway and Charleston Boulevard and shall be paid as follows:

Zone 1	0 to 40 miles	\$0.00
Zone 2	40 to 60 miles	\$2.50
Zone 3	over 60 miles	\$4.25

RECOGNIZED HOLIDAYS

New Year’s Day, President’s Day, Memorial Day, Independence Day, Labor Day, Veteran’s Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

ADD PREMIUM PAY

All overtime, except Sundays and holidays, will be time and one-half (1 1/2). Sundays and holidays will be paid double time (2X). Any and all work performed in excess of the regular workday of eight (8) hours, or ten (10) hours if mutually agreed to, and the regular workweek of forty (40) hours shall be considered overtime and shall be paid for at one and one-half (1 1/2) times the regular hourly rate.

JOB DESCRIPTION: Excerpt from Agreement between DC 16 and the independent Drywall Contractors of Northern Nevada

SECTION 1 -- The scope of work covered by this Agreement shall include (but not be limited to) all work operations, including distribution to the point of application, as follows:

- (a) Work or services pertaining to the preparation, spotting, pointing, detailing, flushing, sanding and finishing of interior and/or exterior gypsum, drywall, thin wall, concrete, steel, wood and plaster surfaces, spackling of all surfaces where adhesive materials are used; and all drywall pointing, taping and finishing.
- (b) Work or services pertaining to the application of all finish or flushing materials regardless of method of application or type of surface on which materials are applied, including but not limited to texture and simulated acoustic materials of all types and the application of radiant heat fill and steel fireproofing materials.
- (c) Work or services pertaining to the installation of protective coverings and masking prior to the application of finish materials.
- (d) The operation and care of all taping tools and texturing equipment used in the finishing and texturing of drywall and other surfaces including brushes, rollers, spray texturing equipment, miscellaneous hand, mechanical, and power tools, and the operation and maintenance of compressors required in the finishing and texturing of such surfaces.
- (e) No limitation shall be placed on the work covered by this Agreement by reason of the surface, type of material or purpose for which the materials used are designed or intended.
- (f) The cleanup of all materials and debris occasioned by any job operation at the site of construction, alteration, or repair undertaken whether such operation occurs on the interior or exterior of a building structure.

Craft: TILE SETTER/TERRAZZO WORKER/MARBLE MASON FINISHER (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Tile Setter/Terrazzo Worker/Marble Mason- Finisher.....	37.82
Tile Setter/Terrazzo Worker/Marble Mason- Finisher Foreman.....	39.07
Tile Setter/Terrazzo Worker/Marble Mason Finisher- General Foremen.....	40.82

ADD PREMIUM PAY

All work in excess of forty (40) hours during the established work week shall be paid at the rate of one and one-half (1-1/2) times the hourly base wage rate in effect.

Employees shall be paid one and one-half (1-1/2) times the hourly wage rate for all hours worked over eight (8) in a single day and double time after ten (10) hours in a single day, Monday through Friday, except recognized holidays.

Daily Overtime Saturdays the first ten (10) hours performed on Saturday shall be paid at one and one-half (1-1/2) times the straight time wage rate.

Daily Overtime Sunday- Employees shall be paid double time on Sundays if forty (40) straight time hours have been worked during the proceeding work week.

Holidays shall be paid double time for hours owed on recognized holidays.

RECOGNIZED HOLIDAYS

New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day. Any holiday falling on a Sunday will be observed on Monday.

JOB DESCRIPTION: Excerpt from Agreement between BAC 13 Nevada of the Mountain West Administrative District Council Master Labor Agreement

FINISHER'S WORK:

Finisher's work shall consist of assisting, helping or supporting the tile, marble and terrazzo mechanic by performing their historic and traditional work assignments. required to complete the proper installation of the work covered by Sections 5, 7 and 8 of this Code.

Craft: TILE SETTER/TERRAZZO WORKER/MARBLE MASON (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Tile Setter Journeyman.....	47.87
Tile Setter Foreman.....	49.12
Tile Setter General Foreman.....	50.87
Terrazzo/Marble Mason-Journeyman	49.37
Terrazzo/Marble Mason-Foreman	50.62
Terrazzo/Marble Mason-General Foreman.....	52.37

ADD ZONE RATE

In addition to TILE SETTER/TERRAZZO WORKER/MARBLE MASON rates add the applicable amounts per hour, calculated based on a road miles of over fifty (50) miles from the Washoe County Courthouse in Reno, Nevada:

Zone 1	0 to 50 miles	\$0.00
Zone 2	50 to 75 miles	\$3.75
Zone 3	Over 70 miles	\$8.13

ADD PREMIUM PAY

All work in excess of forty (40) hours during the established work week shall be paid at the rate of one and one-half (1-1/2) times the hourly base wage rate in effect.

Employees shall be paid one and one-half (1-1/2) times the hourly wage rate for all hours worked over eight (8) in a single day and double time after ten (10) hours in a single day, Monday through Friday, except recognized holidays.

Daily Overtime Saturdays the first ten (10) hours performed on Saturday shall be paid at one and one-half (1-1/2) times the straight time wage rate.

Daily Overtime Sunday- Employees shall be paid double time on Sundays if forty (40) straight time hours have been worked during the proceeding work week.

Holidays shall be paid double time for hours owed on recognized holidays.

RECOGNIZED HOLIDAYS

New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day. Any holiday falling on a Sunday will be observed on Monday.

JOB DESCRIPTION: Excerpt from Agreement between BAC 13 Nevada of the Mountain West Administrative District Council Master Labor Agreement

TILE LAYERS' WORK:

Tile laying shall consist of, but not be limited to, the following work procedures and installation of the following materials:

A. The laying, cutting or setting of all tile where used for floors, walls, ceilings, walks, promenade roofs, stair treads, stair risers, facings, hearths, fireplaces, and decorative inserts, together with any marble plinths, thresholds or window stools used in connection with any tile work; also, preparing and setting all concrete, cement, brickwork, or other foundation or materials that may be required to properly set and complete such work; setting or bedding all tiling, stone, marble, composition, glass, mosaic, or other materials forming the facing, hearth or fireplace of a mantel, or the mantel complete, together with setting of all cement, brickwork, or other materials required in connection with the above work; also the slabbing and fabrication of tile mantels, counters and tile panels of every description, and the erection and installation of same; the building, shaping, forming, construction or repairing of all fireplace work, whether in connection with a mantel hearth facing or not, and the setting and preparing of all material, such as cement, plaster, mortar, brickwork, iron work or other materials necessary for the proper and safe construction and completion of such work, except that a mantel made exclusively of brick, marble or stone, shall be conceded to be bricklayers', marble setters' or stonemasons' work, respectively.

B. It will be understood that the word "tile" refers to all burned clay products, as used in the tile industry, either glazed or unglazed, and to all composition materials made in single units up to 15"x20"x2", except quarry tiles larger than 9"x9"x1 1/4", also to mixtures in tile form of cement, plastics and metals that are made for and intended for use as a finished floor surface, whether upon interior or exterior floors, stair treads, promenade roofs, garden walks, interior walls, ceilings, swimming pools, and all places where tile may be used to form a finished surface for practical use, sanitary finish or decorative purposes, for setting all accessories in connection therewith, or for decorative inserts in other materials.

C. All terra cotta called unit tile in sizes of 6"x12" or under, regardless of method of installation, quarry tile 9"x9"x1 1/4" or less; split brick or quarry tile or similar material where the bed is floated or screeded and the joints grouted. Where the work is installed by tile layers, the grouting and cleaning shall be supervised by the mechanic. The bedding, jointing, and pointing of the above materials shall be the work of the craft installing the same. All clay products known as terra cotta tile, unit tile, ceramic veneer and machine-made terra cotta, and like materials in sizes 6"x12" and less regardless of the method of installation. Where the preponderance of materials to be installed comes within the provisions of this Section and when there is also some material in excess of the sizes provided for in this Section, the tile setter shall install all such materials.

D. The preparation, setup, calibration, operation, cleaning, and routine maintenance of any mechanical devices or robotics used to install tile and related materials, or that otherwise assist the tile layer in performing any of the work described in Article II and Code 1 of the IU Constitution, as well as the preparation and ongoing maintenance of the work area to allow proper installation of tile and related materials.

Craft: TRAFFIC BARRIER ERECTOR (Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

SEE AMENDMENT 3A

Traffic Barrier Erector.....45.53

ADD ZONE RATE

In addition to LABORER rates add the applicable amounts per hour, calculated based on a road miles from either the Carson City Courthouse or the Washoe County Courthouse:

Zone 1	0 to 75 miles	\$0.00
Zone 2	75 to 150 miles	\$4.00
Zone 3	150 to 300 miles	\$5.00
Zone 4	300 miles and over	\$6.00

ADD PREMIUM PAY

One and one half (1 ½) the regular straight time hourly rate shall be paid:

1. For all hours worked over eight (8) hours in one day or shift.
2. For any hours worked on Saturday from mid night to midnight.

Double the regular straight time hourly rate shall be paid for all time:

1. For all hours worked over twelve (12) hours in one day or shift.
2. For any hours worked on Sunday from midnight to midnight.
3. For any hours worked on holidays from midnight to midnight.

RECOGNIZED HOLIDAYS

If any of these holidays fall on Sunday, the Monday following shall be considered a Holiday.

New Year’s Day, President’s Day, Memorial Day, Independence Day, Labor Day, Veteran’s Day, Thanksgiving Day, Day after Thanksgiving Day, Christmas Day.

