

BID FOR
TMWRF BLOWER SOFT STARTER RETROFIT

BID # 17/18-015

BIDS DUE NOT LATER THAN: 1:45 PM ON FEBRUARY 7, 2018

PUBLIC BID OPENING: 2:00 PM ON FEBRUARY 7, 2018

[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
TMWRF BLOWER SOFT STARTER RETROFIT
BID #17/18-015**

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 FEBRUARY 7, 2018**. 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. Bids will be opened and publicly read at **2:00 PM ON FEBRUARY 7, 2018**, at Sparks City Hall, 431 Prater Way Sparks, NV 89431.

PROJECT DESCRIPTION: This project includes the retrofit of three (3) existing medium voltage starters located in motor control center “MCC 15601” for the Truckee Meadows Water Reclamation Facility (TMWRF) as detailed in the bid document.

PRE-BID MEETING: A **MANDATORY** pre-bid meeting will be held at the project site Training Room (8500 Cleanwater Way), at 10:00AM on January 31, 2018. Contractors wishing to submit bids on this project must attend the pre-bid meeting to be considered in evaluation.

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://www.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: January 24, 2018
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)

**CITY OF SPARKS
 BID ITEM SCHEDULE**

BID TITLE: TMWRF BLOWER SOFT STARTER RETROFIT

BID #17/18-015

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)

Item No.	Quantity	Unit	Description	Unit Price	Total Price
1	1	LS	Mobilization	/LS	\$
2	1	LS	Installation of Owner Provided Medium Voltage Starter for Blower Motor #4	/LS	\$
3	1	LS	Procure and Install Two (2) Medium Voltage Starter Retrofit Conversion Kits for Blower Motors #2 & #3	/LS	\$
4	1	LS	UL Testing and Certification	/LS	\$
5	1	LS	Force Account	\$25,000.00 / LS	\$25,000.00
Grand Total					
\$				\$	
(written total bid price)					

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:

**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 Subcontractors will be paid an amount exceeding one percent (1%) of the Bid or \$50,000, whichever is greater. The Bidder shall list the name of a Subcontractor for each portion of any of the Work the value of which exceeds one percent (1%) of the Bid Price.

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 **TMWRF BLOWER SOFT STARTER RETROFIT**, Bid # **17/18-015**, 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 _____, 2018.

State of Nevada)
) SS.
County of _____)

On this _____ day of _____, in the year 2018, 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)

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 # **17/18-015**, for the **TMWRF BLOWER SOFT STARTER RETROFIT**.

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 **TMWRF BLOWER SOFT STARTER RETROFIT**, 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 \$250,000 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:

http://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.

22. 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:

- (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.

General Conditions



- (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.

23. 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.

24. 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.

25. 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.

26. 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

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(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.

27. 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:

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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.

28. 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.

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	

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Applicable to this Contract	Insurance Type	Minimum Limit	Insurance Certificate	Additional Insured	Waiver of Subrogation
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.

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, employment-related practices, 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.

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Any failure by the Contractor to comply with reporting provisions of the policies shall not affect its obligations to the additional insureds.

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.

Separation of Insureds

Contractor's insurance shall apply separately to each insured against whom a claim is made or suit is brought, except with respect to the limits of the insurer's liability.

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

A policy form or endorsement is required confirming coverage for all required additional insureds. The endorsement for CGL shall be at least as broad as the unmodified ISO additional insured endorsement CG 20 10 11/85 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.

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).

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.

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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.

Workers’ Compensation and Employer’s Liability

Contractor shall carry and maintain workers’ compensation and employer’s liability insurance as required by NRS 616B.627 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.

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)

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- 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 per occurrence 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 with a minimum of three (3) years reporting of claims 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.

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.

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

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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 on the Insurance Commissioner's approved but not admitted list.

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.
- 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 of 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.
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:

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- 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.

29. 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.

30. 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.
- (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

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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.

31. 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.

32. 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 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

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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.

33. 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.

34. 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/departments/financial-services/purchasing/bids-rfps>).

- (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).
- (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.

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- (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.

35. 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.

36. 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.

37. 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.

38. 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.

39. 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.

40. 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.

General Conditions



41. 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.

42. 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.

43. Optional Cooperative Purchase Agreement

It is intended that any other public agency (i.e., city, county, district, public agency, municipality or state agency) shall have the option to participate (A.K.A. "join" or "piggyback") in any award made as a result of this solicitation. The City of Sparks shall incur no financial responsibility in connection with purchase orders or contracts made by the bidder with another public agency resulting from this solicitation. The public agency utilizing the original contract shall accept sole responsibility for placing orders and making applicable payments to the vendor. Should the Bidder not wish for a contract resulting from this bid to be used by other public agencies, they have the option to decline that option at the time of request.

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 July 1st and ends June 30th of each year. Payments made under term contracts and leases are considered items

General Conditions



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
TMWRF BLOWER SOFT STARTER RETROFIT
BID #17/18-015**

These Special Provisions supplement and modify the "Standard Specifications for Public Works Construction" Latest Edition, and adopted by the City of Sparks, Nevada. All of the requirements and provisions of said Standard Specifications shall apply except where modified by the plans and these Special Provisions.

SECTION 1: SCOPE OF WORK

This project includes the retrofit of three (3) existing Eaton medium voltage starters located in motor control center "MCC 15601" for the Truckee Meadows Water Reclamation Facility (TMWRF). The scope shall also include the following:

1. The Demolition Work includes, but is not necessarily limited to, the following:
 - a. Disconnect and remove three (3) 2300-V Eaton soft starters.
 - b. Disconnect and remove existing controls.
2. The New Work includes, but is not necessarily limited to, the following:
 - a. Retrofit blower motor #4 soft starter using materials previously purchased by TMWRF. Install per Solcon shop drawings. Coordinate with Solcon for installation, commissioning and start-up. Contractor shall coordinate with Solcon at completion for UL Field Inspection and Certification.
 - b. Retrofit blower motor #3 soft starter with Solcon soft starter conversion kit part # HRVSDN40023-SO170362. Contractor shall purchase materials as part of this bid, including commissioning. Install per Solcon shop drawings. Coordinate with Solcon for installation, commissioning and start-up. Contractor shall coordinate with Solcon at completion for UL Field Inspection and Certification.
 - c. Retrofit blower motor #2 soft starter with Solcon soft starter conversion kit part #HRVS-DN-400-2300-115-3M-CONV-KIT. Contractor shall purchase materials as part of this bid, including commissioning. Install per Solcon shop drawings. Coordinate with Solcon for installation, commissioning and start-up. Contractor shall coordinate with Solcon at completion for UL Field Inspection and Certification.
 - d. Contractor shall include coordination with Solcon at completion of project for UL Field Inspection and Certification of existing blower motor #1 soft starter.
 - e. Soft start replacements shall be sole sourced to Solcon and shall be conversion kit part number: HRVSDN40023-SO170362, description: HRVSDN-400-2.3-115-3M-CONVKIT S0170362, no exceptions.
 - f. An Arc Flash Study will be performed by others and is not a part of this project. Any placement of labels and revision in breaker settings due to the study will also be done by others. The equipment supplier shall provide the dimensional data required for the arc flash study.

The work of this Contract is located at the Truckee Meadows Water Reclamation Facility, 8500 Clean Water Way, Reno, Nevada 89502.

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: STANDARD SPECIFICATIONS

All materials furnished and work performed shall be done in accordance with the most current edition of the "Standard Specifications for Public Works Construction" (Orange Book) and any revisions thereto if not covered or amended by the Special Provisions. The "Standard Specifications for Public Works Construction" are herein referred to as "Standard Specifications".

SECTION 4: STANDARD DETAILS

All materials furnished and work performed shall be done in accordance with the most current edition of the "Standard Details for Public Works Construction" (Orange Book) and any revisions thereto if not covered or amended by the Special Provisions. The "Standard Details for Public Works Construction" are herein referred to as "Standard Details".

SECTION 5: 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 One Hundred Twenty (120) calendar days from the time of issuance of the Notice to Proceed. The Notice to Proceed date will be discussed and determined at the Pre-construction meeting.

- The owner owned/supplied soft start shall be installed and operational Forty-Five (45) calendar days following NTP.
- Contractor purchased soft starts shall be installed and operational One Hundred Twenty (120) calendar days following NTP. This work shall include a 48 hour test and verification period between the installations of the each unit.

A Gantt style Project Schedule shall be developed by the Contractor and submitted to the Engineer for review and approval. The Project Schedule shall be submitted a minimum of one (1) week prior to the Pre-construction Meeting. Project Schedules shall be edited and provided to Engineer following any large modifications to the Project timeframe.

Two-week look ahead schedules shall be updated and provided by Contractor at all Construction Progress Meetings.

SECTION 6: 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, ONE THOUSAND DOLLARS (\$1,000.00) for each and every working day of delay in finishing the work in excess of the number of working days 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 7: EXCUSABLE DELAYS

The CONTRACTOR shall not be assessed with liquidated damage nor the cost of Project Coordinating 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 Coordinator in writing of the causes of delay. The Project Coordinator's findings of the facts thereon shall be final and conclusive.

SECTION 8: INTENT OF THE 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 9: AUTHORITY OF THE PROJECT COORDINATOR AND INSPECTOR

All work shall be done under the supervision of the Project Coordinator acting on behalf of the City. The Project Coordinator 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 Coordinators estimate shall be "condition precedent" to the right of the CONTRACTOR to receive money due him under the contract. The Project Coordinator does not have authority to authorize changes in plans and specifications without prior written approval of the Engineer.

The CONTRACTOR is responsible to provide, coordinate and schedule all inspections. Inspections related to satisfaction of the City of Sparks Building Permit shall be performed by the City. The Owner will provide Construction Observation and Management.

SECTION 10: 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 11: COOPERATION WITH OTHER CONTRACTORS

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

SECTION 12: DISPOSAL OF EXCESS AND WASTE MATERIALS

Trash, construction debris, cleared vegetation, excavated material unsuitable to be incorporated in the 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 13: LIMITS OF CONTRACTOR'S OPERATIONS

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

If the CONTRACTOR negotiates with property owners for the use of land for construction operations outside the limits of the construction easements, he shall do so at his own risk and the City will assume no liability for such use of private property. All agreements between the CONTRACTOR and private property owners shall be in writing and the City will be furnished copies of such agreements.

At no time will the CONTRACTOR be allowed to store debris or materials on the street overnight. All asphalt, concrete, soil and aggregate base will be hauled off at the conclusion of each working day. Materials for installation of Drop Inlets (Pipe, boxes frame and cover) will be allowed to be stored onsite with the approval of the Project Coordinator or inspector.

SECTION 14: PROTECTION OF EXISTING UTILITIES

Utility locations are provided for reference in determining the required scope of the work. The location and completeness of existing utilities shown on the plans are not guaranteed, but indicates generally their location according to the best knowledge of the Project Coordinator. Existing utilities are not always shown on design drawings for clarity in areas where existing utilities are congested. The CONTRACTOR shall make all investigations as necessary to satisfy himself as to the field conditions prior to bidding and construction.

The CONTRACTOR shall notify Underground Services Alert (USA Dig) at 1-800-227-2600, and NV Energy, Truckee Meadows Water Reclamation Facility (TMWRF), The City of Sparks, Truckee Meadows Water Authority (TMWA), SBC, Charter Communications and other cable companies not less than five (5) working days prior to the start of construction to verify the location and depths of utilities.

The CONTRACTOR shall inform himself of the exact location of all vaults, boxes, conduits, ducts, cables, pipe systems, etc. and shall protect said utilities. Any damage caused by operation of the CONTRACTOR shall be repaired by the CONTRACTOR at his own expense. It shall be the CONTRACTOR's responsibility to contact the impacted utility for any replacement hardware.

SECTION 15: CONTRACT AMOUNT

The total amount payable under this contract shall be determined by the sum of the amounts earned and the various quantities of repairs actually made and determined from unit prices as furnished by the CONTRACTOR in the schedule of prices contained in his proposal. The various quantities of repairs in the bid proposal are estimates and the City of Sparks reserves the right to vary quantities as may be necessary.

SECTION 16: PRECONSTRUCTION CONFERENCE

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

SECTION 17: MEASUREMENT AND APPLICATION FOR PAYMENT

Whenever possible, the actual quantities installed or work performed on any project shall be measured on the site of the work by a crew composed of both the CONTRACTOR and the Project Coordinator. This combined crew shall record all measured quantities in field notebooks, in legible and understandable

entries. The CONTRACTOR and the Project Coordinator shall each have a set of field notes which are to be in agreement on all quantities and items measured and shall include all work accomplished on the project under contract. Each set of field measurements shall be initialed and dated by responsible representatives of the CONTRACTOR and the Project Coordinator participating on the combined crew. In the event that it is not possible to form a combined crew for the measurements, the area repaired shall be measured by the Project Coordinator.