JOB DESCRIPTION: Excerpt from Agreement between AGC and LIUNA Local 169

1. Distributing traffic control signs and markers along site in designated pattern;
2. Informing drivers of detour routes through construction sites;

Craft: Truck Driver (Non-Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Dump Trucks (Single or Multiple Units Including Semi's & Double Transfer Units), Dumpcretes and Bulk Cement Spreader

Under 4 yds. (water level).....	28.72
4 yds. & under 8 yds. (water level).....	28.72
8 yds. & under 18 yds. (water level).....	28.72
18 yds. & under 25 yds. (water level)	28.72
25 yds. & under 60 yds. (water level).....	28.72
60 yds. & under 75 yds. (water level)).....	28.72
75 yds. & under 100 yds. (water level)).....	28.72
100 yds. & under 150 yds. (water level)).....	28.72
150 yds. & under 250 yds. (water level)).....	28.72
250 yds. & under 350 yds. (water level)).....	28.72
350 yds. & over (water level).....	28.72

Transit Mix

Under 8 yds.....	28.72
Under 8 yds & including 12 yds.....	28.72
Over 12 yds.....	28.72

Transit Mix (Using Boom)

Transit mix with boom shall receive 16 cents per hour above the appropriate yardage classification rate of pay when such boom is used.....	28.72
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Water & Jetting Trucks

Up to 2,500 gallons.....	28.72
Up to 2,500 gallons & over.....	28.72
DW 20's & 21's & other similar Cat type, Terry Cobra LeTourneau pulls, Tournerocker, Euclid, & similar type equipment when pulling Aqua/Pak, Water Tank Trailers, & Fuel, and/or Grease Tank Trailer, or other miscellaneous Trailers, (except as defined under "Dump Trucks")	
Heavy Duty Transport (High Bed).....	28.72
Heavy Duty Transport(Gooseneck low bed).....	28.72
Tiltbed or Flatbed Pull Trailers..	28.72
Bootman, Comb. Bootman & Road Oiler.....	28.72
Flat Rack (2 or 3 axle unit).....	28.72

Bus & Manhaul Drivers

Up to 18,000 lbs. (single unit).....	28.72
18,000 lbs. and over	28.72
Warehousemen Spotter	28.72

Winch Truck & "A" Frame Drivers

Up to 18,000 lbs.	28.72
18,000 lbs. and over.....	28.72
Warehousemen Spotter.....	28.72
Warehouse Clerk.....	28.72
Tire Repairmen.....	28.72
Truck Repairmen.....	28.72
Pick Up Truck & Pilot Cars (Jobsite)	28.72
Pick Up Truck & Pilot Cars (Over the road)	28.72
Truck Oil Greaser.....	28.72
Fuel Truck Driver.....	28.72
Fuel Man & Fuel Island Man.....	28.72
Oil Tanker.....	28.72

Oil Tanker with Pup.....	28.72
Foreman.....	28.72

TRUCK DRIVER

Includes but is not limited to:

Driving a tractor trailer combination or a truck to transport goods or materials at the site of a public work or between sites of a public work. (Also, see descriptions listed with Truck Driver rates, if any.)

Craft: WELL DRILLER (Non-Union Rate)

Prevailing wage rates include the base rate as well as all applicable fringes

Well Driller.....31.29

JOB DESCRIPTIONS

1. Setting, operating or tending to portable drilling rig machinery and related equipment to drill wells;
2. Extending stabilizing jackscrews to support and level a drilling rig;
3. Installing water well pumps;
4. Drillings wells for industrial water supplies, irrigation water supplies or water supplies for any other purpose; dewatering or other similar purposes; exploration; hole drilling for geologic and hydrologic information; and core drilling for geologic information.

GROUP CLASSIFICATIONS

LABORER, includes but is not limited to:

Group 1

- All cleanup work of debris, grounds, and building including windows and tile
- Dumpmen or Spotter (other than asphalt)
- Handling and Servicing of Flares, Watchmen
- General Laborer
- Guideposts and Highway Signs
- Guardrail Erection and Dismantling
- Limber, Brushloader and Piler
- Pavement Marking and Highway Striping
- Traffic Barrier Erector
- Tending to portable space heaters
- Profilograph work all types manual, self propelled or carts
- Gabion basket, building, handling, installation and rigging
- Dry set paver work
- Traffic Barrier Erector

Group 2

- Choker setter or Rigger (clearing work only) Pittsburgh
- Chipper and similar type brush shredders
- Concrete worker (wet or dry) all concrete work not listed in Group 3 included but not limited to: concrete forms stripping, handling, cleaning, oiling and moving to the next point of installation.
- Crusher or Grizzly Tender
- Greasing Dowels
- Guinea Chaser (Stakemen)
- Panel Forms (wood or metal) handling, cleaning and stripping of Loading and unloading, (Carrying and handling of all rods and material for use in reinforcing concrete
- Railroad Trackmen (maintenance, repair or builders)
- Sloper
- Semi-Skilled Wrecker (salvaging of building materials other than those listed in Group 3)
- Waterproofing work
- Epoxy rebar/dowels and anchoring dowel baskets
- Placement pouring of concrete including any epoxy resin or similar materials, rodding, spreading and tamping concrete, brooming or brushing, hand application of curing compounds, applying topping (wet or dry) colors or grits, and exposed finishes for architectural work
- Concrete patching, dry packing, chipping, stoning, and grouting
- Concrete cold weather/rain protection and curing
- Placement /anchoring of all earth stabilization/filters fabrics,
- Mechanically stabilized Earth (MSE) and Keystone type retaining walls rigging, placing , aligning, backfilling and installation of dead men and any stabilization compenents

Group 3

- Asphalt Workers (Ironers, Shovelers, Cutting Machine)
- Buggymobile

- Chainsaw, Faller, Logloader and Bucker
- Compactor (all types)
- Concrete Mixer under 1/2 yard
- Concrete Pan Work (Breadpan type), handling, cleaning\stripping
- Concrete Saw, Chipping, Grinding, Sanding, Vibrator
- Cribbing, Shoring, Lagging, Trench Jacking, Hand-Guided Lagging Hammer
- Curbing or Divider machine
- Curb Setter (precast or cut)
- Ditching Machine (hand-guided)
- Drillers Helper, Chuck Tender
- Fence erector including safety, chain link, turtle, field and barbe wire fencing
- Form Raiser, Slip Forms
- Grouting of Concrete Walls, Windows and Door Jams
- Headerboardmen
- Jackhammer, Pavement Breaker, Air Spade
- Mastic Worker (wet or dry)
- Pipewrapper, Kettlemen, Potmen, and men applying asphalt, creosote and similar type materials
- All Power Tools (air, gas, or electric), Post Driver
- Riprap-Stonepaver and RockSlinger, including placing of sack concrete wet or dry Rototiller
- Rigging and Signaling in connection with Laborers' work
- Sandblaster, Potmen, Gunmen or Nozzlemen water blasting not covered in group 5A
- Vibra-screed
- All demolition and wrecking work including but not limited t any torch work cutting, burning, plasma are, dust control, and salvaging (removing and salvaging of all materials, windows, doors, plumbing, and electrical fixtures) and use of customary tools and equipment for demolition and wrecking
- All underpinning foundation work, digging and underpinning pits, removal of debris with tuggers or other methods, cutting, handling and installing all shoring boards and lagging boards used for underpinning and foundation work, placement and tying of steel reinforcing for underpinning piers, all tiebacks and soil nail work drilling and grouting, all soldier beam work and us of customary tools and equipment for underpinning foundation work

Group 3A

- Concrete Specialist
- Setting screeds
- Screed pins
- Curb forms and curb and gutter forms,
- Using Darby and push floats,
- Hand trowels or hand floating
- Marking edging
- Using base cove or step tools
- Spreading and finishing gypsum
- Concrete grinding machines (the terms does not include Rotomill machines for highway overlay grinding)
- Troweling machines,
- Floating machines
- Finishing of epoxy or resin materials,
- Operation of skill saw

- Laser Screed
- Laser Level
- Curb and Slipform machines,
- Stamps or other means or texturing,
- Any new devices which are beneficial to the construction of or with concrete or related products.

Group 4

- Burning and Welding in connection with Laborers' work
- Joy Drill Model TWM-2A, Gardner Denver Model DN143 and similar type drills (in accordance with Memorandum of Understanding between Laborers and Operating Engineers dated at Miami, Florida, Feb. 3, 1954) and Track Drillers, Diamond Core Drillers, Wagon Drillers, Mechanical Drillers on Multiple Units
- High scalers including but not limited to laying, anchoring, pinning, cabling and stretching of any rock fall netting, mesh or wire fabric and use of customary tools and equipment for high scaling
- Concrete pump operator
- Heavy Duty Vibrator with Stinger 5" diameter or over
- Pipelayer, Caulker and Bander
- Pipelayer-waterline, Sewerline, Gasoline, Conduit and all other types of composition for any purpose buried under ground outside of building including, stringing, trench shoring, backfilling sanding, caution taping, all walk behind equipment and spotting
- Laborer work in connection with micro tunneling, directional drilling and pipe-jacking
- Cathodic protection, grounding for pipe work
- Cleaning of Utility Lines
- Slip Lining of Utility Lines (including operation of Equipment)
- TV Monitoring and Grouting of Utility Lines
- Asphalt Rakers and Asphalt dump Man
- All mechanical and pressurized pipe work, including the installation of pipe above and below ground, cathodic protection, bolt up, and support installation in connection to water conveyance, c

Group 4A

- Foreman

Group 5

- Construction Specialists
- Blasters and Powdermen, all work of loading, placing, and blasting of all powder and explosives of any type, regardless of method used for such loading and placing
- Asbestos removal
- Lead abatement
- Hazardous waste
- Material removal

Group 5A

- Pavement Marking and Highway Striping
- Pavement Marking and Highway Striping Foreman
- Pavement Marking and Highway Striping work includes but is not limited to: All work by any method performed in connection with the permanent or temporary application and installation of pavement marking of any kind, brand, type or style on parking lots, airfields, highways,

streets and other such surfaces and all work performed in connection with removal of pavement.