Lump Sum items will not be paid until they are finally complete unless a schedule of values is provided for sub components that can be verified by the owner; then the value of the complete components will be paid minus retention.

Application for payment shall be in satisfactory spreadsheet type form and submitted to Engineer for review and approval. EJCDC Application for Payment Form (C-620) or approved alternate shall be used. Engineer will provide form C-620 in excel format to Contractor upon request Retainage will be held and released per NRS requirements.

Submitted application for payment form shall be signed, correct, include application number and date, and include appropriate substantiating data to support amounts included in application for payment. Lump sum items shall be prorated as realistically as possible to reflect the work completed for those items.

SECTION 18: SURFACE MOUNTED UTILITY ADJUSTMENT

It shall be the CONTRACTOR's responsibility to adjust all surface mounted utility appurtenances, such as manholes, survey monument covers and valve boxes to grade consistent with the grade of the restored street surface.

SECTION 19: PRE/POST-CONSTRUCTION WALK-THRU

The CONTRACTOR, Inspector, and/or Project Coordinator shall conduct a pre and post construction walk-thru. This shall be accomplished to determine limits of construction and existing conditions at each site and the surrounding area. The CONTRACTOR should walk the site and note all existing conditions. Concrete pavers, mow strips, fencing, edging, sprinklers block and brick walls, etc. are within this area. Any damage and finish back to these landscapes will be included within the scope of work and no additional pay item will be allowed for this work.

The CONTRACTOR will be required to video tape the entire project prior to any construction including all effected properties and staging locations. This video media will be in a DVD format and a copy of the tape will be provided to the City. Areas near the property lines, back of sidewalk and driveways, landscaping, mow strips, fences and edging should be filmed in great detail to avoid any damage or disputes with property owners. The CONTRACTOR will be required to replace and or repair all areas that damaged by construction activities. Areas that are in question or concern should be noted on the video and the CONTRACTOR should notify the project coordinator or inspector.

SECTION 20: WORKING DAY, WORK HOURS, SATURDAY, SUNDAY, HOLIDAY AND OVERTIME WORK

The CONTRACTOR shall not perform any contract work on 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 Coordinator and as specified herein. 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 Coordinator 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 Coordinator at least twenty-four (24) hours prior to commencing such overtime work. If the CONTRACTOR plans to perform work on Sunday, he/she shall obtain approval by the Thursday prior to work on the 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 Coordinator 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 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 Coordinator when requested in writing by the CONTRACTOR, excluding but not limited to, the following legal Holidays, recognized by the City of Sparks:

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

SECTION 21: SUBMITTALS

Submittals for the following items shall be provided and shall have been compiled within the previous 12 months. One (1) electronic copy of each item should be submitted unless otherwise noted.

- Worker Certifications (if necessary)
- Bonds and Insurance
- Project Schedule and Three-Week Outlook Schedules. Project schedule shall be submitted a minimum of one (1) week prior to Pre-construction Meeting.
- Letter from Contractor to identify Contractor 24-hour emergency contact person and Contractor's authorized representative

- Outage Plans
- Electrical Gear submittal with shop drawings
- Information needed for Arc Flash by others
- Concrete Patch Mix Design
- Asset Attribute List
- Controls Equipment
- Conductors
- Raceway's and Boxes
- Grounding and bonding
- Disconnects
- Low voltage Transformers
- Data and Fiber cabling
- Data Cabinet
- Manufacturer's certification
- Start Up report
- User Manuals/Operations and Maintenance Manuals
- Test Results and Reports
- Record Drawings

Submittals for the items listed above shall be submitted to the Engineer and approved for use prior to implementation into the Project. Engineer shall have fourteen (14) days to review and comment on information submitted. Submittal transmittal will be provided by the Engineer in electronic format for Contractor use.

SECTION 22: FORCE ACCOUNT

THIS ITEM SHALL BE IDENTIFIED AS A CONTINGENT ITEM. The use of this contingent item will be as directed by the Project Coordinator. The quantity of the above contingent item of work, as set forth on the bid schedule represent no actual estimate, is nominal only and may be greatly increased or decreased or reduced to zero. The increase or reduction of this quantity as compared with that set forth on the bid schedule shall not constitute a basis for claim by the CONTRACTOR for extra payment or damages.

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. Unforeseen circumstances include but are not limited to the following:

Emergency repairs, complications arising with interfacing new improvements to existing improvements, emergency pumping, emergency light/power plants, premium time or overtime to accelerate portions of work, unexpected utility modifications or conflicts, correcting existing substandard work, requested traffic control measures or signage, over-excavation of unsuitable materials, unknown field conditions, underground storage tanks, asbestos encountered, or any other miscellaneous or incidental items related to unforeseen circumstances.

Any force account items shall be adjusted daily upon report sheets, furnished to the Project Coordinator 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 Coordinator.

SECTION 23: 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 24: SEQUENCE OF CONSTRUCTION

The design should be constructed in a manner to minimize the effects to the plant operations and minimize service outage. Outages shall be brief and only as approved by the owner. Temporary power and control outages can last a maximum of four (4) hours but outages for some specific equipment may have shorter allowable timeframes. Not all work days or work shifts may be suitable for power and control shutdowns.

Contractor to develop a power and control Shutdown Schedule and submit schedule to the Engineer for review and approval. Contractor to consider plant operations during specific days and shifts when developing a Shutdown Schedule. Close coordination with Owner will be required during development of a Shutdown Schedule and during implementation of shutdowns to avoid delays during work.

Temporary service for each piece of equipment shall be provided. The Contractor shall submit a detailed outage plan and time schedule for approval by plant operations before removing any equipment, conduits, circuits or structures from service.

SECTION 25: MEETINGS

Contractor is required to attend the following anticipated meetings:

- Pre-bid Meeting
- Pre-Construction Meeting
- Construction Progress Meetings
- Substantial completion walkthrough
- Final completion walkthrough

Meetings will typically be held at the TMWRF Training Facility. Walkthroughs will occur at the Project site unless determined otherwise. The list of meetings above is not necessarily all inclusive. Other meetings may be necessary as determined by Owner or warranted by the work.

SECTION 26: TESTING, TRAINING, START UP, DEMONSTRATION, COMMISSIONING

Testing will be detailed in the electrical specifications and drawings and will be performed by a certified third party approved by the OWNER and paid for by the CONTRACTOR. Twenty-four (24) hour notice must be given by the CONTRACTOR to the Project Coordinator or Inspector prior to any testing so that all testing work will be done in the presence of the OWNER or OWNER'S Representative. See individual Technical Specification Division 16 for additional requirements.

SECTION 27: CLOSEOUT PROCEDURES

Contractor shall complete all the work within the time designated in the Agreement unless modified by Change Order or the Certificate of Substantial Completion. Contractor shall complete Work and send subsequent written notice(s) to Owner and Engineer certifying that Work or designated portion of the Work is Substantially Complete. Contractor shall submit all warranty certificates at the time of application for Substantial Completion. The guarantee and warranty periods begin with the date of Final Acceptance. However, in connection with any specific equipment certified by the Owner as completed and its use or operation thereof for its intended purpose is assumed by the Owner, the warranty period for such equipment shall begin with the beginning date of such use or operation.

In preparation for Substantial Completion or occupancy, Contractor to conduct final inspection of sight-exposed interior and exterior surfaces, and of concealed spaces. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials, from sight-exposed interior and exterior finished surfaces; polish surfaces so designated to shine finish. Repair, patch, and touch up marred surfaces to specified finish, to match adjacent surfaces. Broom clean paved surfaces; rake clean other surfaces of grounds.

Contractor to compile Operations and Maintenance manual for the Project. See requirements in individual Technical Specifications sections.

The Contractor shall maintain and provide Record Drawings prior to Project closeout. Record Drawings shall be full size drawings which capture and notate all differences between the work constructed and the design shown in the Drawings. Notes and sketches shall be complete, legible, precise, correct, and detailed.

The Contractor, prior to requesting final payment, shall complete, obtain, and submit the following items to the Engineer, as applicable:

- Substantial Completion Walkthrough
- Final Completion Walkthrough
- Written guarantees, where required.
- O&M Manual, Technical Manuals and instructions.
- Maintenance stock items; spare parts; special tools.
- Completed and approved record documents.

- Certificates of inspection and certificates of acceptance by local governing agencies.
- Releases from all parties who are entitled to claims against the subject project, property, or improvement pursuant to the provisions of law.
- Release form from all property owners for which the Contractor has made agreements.
- Submit final pay request to Owner in accordance with the Contract.

SECTION 28: PERMITS

The Contractor shall apply for and obtain a City of Sparks Building Permit for the work utilizing the project drawings. The permit fee shall be based on the contractor's bid amount and shall be included in the Mobilization bid item. The Contractor shall comply with all permit requirements including but not limited to coordinating inspections from the building department and filing completion paperwork.

The contractor shall be responsible for and compliant with all other applicable Federal, State, and local standards.

**BID ITEM CLARIFICATIONS
TMWRF BLOWER SOFT STARTER RETROFIT
BID #17/18-015**

BID ITEM 1 ~ MOBILIZATION (LUMP SUM)

- A. No specific unit of measurement shall apply to the lump sum item "Mobilization".
- B. The bid price for "Mobilization" shall constitute full payment for "Mobilization", complete as specified. The bid price shall constitute full pay for all labor, materials, tools, equipment and incidentals necessary to comply with these Specifications including, but not limited to, coordinating, obtaining and maintaining all bonds, permits, and licenses; moving equipment and materials onto and off the site; furnishing and erecting construction trailers, temporary utilities, and other construction facilities; and all preparatory work as required for the proper performance and completion of the project (including work items not identified in a separate bid item), all in accordance with the Contract Documents. This item also includes de-mobilization.

BID ITEM 2 ~ INSTALLATION OF OWNER PROVIDED MEDIUM VOLTAGE STARTER FOR BLOWER MOTOR #4 (LUMP SUM)

- A. No specific unit of measurement shall apply to the lump sum item "Installation of Owner Provided Medium Voltage Starter for Blower Motor #4".
- B. The bid price for "Installation of Owner Provided Medium Voltage Starter for Blower Motor #4" shall constitute full payment for "Installation of Owner Provided Medium Voltage Starter for Blower Motor #4", complete as specified. The bid price shall constitute full pay for all labor, materials, tools, equipment and incidentals necessary to comply with these Specifications including, but not limited to, the removal of the existing medium voltage soft starter and appurtenant conduits, controls, and equipment in total as may be required by Project permits, all in accordance with the Contract Documents. This item includes startup and testing services.

BID ITEM 3 ~ PROCURE AND INSTALL TWO (2) MEDIUM VOLTAGE STARTER RETROFIT CONVERSION KITS FOR BLOWER MOTORS #2 & #3 (LUMP SUM)

- A. No specific unit of measurement shall apply to the lump sum item "Procure and Install Two (2) Medium Voltage Starter Retrofit Conversion Kits for Blower Motors #2 & #3".
- B. The bid price for "Procure and Install Two (2) Medium Voltage Starter Retrofit Conversion Kits for Blower Motors #2 & #3" shall constitute full payment for "Procure and Install Two (2) Medium Voltage Starter Retrofit Conversion Kits for Blower Motors #2 & #3", complete as specified. The bid price shall constitute full pay for all labor, materials, tools, equipment and incidentals necessary to comply with these Specifications including, but not limited to, the removal of the existing medium voltage soft starter and appurtenant conduits, controls, and equipment in total as may be required by Project permits, all in accordance with the Contract Documents. This item includes startup and testing services.

BID ITEM 4 ~ UL TESTING AND CERTIFICATION (LUMP SUM)

- A. No specific unit of measurement shall apply to the lump sum item "UL Testing and Certification".

- B. The bid price for “UL Testing and Certification” shall constitute full payment for “UL Testing and Certification”, complete as specified. The bid price shall constitute full pay for all labor, materials, tools, equipment and incidentals necessary to comply with these Specifications including, but not limited to, the final testing and certification of all four (4) blower motor medium voltage soft starters as may be required by Project permits, all in accordance with the Contract Documents.

BID ITEM 5 ~ FORCE ACCOUNT (LUMP SUM)

- A. No specific unit of measurement shall apply to the lump sum item “Force Account”.
- B. A force account in the amount of \$25,000.00 has been established for this project and shall be included in each bid. The Force Account will be utilized only for extra work not included in the contract documents which is authorized by the Engineer after the bid opening under the direction of the Owner. This item is a contingent item which means this item may be increased by the Owner or reduced to zero without modification to other bid items and without compensatory compensation to the Contractor.