Group 6

- Guniting Foremen, Nozzlemen, Rodmen, Gunmen, Materialmen, Reboundmen
 - Tunnel and shaft workers/miners and use of customary tools and equipment for tunnel and mine work All work performed in a compressed air tunnel shaft or chamber including the use of hand, power tools or equipment as necessary in connection with compressed air work
-

OPERATING ENGINEER, includes but is not limited to:

Group 1

- Engineer Assistant

Group 1A

- Oiler (Construction)
- Partsman

Group 2

- Compressor Operator
- Material Loader and/or Conveyor Operator (handling building materials)
- Pump Operator

Group 3

- Bobcat or similar loader, 1/4 cu. yd. or less
- Concrete Curing Machines (streets, highways, airports, canals)
- Conveyor Belt Operator (tunnel)
- Forklift (under 20)
- Engineer Generating Plant (500 K.W.)
- Mixer Box Operator (concrete plant)
- Motorman
- Rodman/Chainman
- Rotomist Operator
- Oiler (truck crane)

Group 4

- Concrete Mixer Operator, Skip type
- Dinky Operator
- Forklift (20' or over) or Lumber Stacker
- Ross Carrier
- Skip Loader Operator (under one (1) cu. yd.)
- Tie Spacer

Group 5

- Concrete Mixers (over one (1) cu. yd.)
- Concrete Pumps or Pumpcrete Guns
- Elevator and Material Hoist (one (1) drum)
- Groundman for Asphalt Milling and similar

Group 6

- Auger type drilling equipment up to and including 30 ft. depth digging capacity M.R.C.
- Boom Truck or Dual-Purpose a-Frame Truck
- B.L.H. Lima Road Pactor or similar
- Chip Box Spreader (Flaherty type or similar)
- Concrete Batch Plant (wet or dry)
- Concrete Saws (highways, streets, airports, canals)
- Locomotives (over thirty (30) tons)
- Maginnis International Full Slab Vibrator (airports, highways, canals and warehouses)
- Mechanical Finishers (concrete) (Clary, Johnson, Bidwell Bridge Deck or similar types)

- Mechanical Burn, Curb and/or Curb and Gutter Machine (concrete or asphalt)
- Pavement Breaker, Truck Mounted, with compressor combination
- Pavement Breaker or Tamper (with or without compressor combination)
- Power Jumbo Operator (setting slip-forms, etc., in tunnels)
- Roller Operator (except asphalt)
- Self-Propelled Tape Machine
- Self-Propelled Compactor (single engine)
- Self-Propelled Power Sweeper Operator
- Slip-Form Pump (power-driven by hydraulic, electric, air, gas, etc. lifting device for concrete forms)
- Small Rubber-Tired Tractors
- Snooper Crane, Paxton-Mitchell or similar
- Stationary Pipe Wrapping, Cleaning and Bending Machine Operator

Group 7

- Auger type drilling equipment over 30 ft. depth digging capacity M.R.C.
- Compressor (over 2)
- Concrete Conveyor or Concrete Pump, truck or equipment mounted (any assistance required shall be performed by an Assistant to Engineer) Boom length to apply Concrete Conveyor, Building Site
- Drilling and Boring Machine, vertical and horizontal (not to apply to waterliners, wagon drills or jack hammers)
- Crusher Plant Engineer
- Generators
- Instrument Man
- Kolman Loader
- Material Hoist (two (2) or more drums)
- Mine or Shaft Hoist
- Pipe Bending Machines (pipeline only)
- Pipe Cleaning Machines (tractor-propelled and supported)
- Pipe Wrapping Machines (tractor-propelled and supported)
- Portable Crushing and Screening Plants
- Post Driller And/or Driver
- Pumps (over 2)
- Screedman (except asphaltic or concrete paving)
- Self-Propelled Boom-Type Lifting Device (center mount) (on ten (10) ton capacity or less)
- Slusher Operator
- Soil Tester (Certified)
- Soils and Materials Tester
- Surface Heater and Planer Operator
- Trenching Machine (maximum digging capacity three (3) ft. depth) (Any assistance in the operation, if needed, shall be performed by an Assistant to Engineer)
- Truck-Type Loader
- Welding Machines (gasoline or diesel)

Group 8

- Articulated on-Site Dump Trucks
- Asphalt Plant Engineer
- Asphalt Milling Machine

- Cast-In-Place Pipe-Laying Machine
- Combination Slusher and Motor Operator
- Concrete Batch Plant (multiple units)
- Dozer Operator
- Drill Doctor
- Elevating Grader Operator
- Stiff Frame Off Road Haul Trucks
- Grooving and Grinding Machine (highways)
- Ken Seal Operator
- Marination Plant
- Loader (up to and including two and one-half (2 1/2) cu. yds)
- Mechanical Finishers or Spreader Machine (asphalt, Barber-Greene or similar)
- Shuttle Buggy
- Mechanical Trench Shield
- Mixermobile
- Push Cats
- Road Oil Mixing Machine Operator Wood-Mixer (and other similar Pugmill equipment)
- Roller Operator (asphalt)
- Rubber-Tired Earthmoving Equipment (up to and including thirty-five (35) cu. yds. "struck " M.R.C., Euclids, T-Pulls, DW10, 20, 21 and similar)
- Water Pull
- Screedman (Barber-Greene and similar) (asphaltic or concrete paving)
- Self-Propelled Compactors with Dozer; Hyster 450, Cat 825 or similar
- Sheepfoot
- Small Tractor (with boom)
- Soil Stabilizer (P & H or equal)
- Timber Skidder (rubber-tired) or similar equipment
- Track Loader
- Tractor-Drawn Scraper
- Tractor Operator
- Tractor-Mounted Compressor Drill Combination
- Trenching Machine Operator (over three (3) feet depth)
- Tri-Batch Paver
- Tunnel Badger or Tunnel Boring Machine Operator
- Tunnel Mole Boring Machine
- Vermeer T-600b Rock Cutter
- Vacuum Truck(excludes trailer mounted vaccums)

Group 9

- Chicago Boom
- Combination Backhoe and Loader (up to and including 3/8 cu. yd.)
- Combination Mixer and Compressor (gunite)
- Heavy Duty Repairman and/or Welder
- Lull Hi-Lift (twenty (20) feet or over)
- Mucking Machine
- Sub-Grader (Gurries or other types)
- Tractor (with Boom) (D6 or larger)
- Track-Laying-Type Earthmoving Machine (single engine with tandem scrapers)

Group 10

- Boom-Type Backfilling Machine
- Bridge Crane
- Cary-Lift or similar
- Chemical Grouting Machine
- Chief of Party
- Derricks (two (2) Group 10 Operators required when swing engine remote from hoist)
- Derrick Barges (except excavation work)
- Euclid Loader and similar types
- Heavy Duty Repairman
- Heavy Duty Rotary Drill Rigs
- Lift-Slab (Vagtborg and similar types)
- Loader (over two and one-half (2 1/2 cu. yds. up to and including four (4) cu. yds.)
- Locomotive (over one hundred (100) tons, single or multiple units)
- Multiple-Engine Earthmoving Machines (Euclid Dozers, etc.)
- Pre-Stress Wire Wrapping Machine
- Rubber-Tired Scraper, Self-Loading
- Single-Engine Scraper (over thirty-five (35) cu. yds.)
- Shuttle Car (Reclaim Station)
- Train Loading Station
- Trenching Machine multi-engine with sloping attachments (Jefco or similar)
- Vacuum Cooling Plant
- Whirley Crane (up to and including twenty-five (25) tons)

Group 10A

- Backhoe-Hydraulic (up to and including one (1) cu. yd.)
- Backhoe (up to and including one (1) cu. yd.) (Cable)
- CMI Dual Lane Auto-Grader SP30 or similar type
- Cranes (not over twenty-five (25) tons) (hammerhead and gantry)
- Finish Blade
- Gradalls (up to and including one (1) cu. yd.)
- Motor Patrol Operator
- Power Shovels, Clamshells, Draglines, Cranes (up to and including one (1) cu. yd.)
- Rubber-Tired Scraper, Self-Loading (twin engine)
- Self-Propelled Boom-Type Lifting Device, center mount (over 10 tons up to and including 25 tons)

Group 11

- Automatic Asphalt or Concrete Slip-Form Paver
- Automatic Railroad Car Dumper
- Canal Trimmer
- Cary Lift, Campbell or similar type
- Cranes (over twenty-five (25) tons)
- Euclid Loader when controlled from the Pullcat
- Finish Blade
- Gradesetter, Grade Checker
- Highline Cableway Operator
- Loader (over four (4) cu. yds. up to and including twelve (12) cu. yds.)

- Multi-Engine Earthmoving Equipment (up to and including seventy-five (75) cu. yds. struck m.r.c.)
- Multi-Engine Scrapers (when used to Push Pull)
- Power Shovels, Clamshells, Draglines, Backhoes Gradalls (over one (1) cu. yd. and up to and including seven (7) cu. yds. m.r.c.)
- Self-Propelled Boom-Type Lifting Device (center mount) (over 25 tons m.r.c.)
- Self-Propelled Compactor (with multiple-propulsion power units)
- Single-Engine Rubber-Tired Earthmoving Machine, with Tandem Scraper
- Slip-Form Paver (concrete or asphalt)
- Tandem Cats and Scraper
- Tower Crane Mobile (including Rail Mount)
- Truck Mounted Hydraulic Crane when remote control equipped (over 10 tons up to and including 25 tons)
- Universal Liebherr and Tower Cranes (and similar types)
- Wheel Excavator (up to and including seven hundred fifty (750) cu. yds. per hour)
- Whirley Cranes (over twenty-five (25) tons)

Group 11A

- Band Wagons (in conjunction with Wheel Excavators)
- Operator of Helicopter (when used in construction work)
- Loader (over twelve (12) cu. yds.)
- Multi-Engine Earthmoving Equipment (over seventy-five (75) cu. yds. "struck" m.r.c.)
- Power Shovels, Clamshells, Draglines, Backhoes, and Gradalls (over seven (7) cu. yds. m.r.c.)
- Remote-Controlled Earth Moving Equipment
- Wheel Excavator (over seven hundred fifty (750) cu. yds. per hour)

Group 11B

- Holland Loader or similar or Loader (over 18 cu. yds.)

OPERATING ENGINEERS - Steel Fabricator & Erector

Group 1

- Cranes over 100 tons
- Derrick over 100 tons
- Self-Propelled Boom Type Lifting Devices over 100 tons

Group 2

- Cranes over 45 tons up to and including 100 tons
- Derrick, 100 tons and under
- Self-Propelled Boom Type Lifting Device, over 45 tons
- Tower Crane

Group 3

- Cranes, 45 tons and under
- Self-Propelled Boom Type Lifting Device, 45 tons and under

Group 4

- Chicago Boom
- Forklift, 10 tons and over

- Heavy Duty Repairman/Welder

Group 5

- Boom Cat
-

OPERATING ENGINEER -PILEDRIVER

Group 1

- Derrick Barge Pedestal mounted over 100 tons
- Clamshells over 7 cu. yds.
- Self-Propelled Boom Type Lifting Device, over 100 tons
- Truck Crane or Crawler, land or barge mounted over 100 tons

Group 2

- Derrick Barge Pedestal mounted 45 tons up to and including 100 tons
- Clamshells up to and including 7 cu. yds.
- Self-Propelled Boom Type Lifting Device over 45 tons
- Truck Crane or Crawler, land or barge mounted, over 45 tons up to and including 100 tons

Group 3

- Derrick Barge Pedestal mounted under 45 tons
- Self-Propelled Boom Type Lifting Device 45 tons and under
- Skid/Scow Piledriver, any tonnage
- Truck Crane or Crawler, land or barge mounted 45 tons and under

Group 4

- Assistant Operator in lieu of Assistant to Engineer
- Forklift, 10 tons and over
- Heavy Duty Repairman/Welder

Group 5

No current classification

Group 6

- Deck Engineer

Group 7

No current classification

Group 8

- Deckhand
 - Fireman
-

Forms

(to be used following award of bid)

- 1) Contract Form**
- 2) Performance Bond**
- 3) Payment Bond**



TITLE
BID # BIDNUMBER
PWP# PWPNUMBER

THIS CONTRACT made and entered into on this DAY day of MONTH, YEAR by and between the City of Sparks, Nevada, a municipal corporation, existing under and by virtue of the laws of the State of Nevada, hereinafter called "City", and **CONTRACTORNAME**, a qualified Contractor in the class of work required, hereinafter called "Contractor".

W I T N E S E T H

WHEREAS, the City has awarded a contract to Contractor for providing material and/or performing the work hereinafter mentioned in accordance with the proposal of said Contractor;

WHEREAS, the Contractor will provide the material and/or perform the work for the compensation stated in said proposal, an amount which has been arrived at between the parties;

WHEREAS, each party is willing to and does assume joint liability for the contents of this Contract, and each party accordingly agrees that it shall not be construed against any party as a drafting party;

NOW, THEREFORE, IT IS AGREED as follows:

1. Scope of Work:

The scope of work for this contract is generally defined as **TITLE**. The City's Contract Documents and Contractor's Entire Proposal are on file with the City of Sparks. All terms, conditions and requirements contained within these Documents, including any and all bid documents, addenda and specifications issued by the City, are hereby incorporated by reference into this Contract.

The Contractor shall perform within the time stipulated, the Contract as herein defined and shall provide and furnish any and all of the labor, materials, methods or processes, equipment implements, tools, machinery and equipment, and all utility, transportation and other services required to construct, install and put in complete order for use in a good and workmanlike manner all of the work covered by the Contract in connection with strict accordance with the plans and specifications therein, which were approved by said City and are on file with the City, including any and all addenda issued by the City, and with the other contract documents hereinafter enumerated.

2. Payment for Project Services

As full consideration for the Services to be performed by Contractor, City agrees to pay Contractor as set forth in accordance with the bid and not to exceed fee of **\$AMOUNT** for the project.

A monthly progress payment in the amount of ninety-five percent (95%) of the value of the work completed may be made every thirty (30) days upon application by the Contractor and certification by the Project Manager that such work has been completed.

Partial payments will be made once each month as the work satisfactorily progresses and after acceptance



by the authorized City representative. The progress estimates shall be based upon materials in place, or on the job site and invoiced, and labor expended thereon. From the total of the amount ascertained will be deducted an amount equivalent to five percent (5%) of the whole, which five percent (5%) will be retained by the City until after completion of the entire Contract in an acceptable manner. Any time after fifty percent (50%) of the value of the work has been completed, the City will make any of the remaining partial payments in full.

No such estimates or payments shall be required to be made, when, in the judgment of the City Project Manager, the work is not proceeding in accordance with the provision of the Contract, or when in his judgment the total value of the work done since last estimate amounts to less than Five Hundred Dollars (\$500.00).

The cost of materials conforming to the plans and specifications (materials being those which are required to be contained and incorporated in a finished contract bid item) delivered to the project and not at the time incorporated in the work, may also be included in the estimate for payment. No such estimate or payment shall be construed to be an acceptance of any defective work or improper material. The Contractor shall be responsible for, and shall not remove from the project any material that has been included in the estimate for payment.

Final payment shall be made upon the Project Manager certifying that the Contractor has satisfactorily completed the work in conformity with the Contract Documents.

3. Time for Completion:

The Contractor shall deliver the material and/or services called for in the specifications/proposal and within the delivery time specified and in accordance with the terms of the contract. Work shall be completed within _____ days from the Notice to Proceed issued by the City of Sparks Purchasing Division. The Contractor shall not alter or vary any terms or conditions contained or incorporated herein, including but not limited to, the quantity, price, delivery date or date designated as After Receipt of Order (ARO) or date for commencement or completion of services as mutually agreed upon, unless such alteration or variation is consented to in writing by a duly authorized representative of the City.

The City reserves the right to cancel resultant Contract upon ten days written notice in the event the type and quality of the product or work performance is unsatisfactory or in default, subject to Contractor's right to cure as outlined in termination clause.

This is a non-exclusive Contract and the City reserves the right to acquire the material and/or services at its discretion, from other sources during the term of this Contract.

4. No Unlawful Discrimination:

In connection with the performance of work under this contract, the contractor agrees not to discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, sexual orientation, gender identity or expression, or age, including, without limitation, with regard to employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including, without



limitation, apprenticeship. The contractor further agrees to insert this provision in all subcontracts hereunder, except subcontracts for standard commercial supplies or raw materials.

Any violation of these provisions by Contractor shall constitute a material breach of contract. In all cases where persons are employed in the construction of public works, preference must be given when the qualifications of the applicants are equal:

- A) First: To honorably discharged soldiers, sailors and marines of the United States who are citizens of the State of Nevada.
- B) Second: To other citizens of the State of Nevada

If the provisions of this section are not complied with by the contractor engaged on the public work, the contract is void, and any failure or refusal to comply with any of the provisions of this section renders any such contract void and subject to the exceptions contained in this section, no money may be paid out of the State Treasury or out of the treasury of any political subdivision of the State to any person employed on any work mentioned in this section unless there has been compliance with the provisions of this section. Any contractor engaged on a public work or any other person who violates any of the provisions of this section is guilty of a misdemeanor. The penalties provided for in this section do not apply where violations thereof are due to misrepresentations made by the employee or employees.

5. No Illegal Harassment:

Violation of the City's harassment policy, which is incorporated by reference and available from the Human Resource Division, by the Contractor, its officers, employees, agents, vendors, consultants, subcontractors and anyone from whom it is legally liable, while performing or failing to perform Contractor's duties under this Contract shall be considered a material breach of contract.

6. Lawful Performance:

Vendor shall abide by all Federal, State and Local Laws, Ordinances, Regulations, and Statutes as may be related to the performance of duties under this agreement. In addition, all applicable permits and licenses required shall be obtained by the vendor, at vendor's sole expense.