CITY OF SPARKS
PUBLIC WORKS DEPARTMENT

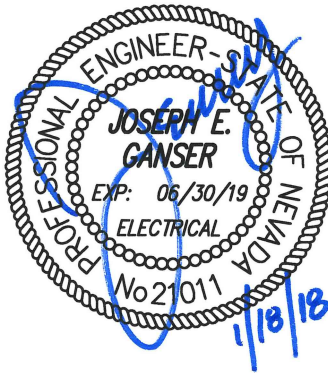
TMWRF BLOWER SOFT STARTER RETROFIT PROJECT



TECHNICAL SPECIFICATIONS

PROJECT BID NO. 17/18-015

BID SET



PK Electrical, Inc.
Engineering · Design · Consulting

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TMWRF BLOWER SOFT STARTER RETROFIT

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**TECHNICAL SPECIFICATIONS
TMWRF BLOWER SOFT STARTER RETROFIT**

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**SECTION 01 75 10
ELECTRICAL SYSTEMS COMMISSIONING**

PART 1 – GENERAL

1.1 GENERAL

- A. The electrical systems commissioning shall include a demonstration by the Contractor that all electrical equipment and/or systems have been installed, configured, and tested in conformance with the project specifications. The commissioning process shall demonstrate that each electrical system component has been properly installed and that the associated electrical test data corresponds with the requirements of the contract documents. The electrical contractor (along with any other necessary parties) shall complete a 'pre-commissioning checkout' and shall certify in writing that all electrical systems and equipment have been verified to be operating in accordance with the requirements stated in the contract documents prior to requesting date(s) for the final on-site electrical systems commissioning session(s).
- B. The Contractor shall schedule an electrical systems pre-commissioning meeting with the Owner's representatives at least one week prior to beginning testing and check-out of the electrical systems and equipment. This meeting will be utilized to review and discuss specific testing requirements and/or procedures (including any required third-party electrical systems testing) and to discuss the anticipated timeframe(s) for conducting the testing and commissioning.
- C. Electrical systems commissioning shall be conducted with representatives from the following entities:
1. Electrical Contractor (with a complete set of electrical equipment operating and maintenance manuals and with test instruments as required to perform all specified testing/verification).
 2. Factory-authorized technicians for new soft starters.
 3. The aforementioned representatives shall be present during all portions of the testing (and re-testing as required) and shall be equipped to promptly remedy any deficiencies observed during the commissioning process.
 4. Should any of the aforementioned requirements not be met on the date that the commissioning process commences and/or if deficiencies are observed during the commissioning process the commissioning will be considered a failure and the deficiencies will be required to be remedied prior to requesting a date for re-commissioning. There will be no additional costs allowed to the Contractor for re-commissioning sessions as may be required to address work that is found to be in non-compliance with the requirements of this specification and/or in non-compliance with the remainder of the contract documents.
 5. The Contractor shall include adequate time periods for all commissioning tasks in the project schedule. The necessary time periods shall be carefully reviewed with all of the appropriate subcontractors to ensure that the subcontractors are in agreement with the time allotted for each scheduled task.
 6. The Contractor shall assist the Owner by facilitating all required tests and inspections such that the Owner and/or testing agency performs testing and verification only.
 7. Successful completion of the entire electrical systems commissioning process shall be a condition of Substantial Completion. The building shall be considered 'ready to utilize for its intended use' only at such time that the entire electrical systems commissioning scope of work is successfully completed and accepted by the Owner.

1.2 ELECTRICAL SYSTEMS COMMISSIONING CHECKLIST

- A. Verify clearances at all electrical equipment, panelboards, switchboards, and motor control centers.
- B. Verify labeling of all equipment, panelboards, switchboards, motor control centers, and wiring.
- E. Test torquing of wire terminations and bussing.
- F. Verify all fuse ratings, all circuit breaker ratings, and all thermal overload protection settings.
- G. Verify that conductor color coding is in compliance with specifications and applicable codes.

Note: This checklist is intended to serve only as a guide to typical items that require verification on each project. The actual checklist for each project (typically distributed for review and confirmation at the pre-commissioning meeting) will be expanded as deemed necessary to appropriately test all of the functions and features of the specified electrical systems on each particular project.

END OF SECTION 01 75 10

SECTION 02 41 26
SELECTIVE ELECTRICAL DEMOLITION

PART 1 – GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Removal of existing electrical equipment, wiring, and conduit in areas to be remodeled; removal of designated construction; dismantling, cutting and alterations for completion of the Work.
 - 2. Disposal of materials.
 - 3. Storage of removed materials.
 - 4. Identification of utilities.
 - 5. Salvaged items.
 - 6. Protection of items to remain as indicated on Drawings.
 - 7. Relocate existing equipment to accommodate construction.

1.2 SUBMITTALS

- A. General Conditions: Requirements for submittals.
- B. Shop Drawings: Indicate demolition and removal sequence and location of salvageable items; location and construction of temporary work. Describe demolition removal procedures and schedule.

1.3 CLOSEOUT SUBMITTALS

- A. General Conditions: Requirements for submittals.
- B. Project Record Documents: Record actual locations of capped utilities, conduits and equipment abandoned in place.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with City of Sparks Public Work's standard.

1.5 PRE-INSTALLATION MEETINGS

- A. General Conditions: Pre-installation meeting.
- B. Convene minimum one week prior to commencing work of this section.

1.6 SEQUENCING

- A. General Conditions: Requirements for sequencing.
- B. Sequence as requested for project.

1.7 SCHEDULING

- A. General Conditions: Requirements for scheduling.

- B. Schedule work to coincide with new construction or remodeled/ renovation area.
- C. Cease operations immediately when structure appears to be in danger and notify Architect/Engineer. Do not resume operations until directed.

1.8 COORDINATION

- A. General Conditions: Requirements for coordination.
- B. Conduct demolition to minimize interference with adjacent [and occupied] building areas.
- C. Coordinate demolition work with General Contractor.
- D. Coordinate and sequence demolition so as not to cause shutdown of operation of surrounding areas.
- E. Shut-down Periods:
 - 1. Arrange timing of shut-down periods of in service panels with Owner. Do not shut down any utility without prior written approval.
 - 2. Keep shut-down period to minimum or use intermittent period as directed by Owner.
 - 3. Maintain life-safety systems in full operation in occupied facilities, or provide notice minimum 3 days in advance.
- F. Identify salvage items in cooperation with Owner.