7. Preferences (This Section IS IS NOT Applicable to this contract):

To the extent Contractor has sought and qualified for a bidding preference and this project has a value of over \$250,000 pursuant to Nevada Revised Statutes Chapter 338, Contractor acknowledges and agrees that the following requirements will be adhered to, documented and attained for the duration of the Project:

- 1. At least 50 percent of the workers employed on the Project (including subcontractors) hold a valid driver's license or identification card issued by the Nevada Department of Motor Vehicles;
- 2. All vehicles used primarily for the public work will be (a) registered and (where applicable) partially apportioned to Nevada; or (b) registered in Nevada; and
- 3. The Contractor shall maintain and make available for inspection within Nevada all payroll records related to the Project.

Contractor recognizes and accepts that failure to comply with any requirements herein shall be a



material breach of the contract and entitle the City of Sparks to liquidated damages in the amount set by statute. In addition, the Contractor recognizes and accepts that failure to comply with any requirements herein may lose its certification for a preference in bidding and/or its ability to bid on any contracts for public works pursuant to NRS Chapter 338.

To the extent Contractor has sought and qualified for a bidding preference and this project has a value of over \$250,000 pursuant to Nevada Revised Statutes Chapter 338, each contract between the contractor, applicant or design-build team and a subcontractor must provide for the apportionment of liquidated damages assessed pursuant to this section if a person other than the Contractor was responsible for the breach of a contract for a public work caused by a failure to comply with a requirement of Items 1-5 within this section. The apportionment of liquidated damages must be in proportion to the responsibility of each party for the breach.

8. Prevailing Wages:

The Contractor and subcontractors shall be bound by and comply with all federal, state and local laws with regard to minimum wages, overtime work, hiring and discrimination, including Chapter 338 of the NRS, which is entitled, "Public Works Projects."

The Contractor shall ensure that all employees on the work site are paid in accordance with the CURRENT PREVAILING WAGE RATES AS APPROVED BY THE STATE LABOR COMMISSIONER, whenever the actual value of the Contract totals One Hundred Thousand Dollars (\$100,000) or more, or when required by the Supplementary Conditions. If a Change Order causes a Contract to exceed One Hundred Thousand Dollars (\$100,000), the State Labor Commissioner may audit the entire Contract period.

Questions involving the Prevailing Wage Rates for the City of Sparks should be referred to the Labor Commissioner, State of Nevada, at (775) 687-4850.

When federal money is associated with the project making the Contract subject to both state and federal wage rates, the Contractor shall not pay less than the higher rate when the two rates differ for similar kinds of labor.

- A. Posting of Minimum Wage Rates - In accordance with NRS, Chapter 338, Section 338.020, the Contractor shall post the hourly and daily rate of wages to be paid to each of the classes of mechanics and workers on the site of Work of this Contract in a place generally visible to the workers.
- B. Pursuant to NRS 338.060 and 338.070, the Contractor hereby agrees to forfeit, as a penalty to the City of Sparks, not less than Twenty Dollars (\$20) nor more than Fifty Dollars (\$50) for each calendar day or portion thereof that each worker employed on the Contract is paid less than the designated rate for any work done under the Contract, by the Contractor or any subcontractor under him, or is not reported to the City of Sparks as required by NRS 338.070.
- C. The contractor and each subcontractor shall keep or cause to be kept an accurate record showing, for each worker employed by the contractor or subcontractor:
 - (1) The name of the worker;



-
- (2) The occupation of the worker;
 - (3) If the worker has a driver's license or identification card, an indication of the state or other jurisdiction that issued the license or card; and
 - (4) The actual per diem, wages and benefits paid to the worker.

In addition, the contractor and each subcontractor shall keep or cause to be kept an accurate record showing, for each worker employed by the contractor or subcontractor who has a driver's license or identification card:

- (1) The name of the worker;
- (2) The driver's license number or identification card number of the worker; and
- (3) The state or other jurisdiction that issued the license or card.

D. The records in Section C above must be open at all reasonable hours to the inspection of the City of Sparks, and its officers and agents. A copy of the each record for each calendar Month for the General Contractor and all Sub-Contractors must be submitted to the City of Sparks no later than 15 days after the end of each month for the previous months' wages.

9. Apprenticeship Utilization Act:

Senate Bill 207 (Apprenticeship Utilization Act) passed during the 2019 Legislative Session added sections 338.0116 and 338.01165 to the NRS. These new provisions apply to bids for public works where the value exceeds \$100,000.00. In passing SB 207, The Legislature hereby finds and declares that: (1) A skilled workforce in construction is essential to the economic well-being of the State; (2) Apprenticeship programs are a proven method of training a skilled workforce in construction; and (3) Requiring the use of apprentices on the construction of public works will ensure the availability of a skilled workforce in construction in the future for this State.

A contractor or subcontractor engaged in **horizontal construction** who employs a worker on a public work pursuant to NRS 338.040 shall use one or more apprentices for at least 3 percent of the total hours of labor worked for each apprenticed craft or type of work to be performed on the public work for which more than three workers are employed.

“Horizontal Construction” means any construction, alteration, repair, renovation, demolition or remodeling necessary to complete a public work, including, without limitation, any irrigation, drainage, water supply, flood control, harbor, railroad, highway, tunnel, airport or airway, sewer, sewage disposal plant or water treatment facility and any ancillary vertical components thereof, bridge, inland waterway, pipeline for the transmission of petroleum or any other liquid or gaseous substance, pier, and any other work incidental thereto. The term does not include vertical construction, the construction of any terminal or other building of an airport or airway, or the construction of any other building.

A contractor or subcontractor engaged in **vertical construction** who employs a worker on a public work pursuant to NRS 338.040 shall use one or more apprentices for at least 10 percent of the total hours of labor worked for each apprenticed craft or type of work to be performed on the public work for which more than three workers are employed.



“Vertical Construction” means any construction, alteration, repair, renovation, demolition or remodeling necessary to complete a public work for any building, structure or other improvement that is predominantly vertical, including, without limitation, a building, structure or improvement for the support, shelter and enclosure of persons, animals, chattels or movable property of any kind, and any other work or improvement appurtenant thereto.

A Public Body/Awarding Body, upon the request of a contractor or subcontractor, **MAY** submit a request for a modification or waiver of the percentage of hours of labor of one or more apprentices prior to (1) the bid advertisement; (2) the bid opening; or (3) the award of the contract if, “Good Cause” exists. The Labor Commissioner may also grant a modification or waiver from the requirements of NRS 338.01165 after work on the public work has commenced.

10. Acceptance by the City:

It is expressly understood and agreed that all materials provided and/or work done by the Contractor shall be subject to inspection and acceptance by the City at its discretion, and that any progress inspections and approval by the City of any item or work shall not forfeit the right of the City to require the correction of faulty workmanship or material at any time during the course of the work, although previously approved by oversight. Nothing herein contained shall relieve the Contractor of the responsibility for proper construction and maintenance of the work, materials and equipment required under the terms of this Contract until all work has been completed and accepted by the City.

11. Waiver:

No waiver of any term, provision or condition of this Contract, whether by conduct or otherwise, in any one or more instances, shall be deemed to be nor shall it be construed as a further or continuing waiver of any such term, provision or condition of this Contract. No waiver shall be effective unless it is in writing and signed by the party making it.

12. Notices:

All notices required to be given in writing by this Contract shall be deemed to be received (i) upon delivery if personally delivered, or (ii) when receipt is signed for if mailed by certified or registered mail, postage prepaid, or by express delivery service or courier, when addressed as follows (or sent to such other address as a Party may specify in a notice to the others):

PURCHASING MANAGER
CITY OF SPARKS
431 PRATER WAY
PO BOX 857
SPARKS, NV 89432-0857

CONTRACTOR:
CONTACT
CONTRACTORNAME
ADDRESS
CITY, STATE ZIP
e-mail:

13. Arbitration:

Any and all disputes, controversies or claims arising under or in connection with this Contract, including without limitation, fraud in the inducement of this Contract, or the general validity or enforceability of this Contract, shall be governed by the laws of the State of Nevada without giving effect to conflicts of law principles, may be submitted to binding arbitration before one arbitrator, and shall be conducted in



accordance with the Commercial Arbitration Rules of the American Arbitration Association in a private manner in Washoe County, Nevada. This award shall be final and judgment may be entered upon it in any court having jurisdiction thereof. In reaching this final award, the arbitrator shall have no authority to change or modify any provision of this Contract. All other expenses of arbitration shall be borne equally by the parties. All fees, including legal fees, shall be borne by the party who incurred them. All costs of enforcement shall be borne by the losing party. Each party shall have the right to discovery in accordance with the Nevada Rules of Civil Procedure.

14. Jurisdiction and Venue:

In the event the arbitration award is challenged, any action or proceeding seeking to do so must be brought in the courts of the State of Nevada, County of Washoe, or if the party can acquire subject-matter jurisdiction, in the United States District Court for the District of Nevada in the City of Reno. Each of the parties consents to the personal jurisdiction of such courts (and of the appropriate appellate courts) in any such action or proceeding and waives any objection to venue laid therein. Process in any action or proceeding referred to in the preceding sentence may be served on either party by sending it certified mail to the respective addresses designated for notice.