1.9 CONTRACTOR'S USE OF PREMISES

- A. Confine operations at site to areas and limits permitted by law, ordinances, permits; contract documents and general conditions.
- B. Protection and safekeeping of products stored on premises is responsibility of contractor supplying product.
- C. Deliveries and unloading shall be scheduled to prevent traffic congestion blocking of access or interference with work. Arrange deliveries to avoid larger accumulations of materials than can be suitably stored at site.
- D. Contractor shall pay for, or satisfactorily repair, all damages incident to their work, to sidewalks, streets, other public or private property, or to any public utilities occurring during period of work under this contract.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

3.1 EXAMINATION

- A. General Conditions: Verification of existing conditions before starting work.
- B. Visit site and survey existing conditions affecting work prior to bid. Include necessary materials and labor to accomplish the electrical work, including relocation of existing services and

utilities on building site in bid. No consideration shall be given to future claims due to existing conditions. Any discrepancies or interference shall be reported immediately to the consultant.

- C. Verify wiring and equipment indicated to be demolished serve only abandoned facilities.
- D. Verify termination points for demolished services.

3.2 PREPARATION

- A. Erect, and maintain temporary safeguards, including warning signs and lights, barricades, and similar measures, for protection of the public, Owner, Contractor's employees, and existing improvements to remain.

3.3 DEMOLITION

- A. Demolition Drawings are based on casual field observation and existing record documents. Report discrepancies to Architect/Engineer before disturbing existing installation. Demolish existing electrical work, including auxiliary systems, in areas of existing building shown reworked. Coordinate removal of electrical systems with General Contractor and Owner.
- B. Remove conduit, wire, boxes, and fastening devices to avoid any interference with new installation.
- C. Reconnect equipment being disturbed by renovation work and required for continue service to nearest available panel.
- D. Install temporary wiring and connections to maintain existing systems in service during construction.
- E. Perform work on energized equipment or circuits with experienced and trained personnel.
- F. Clean and repair existing equipment to remain.
- G. Protect and retain power to existing active equipment remaining.
- H. Cap abandoned empty conduit at both ends.

3.4 SALVAGE ITEMS

- A. Electrical equipment, wiring, etc., removed and not required to be part of new electrical installation is classed as salvage.
- B. The Contractor shall submit a list of salvageable equipment and/or parts identified below that are to be removed. Provide list to Owner for review.
- C. The list shall contain the following:
 - 1. type of equipment
 - 2. quantity
 - 3. manufacturer
 - 4. model #
 - 5. condition (with explanation if needed)
- D. Once the list has been reviewed the Contractor will be notified of any equipment deemed reusable by the Owner.

- E. Salvageable equipment not selected to be retained by the Owner becomes property of Contractor. Remove from job site.

3.5 REUSABLE ELECTRICAL EQUIPMENT

- A. Carefully remove equipment, materials, or fixtures which are to be reused.
- B. Disconnect, remove, or relocate existing electrical material and equipment interfering with new installation.

3.6 CUTTING AND REPAIRING

- A. Cut and repair walls floors, roof, etc., as required for installation of work in this Division. Employ professional installers of repair materials where repair work is major or aesthetics are of primary importance.
- B. Do not pierce exterior walls below grade with hanger bolts. Do not cut building structural members except where accepted by Engineer. Do not use core drilling as a cutting method above telephone, electrical or data equipment. Use hammer drill only (size limited). Contain water below floor at any location of core drilling. Locate final holes to avoid cutting existing rebar as much as possible.
- C. Repair work shall be comparable with work cut. New finishes shall match adjacent finishes. Engineer will review repaired work and may reject unsuitable work.

3.7 HAZARDOUS MATERIALS

- A. Submit Material Safety Data Sheets for all materials furnished in this project defined as hazardous by NFPA. All requirements of the Material Safety Data Sheets shall be implemented and followed judiciously when hazardous materials are installed or otherwise used.
- B. All hazardous materials shall be stored and used (mixed, applied, etc.) in strict accordance with the OSHA Standards, and Safety Data Sheets.

3.8 WELDING AND CUTTING

- A. Special precautions shall be taken to reduce fire hazards where electric or gas welding or cutting work or soldering is done and suitable fire extinguishing equipment shall be maintained near such operations.

3.9 CLEANING

- A. General Conditions: Requirements for cleaning.
- B. Remove demolished materials as work progresses. Legally dispose.
- C. Keep workplace neat.

3.10 PROTECTION OF FINISHED WORK

- A. General Conditions: Requirements for protecting finished Work.

END OF SECTION 02 41 26

**SECTION 26 00 01
ELECTRICAL GENERAL PROVISIONS**

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. The Drawings and General provisions of the Contract including the "General Conditions", "Supplementary Conditions", and "General Requirements" of the Contract as written and referred to here are adopted and made part of Division 26.
- B. The Contract Agreement, Bidding documents, and all Addenda issued prior to Contract Agreement execution form a part of these specifications and apply to all Contracts or Subcontracts relating to the electrical systems.

1.2 SUMMARY

- A. The work under this Division shall consist of all labor, materials, equipment, services and related accessories, etc., necessary and required to complete all work as shown or inferred on the Drawings and in the Specifications (Contract Documents).
- B. Provide fixed electrical equipment, except where specifically noted otherwise.
- C. Provide portable electrical equipment for the complete system(s).
- D. Provide equipment and/or wiring normally furnished or required for complete electrical systems but not specifically specified on the drawings and/or in specifications, as though specified by both.
- E. All equipment and wiring shall be new, except where specifically shown or specified otherwise.
- F. Provide flexible electrical conduit and conductors having a slack, 90-degree bend or loop in any plane between connections at all vibration isolated equipment and the first attachment to building structure or cabinets, panels or boxes mounted thereon.

1.3 WORK INCLUDED IN THIS DIVISION

- A. Electrical work includes, but is not limited to
 - 1. Arranging and coordinating with TMWRF medium voltage distribution required as shown or specified.
 - 2. Alterations and additions to existing electrical systems.
 - 3. Connection equipment including Owner furnished soft starter equipment.

1.4 REFERENCES

NEC:	National Electrical Code (latest edition adopted by local authorities unless otherwise noted).
NFPA:	National Fire Protection Association.
OSHA:	Occupational Safety and Health Administration.
UL:	Underwriters Laboratories, Inc.
NEMA:	National Electrical Manufacturer's Association.
IEEE:	Institute of Electrical and Electronic Engineers.
ACI:	American Concrete Institute.
ADA:	American Disabilities Act.
ANSI:	American National Standards Institutes.