15. Indemnification:

To the fullest extent permitted by law, upon award, Contractor shall hold harmless, indemnify, defend and protect City, its affiliates, officers, agents, employees, volunteers, successors and assigns (“Indemnified Parties”), and each of them from and against any and all claims, demands, causes of action, damages, costs, expenses, actual attorney’s fees, losses or liabilities, in law or in equity, of every kind and nature whatsoever (“Claims”) arising out of or related to any act or omission of Contractor, its employees, agents, representatives, or Subcontractors in any way related to the performance of work under this Agreement by Contractor, or to work performed by others under the direction or supervision of Contractor, including but not limited to:

1. Personal injury, including but not limited to bodily injury, emotional injury, sickness or disease, or death to persons;
2. Damage to property of anyone, including loss of use thereof;
3. Penalties from violation of any law or regulation caused by Contractor’s action or inaction;
4. Failure of Contractor to comply with the Insurance requirements established under this Agreement;
5. Any violation by Contractor of any law or regulation in any way related to the occupational safety and health of employees.

In determining the nature of the claim against City, the incident underlying the claim shall determine the nature of the claim, notwithstanding the form of the allegations against City.

If City’s personnel are involved in defending such actions, Contractor shall reimburse City for the time and costs spent by such personnel at the rate charged City for such services by private professionals.

In cases of professional service agreements, requiring professional liability coverage:

If the insurer by which a Consultant is insured against professional liability does not so defend the



City and applicable agents and/or staff, and the Consultant is adjudicated to be liable by a trier of fact, the City shall be entitled to reasonable attorney's fees and costs to be paid to the City by the Consultant in an amount which is proportionate to the liability of the of the Consultant.

Nothing in this contract shall be interpreted to waive nor does the City, by entering into this contract, waive any of the provisions found in Chapter 41 of the Nevada Revised Statutes.

16. Licenses and Permits:

The Contractor shall procure at his own expense all necessary licenses and permits and shall adhere to all the laws, regulations and ordinances applicable to the performance of this Contract.

All Contractors, Sub-Contractors and Suppliers doing business within the City of Sparks are required to obtain a current business license from the City of Sparks prior to commencement of this contract. Per Sparks Municipal Code Section 5.08.020A: "It is unlawful for any person to transact business in the City without first having obtained a license from the City to do so and without complying with all applicable provisions of this title and paying the fee therefore."

17. Insurance:

BIDDERS' ATTENTION IS DIRECTED TO THE INSURANCE REQUIREMENTS BELOW. IT IS HIGHLY RECOMMENDED THAT BIDDERS CONFER WITH THEIR RESPECTIVE INSURANCE CARRIERS OR BROKERS TO DETERMINE IN ADVANCE OF BID SUBMISSION THE AVAILABILITY OF INSURANCE CERTIFICATES AND ENDORSEMENTS AS PRESCRIBED AND PROVIDED HEREIN. IF THE APPARENT LOW BIDDER FAILS TO COMPLY STRICTLY WITH THE INSURANCE REQUIREMENTS, THAT BIDDER MAY BE DISQUALIFIED FROM AWARD OF THE CONTRACT.

The City may, unless otherwise required by law, waive or reduce the insurance requirements itemized here, at the discretion of the city's Contracts and Risk Manager.

Should work be required on City premises or within the public right-of-way, upon award of the contract, the bidder shall provide proof of insurance for the types of coverage, limits of insurance and other terms specified herein, prior to initiation of any services under City, Bid, Proposal or Contract. Coverage shall be from a company authorized to transact business in the State of Nevada and the City of Sparks and shall meet the following minimum specifications:

Contractor shall at its own expense carry and maintain at all times the following insurance coverage and limits of insurance no less than the following or the amount customarily carried by Contractor or any of its subcontractors, whichever is greater. Contractor shall also cause each subcontractor employed by Contractor to purchase and maintain insurance of the type specified herein. All insurers must have AM Best rating not less than A-VII, and be acceptable to the City. Contractor shall furnish copies of certificates of insurance evidencing coverage for itself and for each subcontractor. Failure to maintain the required insurance may result in termination of this contract at City's option. If Contractor fails to maintain the insurance as set forth herein, City shall have the right, but not the obligation, to purchase said insurance at Contractor's expense.



Contractor shall provide proof of insurance for the lines of coverage, limits of insurance and other terms specified below prior to initiation of any services. Coverage shall be from a company authorized to transact business in the State of Nevada and the City of Sparks. Contractor and any of its subcontractors shall carry and maintain coverage and limits no less than the following or the amount customarily carried by Contractor or any of its subcontractors, whichever is greater.

Applicable to this Contract	Insurance Type	Minimum Limit	Insurance Certificate	Additional Insured	Waiver of Subrogation
Yes	General Liability/Umbrella (Excess) Liability	\$2,000,000	✓	✓	✓
Yes	Automobile Liability	\$1,000,000	✓	✓	
Yes	Workers' Compensation	Statutory	✓	N/A	✓
Yes	Employer's Liability	\$1,000,000	✓	N/A	
No	Professional Liability	\$1,000,000	✓	N/A	N/A
No	Pollution Legal Liability	\$1,000,000	✓	N/A	N/A

Commercial General Liability

Contractor shall carry and maintain Commercial General Liability (CGL) and, if necessary to meet required limits of insurance, commercial umbrella/excess liability insurance with a total limit of not less than the limits specified herein.

For contracts that are for the construction or improvement of public facilities, the Contractor shall obtain and maintain products and completed operations liability coverage through the statute of repose after completion of the project. Continuing commercial umbrella coverage, if any, shall include liability coverage for damage to the insured's completed work equivalent to that provided under ISO form CG 00 01.

There shall be no endorsement or modification of the CGL limiting the scope of coverage for liability arising from pollution, explosion, collapse, underground property damage, or damage to the named insured's work unless Subcontractor carries and maintains separate policies providing such coverage and provides Contractor evidence of insurance confirming the coverage.

Minimum Limits of Insurance

- \$2,000,000** Each Occurrence Limit for bodily injury and property damage
- \$2,000,000** General Aggregate Limit
- \$2,000,000** Products and Completed Operations Aggregate Limit
- \$10,000** Medical Expense Limit

If Commercial General Liability Insurance or other form with a general aggregate limit is used, it shall be revised to apply separately to this PROJECT or LOCATION.



Coverage Form

Coverage shall be at least as broad as the unmodified Insurance Services Office (ISO) Commercial General Liability (CGL) "Occurrence" form CG 00 01 04/13 or substitute form providing equivalent coverage and shall cover liability arising from premises, operations, independent contractors, products-completed operations, personal and advertising injury, and liability assumed under an insured contract (including the tort liability of another assumed in a business contract).

Additional Insured

City, its officers, agents, employees, and volunteers are to be included as insureds using the applicable ISO additional insured endorsement(s) or substitute forms providing equivalent coverage, in respects to damages and defense arising from: activities performed by or on behalf of Contractor, including the insured's general supervision of Contractor; products and completed operations of Contractor; premises owned, occupied, or used by Contractor. The coverage shall contain no special limitations on the scope of protection afforded to City, its officers, employees, or volunteers. Additional insured status for City shall apply until the expiration of time within which a claimant can bring suit per applicable state law.

Primary and Non-Contributory

Contractor's insurance coverage shall apply as primary insurance with respect to any other insurance or self-insurance programs afforded to City, its officers, agents, employees, and volunteers. There shall be no endorsement or modification of the CGL to make it excess over other available insurance; alternatively, if the CGL states that it is excess or pro rata, the policy shall be endorsed to be primary with respect to the additional insured. Any insurance or self-insurance maintained by City, its officers, employees, or volunteers shall be excess of Contractor's insurance and shall not contribute with it in any way.

Waiver of Subrogation

Contractor waives all rights against City and its agents, officers, directors and employees for recovery of damages to the extent these damages are covered by the commercial general liability or commercial umbrella liability insurance maintained pursuant to this agreement. Insurer shall endorse CGL policy as required to waive subrogation against the City with respect to any loss paid under the policy.

Endorsements

Policy forms or endorsements are required confirming coverage for all required additional insureds. The forms or endorsements for CGL shall be at least as broad as the unmodified ISO additional insured endorsement CGO 20 10 07/04 and CG 20 37 07/04 or substitute forms providing additional insured coverage for products and completed operations.

A waiver of subrogation in favor of City shall be endorsed to the policy using an unmodified Waiver of Transfer of Rights of Recovery of Others to Us ISO CG 24 04 05 09, or a substitute form providing equivalent coverage.

Electronic Data Liability

If any underground work will be performed, Contractor shall maintain electronic data liability insurance applicable to the Project and insuring against liability arising out of the loss of, loss of use of, damage to,



corruption of, inability to access, or inability to manipulate electronic data. This coverage shall be maintained with a limit of liability of not less than \$1,000,000 and provide coverage at least as broad as electronic data liability coverage form CG 04 37 (or substitute form providing equivalent coverage).

Railroad Protective Liability

For any construction or demolition work within fifty (50) feet of a railroad, Contractor shall maintain Railroad Protective Liability insurance on behalf of and in the name of the railroad, as named insured, with a limit of \$6,000,000 per occurrence or higher limit if required by the railroad. Contractor shall also ensure that any exclusions pertaining to the indemnification of a railroad are removed from its CGL policy or that ISO form CG 24 17 (Contractual Liability-Railroads Endorsements) is included in the coverage.

Business Automobile Liability

Minimum Limits of Insurance

\$1,000,000 Combined Single Limit per accident for bodily injury and property damage or the limit customarily carried by Contractor, whichever is greater. No aggregate limit may apply. Coverage may be combined with Excess/Umbrella Liability coverage to meet the required limit.