ASTM:	American Society for Testing Materials.
AWS:	American Welding Society.
FM:	Factory Mutual Insurance Association.
IBC:	International Building Code
IES:	Illumination Engineering Society.
ISA:	Instrument Society of America.
LPI	Lightning Protection Institute.
NACE:	National Association of Corrosion Engineers.
NETA:	International Electrical Testing Association.
UL:	Underwriters Laboratories.
NECA:	National Electrical Contractors Association
NETA:	National Electrical Testing Association.

1.5 ADOPTED CODES

- A. 2012 International Building Code (IBC) Published by the International Code Council (ICC).
- B. 2011 National Electrical Code (NEC) published by the National Fire Protection Association (NFPA)
- C. 2012 International Fire Code (IFC) published by the International Code Council.
- D. National Fire Codes (NFPA Standards) published by the National Fire Protection Association (NFPA) as referenced in the 2012 International Fire Code.
- E. 2009 International Energy Conservation Code (IECC) published by the International Code Council. ASHRAE/IESNA Standard 90.1-2004 is incorporated by reference.
- F. All applicable provisions of the Nevada Revised Statutes (NRS) and the Nevada Administrative Code (NAC), including those listed below.
- G. The most current regulations of the State Fire Marshal, Nevada Department of Public Safety, Carson City, Nevada (NAC Chapter 477, State Fire Marshal).
- H. The most current edition of the Americans with Disabilities Act (ADA) published by the United States Department of Justice including the Americans with Disabilities Act Accessibility Guidelines (ADAAG)
- I. Other codes, regulations, and standards referenced in the body of this document.
- J. Local codes and ordinances do not apply to projects constructed on state-owned land, except for zoning requirements pursuant to Nevada Revised Statutes Section 278.580.

1.6 DEFINITIONS

Provide:	Furnish, install, connect and test until complete.
Wire:	Furnish all necessary wiring, connect and test until complete.
Install:	Furnish, set in place, wire and test until complete.
Work:	Materials completely installed, connected, and tested until complete.
AWG:	American Wire Gage.
Equal:	Acceptable equal as determined by the Engineer.

1.7 REQUIREMENTS OF REGULATORY AGENCIES

- A. Obtain and pay for all permits and inspections required for the work. Comply with all ordinances pertaining to work described herein. Pay all expenses arising from the procurement of these certificates and include in the base Contract Price.
- B. Install work under this Division per drawings, specifications, latest adopted edition of the National Electrical Code, (NFPA-70) including local amendments and interpretations, Local adopted Building Codes, and any special codes having jurisdiction over specific portions of work within complete installation. In event of conflict, install work per most stringent code requirements determined by Engineer. This does not relieve the Contractor from furnishing and installing work shown or specified which may exceed the requirements of such ordinances, laws, regulations and codes.
- C. All materials, products, devices, fixtures, forms or types of construction included in this project shall meet or exceed the published requirements of National Electrical Code (NEC), American National Standards Institute (ANSI), Institute of Electrical and Electronics Engineers (IEEE) and National Electrical Manufacturers Associations (NEMA). All equipment shall bear the Underwriter’s Laboratories (UL) label or equivalent from approved independent testing laboratory.
- D. Arrange, pay fees for and complete work to pass required tests by agencies having authority over work. Deliver to Engineer copies of the Certificates of Inspection and approval issued by authorities and provide original copy of each certificate to Owner.
- E. When required by law or regulations, the governmental agency having jurisdiction for inspections shall be given reasonable notice and opportunity to inspect the work. Any work that is enclosed or covered up before such inspection and test shall be uncovered at the Contractor’s expense; after it has been inspected, the Contractor shall restore the work to its original condition at his own expense.

1.8 INSURANCE

- A. The Contractor shall procure and maintain, at his expense, such insurance as required by law and/or specified in the General Conditions.

1.9 DRAWINGS AND SPECIFICATIONS

- A. Drawings and specifications are complementary. Work called for by one is binding as if called for by both. Any discrepancies between drawings and specifications shall be brought to the attention of the Engineer for clarification during the bidding period. No allowance shall subsequently be made to the Contractor by reason of his failure to have brought said discrepancies to the attention of the Consultant during the bidding period or by reason of any error on the Contractor’s part.
- B. Drawings are schematic and diagrammatic in nature. Drawings show general run of circuits and approximate location of equipment. The contractor shall review drawings of all trades to assure coordination prior to placement of work. Right is reserved to change location of

equipment and devices, and routing of conduits within 10 feet, without extra cost to Owner (prior to rough-in).

- C. Use dimensions in figures, shop drawings, etc. and actual site measurements in preference to scaled dimensions. Do not scale drawings for exact sizes or locations – use dimensioned details or actual field conditions. Verify item mounting heights as required by project conditions prior to rough-in.
- D. The architectural drawings shall take precedence over all other drawings in matters of dimensions. Discrepancies between different drawings or between drawings and specifications, or regulations and codes governing the installation shall be brought to the attention of the Engineer in writing for determination.
- E. Layout equipment as shown on drawings as close as possible. Verify access requirements for equipment actually furnished, and adjust layout to comply with NEC 110. Right is reserved to change layout within 10 feet without additional cost (prior to rough-in).
- F. All devices, light fixtures, etc. located in ceiling tiles shall be located in the center of the ceiling tile UNLESS specifically noted or approved to do otherwise.
- G. The Contractor is responsible to field measure and confirm the mounting heights and location of electrical equipment with respect to counters, doorways, and other architectural, mechanical or structural work. Do not scale distances off the electrical drawings: Use actual building dimensions.
- H. Execution of Contract is evidence that Contractor has examined all existing conditions, drawings and specifications related to work, and is informed to extent and character of work. Later claims for labor and materials required due to difficulties encountered, which could have been foreseen had examination been made, will not be recognized.
- I. All work called for in this Section of the plans and specifications shall be performed under this Section, regardless of whether such work may also have been called for in other Section(s). Discrepancies in or conflicts among the various parts of the contract drawings shall not relieve Contractor of his obligation to perform.
- J. No attempt has been made to establish the required sections or splits of equipment relative to the size of access into the space, building, etc. Contractor shall establish all said splits, sections, etc. necessary to install equipment complete without undue disassembly of equipment or demolition of building parts at site of work.
- K. Charges for extra work are not allowed unless work is authorized by written order from the Owner's Representative approving charges for work.
- L. Check all door swings so light switches are not located behind doors. Relocate switches as required with the Engineer's review.
- M. Elevators: The location of switches, GFCI receptacles, lights, telephone outlets, disconnect switches, fire alarm devices, etc., in elevator pits, shafts, equipment rooms shall be located as required by the Elevator Shop Drawings and applicable codes. Coordinate size and type of all electrical devices with Elevator Contractor prior to purchase of equipment.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. All material shall be new, and have a UL label where available. If UL label is not available, material shall be manufactured in accordance with applicable NEMA, IEEE and Federal Standards. Use UL labeled components in assemblies that do not have overall UL label. All equipment shall comply with the terms "listed and labeled" as defined in the NEC 70, Article 100. Submit letter stating compliance with these requirements.
- B. Utilize one of the manufacturers listed to furnish all of the major equipment (i.e., transformers, bus duct, switchgear, circuit breakers, etc.) required for this project.