Coverage Form

Coverage shall be at least as broad as the unmodified Insurance Services Office (ISO) Business Automobile Coverage form CA 00 01 10/13, CA 00 25 10/13, CA 00 20 10/13 or substitute form providing equivalent coverage. Such insurance shall cover liability arising out of any auto (including owned, hired, and non-owned autos).

Pollution liability coverage at least as broad as that provided under the ISO pollution liability—broadened coverage for covered autos endorsement (CA 99 48) shall be provided, and the Motor Carrier Act endorsement (MCS 90) shall be attached for all contracts involving transportation of “hazardous material” as this term is defined by applicable law, including, but not limited to, waste, asbestos, fungi, bacteria and mold.

Additional Insured

City, its officers, agents, employees, and volunteers are to be included as insureds with respect to damages and defense arising from the ownership, maintenance or use of automobiles owned, leased, hired, or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to City, its officers, employees, or volunteers. Additional insured status for City shall apply until the expiration of time within which a claimant can bring suit per applicable state law.

Endorsements

A policy endorsement is required listing all required additional insureds. The endorsement for Business Automobile Liability shall be at least as broad as the unmodified ISO CA 20 48 10/13 or a substitute form confirming City’s insured status for Liability Coverage under the Who Is An Insured Provision contained in Section II of the coverage form ISO CA 00 01 10/13.

Waiver of Subrogation.

Contractor waives all rights against City, its officers, agents, employees, and volunteers for recovery



of damages to the extent these damages are covered by the commercial general liability or commercial umbrella liability insurance maintained pursuant to this agreement. Contractor's insurer shall endorse policy to waive subrogation against City with respect to any loss paid under the policy.

Workers' Compensation and Employer's Liability

Contractor shall carry and maintain workers' compensation and employer's liability insurance meeting the statutory requirements of the State of Nevada, including but not limited to NRS 616B.627 and NRS 617.210 or provide proof that compliance with the provisions of Nevada Revised Statutes Chapters 616A-D and all other related chapters is not required. It is understood and agreed that there shall be no coverage provided for Contractor or any Subcontractor of the Contractor by the City. Contractor agrees, as a precondition to the performance of any work under this Agreement and as a precondition to any obligation of the City to make any payment under this Agreement to provide City with a certificate issued by an insurer in accordance with NRS 616B.627 and with a certificate of an insurer showing coverage pursuant to NRS 617.210.

It is further understood and agreed by and between City and Contractor that Contractor shall procure, pay for and maintain the above-mentioned coverage at Contractor's sole cost and expense.

Should Contractor be self-funded for workers' compensation and employer's liability insurance, Contractor shall so notify City in writing prior to the signing of this Contract. City reserves the right to approve said retentions, and may request additional documentation, financial or otherwise, for review prior to the signing of this Contract.

Upon completion of the project, Contractor shall, if requested by City, provide a Final Certificate for itself and each Subcontractor showing that Contractor and each Subcontractor had maintained the required Workers Compensation and Employer's Liability by paying all premiums due throughout the entire course of the project.

Nevada law allows the following to reject workers' compensation coverage if they do not use employees or subcontractors in the performance of work under the contract:

- Sole proprietors (NRS 616B.627 and NRS 617.210)
- Unpaid officers of quasi-public, private or nonprofit corporations (NRS 616B.624 and NRS 617.207)
- Unpaid managers of limited liability companies (NRS 616B.624 and NRS 617.207)
- An officer or manager of a corporation or limited liability company who owns the corporation or company (NRS 616B.624 and NRS 617.207)

If a contractor has rejected workers' compensation coverage under applicable Nevada law, the contractor must indicate the basis for the rejection of coverage and complete, sign and have notarized an Affidavit of Rejection of Coverage. The Affidavit must be completed, signed and notarized prior to performance of any work.

Minimum Limits of Insurance

Workers' Compensation:	Statutory Limits
Employer's Liability:	\$1,000,000 Bodily Injury by Accident – Each Accident



\$1,000,000 Bodily Injury by Disease – Each Employee
\$1,000,000 Bodily Injury by Disease – Policy Limit

Coverage Form

Coverage shall be at least as broad as the unmodified National Council on Compensation Insurance (NCCI) Workers Compensation and Employer’s Liability coverage form WC 00 00 07/11 or substitute form providing equivalent coverage.

OTHER INSURANCE COVERAGES (IF APPLICABLE)

Professional Liability Insurance (if Applicable) \$1,000,000 each claim limits of liability or whatever limit is customarily carried by the Contractor, whichever is greater, for design, design-build or any type of professional services. If coverage is required on a claims-made or claims-made and reported basis, any applicable retroactive or pending & prior litigation dates must precede the effective date of this contract. Continuous coverage shall be maintained, or an extended reporting period shall be obtained for a period of at least three (3) years following completion of the project.

Contractors Pollution Liability Insurance (If Applicable)- \$1,000,000 per occurrence and \$2,000,000 aggregate or whatever amount is acceptable to the City for any exposure to “hazardous materials” as this term is defined in applicable law, including but not limited to waste, asbestos, fungi, bacterial or mold.

Coverage shall apply to bodily injury; property damage, including loss of use of damaged property or of property that has not been physically injured; cleanup costs; and defense, including costs and expenses incurred in the investigation, defense, or settlement of claims.

City shall be included as an insured under Contractor’s pollution liability insurance.

If coverage is required on a claims-made or claims-made and reported basis, any applicable retroactive or pending & prior litigation dates must precede the effective date of this contract. Continuous coverage shall be maintained, or an extended reporting period shall be obtained for a period of at least three (3) years following completion of the project.

If the scope of services as defined in this contract includes the disposal of any hazardous materials from the job site, Contractor must furnish to City evidence of pollution liability insurance maintained by the disposal site operator for losses arising from the insured facility accepting waste under this contract. Coverage certified to the City under this section must be maintained in minimum amounts of \$1,000,000 per loss, with an annual aggregate of at least \$2,000,000.

Lower tier sub-subcontractors, Truckers, Suppliers: Evidence confirming lower tier subcontractors, truckers and suppliers are maintaining valid insurance prior to beginning work on the project to meet the requirements set forth herein on Subcontractor, including but not limited to all additional insured requirements of Subcontractor.

ALL COVERAGES

Coverage shall not be suspended, voided, canceled, or non-renewed by either CONTRACTOR or by the



insurer, reduced in coverage or in limits except after thirty (30) days' prior written notice has been given to CITY except for ten (10) days' notice for nonpayment of premium.

DEDUCTIBLES AND RETENTIONS

Any deductibles or self-insured retentions that exceed \$100,000.00 per occurrence or claim must be declared to and approved by the City's Contracts and Risk Manager and prior to signing this Contract. City is entitled to request and receive additional documentation, financial or otherwise, prior to giving its approval of the deductibles and self-insured retentions. Any changes to the deductibles or self-insured retentions made during the term of this Contract or during the term of any policy must be approved by City's Contracts and Purchasing Manager prior to the change taking effect. Contractor is responsible for any losses within deductibles or self-insured retentions.

OTHER INSURANCE PROVISIONS

Should City and Contractor agree that higher coverage limits are needed warranting a project policy, project coverage shall be purchased and the premium for limits exceeding the above amount may be borne by City. City retains the option to purchase project insurance through Contractor's insurer or its own source.

Any failure to comply with reporting provisions of the policies shall not affect coverage provided to City, its officers, agents, employees, or volunteers.

ACCEPTABILITY OF INSURERS

Insurance is to be placed with insurers with a Best's rating of no less than A-VII and acceptable to the City. City, with the approval of the Risk Manager, may accept coverage with carriers having lower Best's ratings upon review of financial information concerning Contractor and insurance carrier. City reserves the right to require that Contractor's insurer be a licensed and admitted insurer in the State of Nevada, or meet any applicable state and federal laws and regulations for non-admitted insurance placement.

VERIFICATION OF COVERAGE

Contractor shall furnish City with certificates of insurance and with original endorsements affecting coverage required by this contract. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf.

Prior to the start of any Work, Contractor must provide the following documents to City of Sparks, Attention: Purchasing Division, P.O. Box 857, Sparks, NV 89432-0857:

- A. Certificate of Insurance.** Contractor must provide a Certificate of Insurance form to the City of Sparks to evidence the insurance policies and coverage required of Contractor.
- B. Additional Insured Endorsements.** An original Additional Insured Endorsement, signed by an authorized insurance company representative, must be submitted to the City of Sparks, by attachment to the Certificate of Insurance, to evidence the endorsement of the City of Sparks as additional insured.
- C. Policy Cancellation Endorsement.** Except for ten (10) days' notice for non-payment of



premium, each insurance policy shall be endorsed to specify that without thirty (30) days prior written notice to the City of Sparks, the policy shall not be suspended, voided, cancelled or non-renewed, and shall provide that notices required by this paragraph shall be sent by certified mailed to the address specified above. A copy of this signed endorsement must be attached to the Certificate of Insurance. If endorsements are not available, Contractor shall be responsible to provide prior written notice to City as soon as practicable upon receipt of any notice of cancellation, non-renewal, reduction in required limits or other material change in the insurance required under this Agreement.

D. Bonds (as Applicable). Bonds as required and/or defined in the original bid documents.

All certificates and endorsements are to be addressed to the City of Sparks, Purchasing Division and be received and approved by City before work commences. The City reserves the right to require complete certified copies of all required insurance policies at any time.

SUBCONTRACTORS

Contractor shall include all Subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each Subcontractor. All coverages for Subcontractors shall be subject to all the requirements stated herein.

MISCELLANEOUS CONDITIONS

1. Contractor shall be responsible for and remedy all damage or loss to any property, including property of City, caused in whole or in part by Contractor, any Subcontractor, or anyone employed, directed, or supervised by Contractor.
2. Nothing herein contained shall be construed as limiting in any way the extent to which Contractor may be held responsible for payment of damages to persons or property resulting from its operations or the operations of any Subcontractors under it, and such coverage and limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to City in this contract.
3. In addition to any other remedies City may have if Contractor fails to provide or maintain any insurance policies or policy endorsements to the extent and within the time herein required, City may, at its sole option:
 - a. Purchase such insurance to cover any risk for which City may be liable through the operations of Contractor under this Agreement and deduct or retain the amount of the premiums for such insurance from any sums due under the Agreement;
 - b. Order Contractor to stop work under this Agreement and/or withhold any payments which become due Contractor here under until Contractor demonstrates compliance with the requirements hereof; or,
 - c. Terminate the Agreement.
4. If Contractor's liability policies do not contain the standard ISO separation of insureds condition, or a substantially similar clause, they shall be endorsed to provide cross-liability coverage.

18. Liquidated Damages:

If the Product is not delivered/Project is not completed within the time stipulated in the bid, the



Contractor shall pay to the City of Sparks as fixed, agreed and liquidated damages for delay and not as a penalty (it being impossible to determine the actual damages occasioned by the delay) \$AMT for each _____ day of delay until delivery is completed; the Contractor shall be liable to the City of Sparks for the amount herein. This amount may be deducted from money due or to become due to the Contractor as compensation under this proposal in the event the Contractor fails to meet delivery schedules or product specifications.

19. Material Breach of Contract:

In the event Contractor fails to deliver the product and services as contracted for herein, to the satisfaction of the City of Sparks or otherwise fails to perform any provisions of this Contract, the City, after providing five (5) days written notice and Contractor's failure to cure such breach within the time specified in the notice, may without waiving any other remedy, make good the deficiencies and deduct the actual cost of providing alternative products and/or services from payment due the Contractor. Non-performance after the first notice of non-performance shall be considered a material breach of contract.

20. Force Majeure:

Neither party to the Contract shall be held responsible for delay or default caused by fire, riot, acts of God, and/or war which is beyond that party's reasonable control. City may terminate the Contract upon written notice after determining such delay or default will reasonably prevent successful performance of the Contract.

21. Termination:

The City may terminate the Contract for material breach of contract upon ten (10) days written notice and recover all damages, deducting any amount still due the Contractor from damages owed to the City, or seek other remedy including action against all bonds. The Contractor may terminate the Contract for material breach of contract upon thirty (30) days written notice to the City.

22. Assignment:

All of the terms, conditions and provisions of this Contract, and any amendments thereto, shall inure to the benefit of and be binding upon the parties hereto, and their respective successors and assigns. The Contractor shall not assign this Contract without the written consent of the City which will not be unreasonably withheld.

23. Entire Contract:

This Contract constitutes the entire agreement of the parties and shall supersede all prior offers, negotiations, agreements and contracts whether written or oral. Any modifications to the terms and conditions of this Contract must be in writing and signed by both parties.

24. Severability:

If any part of this Contract is found to be void it will not affect the validity of the remaining terms of this Contract which will remain in full force and effect.

25. Headings:

Paragraph titles or captions contained in this Contract are inserted only as a matter of convenience and for reference only, and in no way define, limit, extend, or describe the scope of this Contract or the intent of any provision herein.



26. Singular Includes the Plural; Gender; Title Reference:

Whenever the singular number is used in this Contract and when required by the context, the same shall include the plural, and the use of any gender, be it masculine, feminine or neuter, shall include all of the genders, and the word "person" or "entity" shall include corporation, firm, partnership, or any other combination or association.

The use of the title "Bidder", "Vendor", "Contractor" or "Consultant" within this contract or associated bid documents shall be deemed interchangeable and shall refer to the person or entity with whom the City of Sparks is contracting for the service or product referenced within this contract.

27. Execution:

The parties agree to execute such additional documents and to take such additional actions as are reasonably necessary or desirable to carry out the purposes hereof. They also agree, acknowledge and represent that all corporate authorizations have been obtained for the execution of this Contract and for the compliance with each and every term hereof. Each undersigned officer, representative or employee represents that he or she has the authority to execute this Contract on behalf of the party for whom he or she is signing.

THIS SPACE INTENTIONALLY LEFT BLANK



IN WITNESS WHEREOF, the City of Sparks has caused this Contract to be executed by its officers thereunto duly authorized and the Consultant has subscribed same, all on the day and year first above written.

(Vendor)

CITY OF SPARKS, NEVADA
A Municipal Corporation

By: _____

By: _____
Ed Lawson, Mayor

(Title)

APPROVED AS TO FORM

ATTEST:

City Attorney

City Clerk

CITY OF SPARKS, NEVADA - BOND OF FAITHFUL PERFORMANCE

Bid #: _____

Bond #: _____

Surety Rating: _____

NV License #: _____

Appt. Agent Countersigning - List below with address

KNOW ALL MEN BY THESE PRESENTS: That WHEREAS, the City of Sparks in the State of Nevada has awarded to **CONTRACTORNAME** hereinafter designated as the "Principal" a contract for Bid # **BIDNUMBER**, PWP # **PWPNUMBER**, for the **TITLE** and

WHEREAS, said Principal is required under the terms of said contract to furnish a bond for the faithful and proper performance of the Contract and the Bonding Company has an "A" or better rating with Moody's or A.M. Best and T-Listed with the U.S. Treasury Department;

NOW, THEREFORE, we the Principal and _____ as Surety, are held and firmly bound unto the City of Sparks in the State of Nevada, in the penal sum of **WRITTENAMOUNT** dollars (**\$AMOUNT**), lawful money of the United States, being not less than one hundred percent (100%) of the estimated contract cost of the work, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if the above bound Principal, his or its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and faithfully perform the covenants, conditions and agreements in the said contract and any alterations made as therein provided on his or their part to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the City of Sparks in the State of Nevada, its officers and agents as therein stipulated, then this obligation shall become null and void; otherwise, it shall be and remain in full force and virtue.

As a condition precedent to the satisfactory completion of the said contract, the above obligation shall hold good for a period of one (1) year after the completion and acceptance of the said work, during which time, if the above bounden principal, his or its heirs, executors, administrators, successors or assigns shall fail to make full, complete and satisfactory repair and replacements or totally protect the said City of Sparks in the State of Nevada from loss or damage made evident during said period of one (1) year from the date of acceptance of said works, and resulting from or caused by defective materials or faulty workmanship in the prosecution of the work done, the obligation in the said sum of **WRITTENAMOUNT** dollars (**\$AMOUNT**), shall remain in full force and virtue; otherwise the above obligation shall be void.

And the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in anyway effect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the contract, to the work or to the specifications.

IN WITNESS WHEREOF, the above bound parties have executed this instrument under their seals this ____ day of _____, 20__, the name and corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Principal

By _____

Surety
By _____

CITY OF SPARKS, NEVADA – Payment Bond – Labor & Materials

Bid #: _____

Bond #: _____

Surety Rating: _____

NV License #: _____

Appt. Agent Countersigning - List below with address

KNOW ALL MEN BY THESE PRESENTS: That WHEREAS, the City of Sparks in the State of Nevada, has awarded to **CONTRACTORNAME** hereinafter designated as the “Principal” a contract for Bid # **BIDNUMBER**, PWP # **PWPNUMBER**, for the **TITLE** and

WHEREAS, said Principal is required under the terms of said contract to furnish a Bond for the faithful and proper performance of the Contract and the Bonding Company has an “A” or better rating with Moody’s or A.M. Best and T-Listed with the U.S. Treasury Department;

NOW, THEREFORE, we, the Principal, and _____ as Surety, are held and firmly bound unto the City of Sparks in the State of Nevada, in the penal sum of **WRITTENAMOUNT** dollars (\$**AMOUNT**), lawful money of the United States, being not less than one hundred percent (100%) of the estimated contract cost of the work for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally firmly by these presents.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH that if the above bounden principal, his or its heirs, executors, administrators, successors, or assigns, shall fail to pay for any materials, provisions, provender or other supplies, implements, or machinery used in, upon, for, or about the performance of the work contracted to be done or for any work or labor thereon of any kind, or for amounts due under the Unemployment Compensation Law with respect to such work or labor as required by the provisions of NRS 612, and provided that the claimant shall have complied with the provisions of said law, the Surety hereon will pay for the same within thirty (30) calendar days an amount not exceeding the sum specified in this bond, then the above obligation shall be null and void; otherwise to remain in full force and account. In case suit is brought upon this bond, the said Surety agrees to pay a reasonable attorney’s fees to be fixed by the Court.

The Bond shall insure to the benefit of any and all persons, companies and corporations entitled to file claims under NRS 339 as to give a right of action to them or their assigns in any suit brought upon this Bond.

IN WITNESS WHEREOF, the above bound parties have executed this instrument under their seals this ____ day of _____, 20____, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Principal

By _____

Surety

By _____