PART 3 – EXECUTION

3.1 VISIT TO SITE

- A. Visit site, and survey existing conditions affecting work prior to bid. Include necessary materials and labor to accomplish the electrical work, including relocation of existing services and utilities on building site in bid. No consideration shall be given to future claims due to existing conditions. Any discrepancies or interference's shall be reported immediately to the Engineer.

3.2 WORKMANSHIP

- A. All work performed shall be first class work in every aspect. The work shall be performed by mechanics skilled in their respective trades, who shall at all times be under the supervision of competent persons. All work shall be installed to comply with NECA's "Standard of Installation."
- B. Work under this Division shall be first class with emphasis on neatness and workmanship. All work shall be installed square and plumb and concealed where possible. Work that is deficient, defective, poorly laid out, not perfectly aligned, or that is not consistent with the requirements generally accepted in the trade for "first class work" will not be acceptable.
- C. In addition to the materials specified elsewhere, furnish and install all other miscellaneous items necessary for the completion of the work to the extent that all systems are complete and operative.
- D. All work under this Section shall be performed in cooperation with the work performed under all other Sections of the Specifications for the Project in order to avoid interference with other work and to secure the proper installation of all work. Refer the Drawings and Specifications covering the work to be performed under all Sections, so that the relation and extent of the work of this Section with respect to the work of all other Sections is understood. Give right of way to raceways and piping systems installed at a required slope.
- E. Install work using competent mechanics, under supervision of foreman, all duly certified by local authorities. The installation shall be subject to the Engineer's observation, and final acceptance. The Engineer may reject unsuitable work.
- E. Conduit systems must be complete prior to installation of wiring.

3.3 CHANGE ORDERS

- A. Additional work may be required on the project which is outside the scope of the contract. Such additional work will be described in Supplemental Instructions and/or Clarifications, to be estimated and priced by the Contractor, and accepted by the Owner, prior to commencing work. Proposals shall include a list of quantities of all material being used with unit costs broken down into material and labor costs per unit.

- B. Material costs and labor units shall not exceed the latest edition of RS Means Electrical Cost Data.
- C. See the General Conditions of the Specifications for acceptable charges.

3.4 GUARANTEE

- A. Furnish the Owner a written guarantee, stating that if workmanship and/or material executed under this Division is proven defective within one (1) year after final acceptance by the Owner, such defects and other work damaged will be repaired and/or replaced. Submit with Operations and Maintenance Manuals.
- B. Obtain from the various manufacturers or vendors guarantees or warranties for their particular equipment or components, and deliver them to the Owner. All guarantees and warranties provided shall be referenced to this project.
- C. In event that systems are placed in operation in several phases at the Owner's request, guarantee will begin on date each system or item of equipment is accepted for service by the Owner. Provide O&M manuals for all equipment when equipment is accepted for service by the Owner.
- D. All guarantees and warranties shall include labor and material at the site of installation for the duration of the guarantee period.

3.5 OBSERVATIONS OF WORK AND DEMONSTRATION OF OPERATION (ACCEPTANCE)

- A. At all observations of work, open panel covers, junction box covers, pull box covers, device covers, and other equipment with removable plates for observation. Provide sufficient personnel to expedite cover removal and replacement.
- B. Contractor to demonstrate operation of new equipment and/or systems to satisfaction of Owner/Engineer. Contractor to have manufacturer available for demonstration of equipment and/or systems where requested by Owner/Engineer. Furnish affidavit signed by Owner's representative indicating that demonstration of operation has been performed.

3.6 COOPERATION AND COORDINATION

- A. Carefully coordinate work with other contractors and subcontractors. Refer conflicts between trades to Engineer. Provide necessary information to other trades for such coordination. Such information shall include Shop Drawings, Product Data and all other required data.
- B. Whenever such information is not provided in a timely manner or whenever such information is incorrect, this contractor shall bear all costs for providing or correcting affected work of related trades with no change to the Contract Price or Construction Schedule.
- C. Work to be installed as progress of project will allow. Schedule of work determined by General Contractor, Owner, and/or Architect/Engineer.

3.7 PROTECTING

- A. Provide warning lights, bracing, shoring, rails, guards and covers necessary to prevent damage or injury. All persons working around electrical equipment shall have electrical shock and flash protection per OSHA 1910.301-309 & 331-335.

- B. Do not leave exposed or unprotected, electrical items carrying current. Protect visitors and workers from exposure to contact with electrically energized surfaces, parts, etc. in accordance with OSHA standards.

3.8 DELIVERY, STORAGE AND HANDLING

- A. Deliver equipment and materials to job site in original, unopened, labeled container. Products shall be properly identified with names, model numbers, types, grades, compliance labels and other information needed for identification. Store to prevent damage and injury. Store materials to prevent corroding. Store finished materials and equipment to prevent staining and discoloring. Store materials affected by condensation in warm dry areas. Provide heaters. Contractor shall verify the availability of on site storage space, if no on site storage space is available then the contractor shall cover the cost for off site storage. Materials stored at the project site that becomes soiled with construction dirt, concrete, or moisture shall be removed from the site and replaced with new. Do not install soiled material.
- B. Protect work and materials from damage by weather, entrance of water or dirt. Cap and mark conduit during installation.
- C. Avoid damage to materials and equipment in place. Repair, or remove and replace damaged work and materials.
- D. Protection and safekeeping of products stored on premises is responsibility of Contractor supplying products.
- E. Schedule of deliveries and unloading to prevent traffic congestion blocking of access or interference with work. Arrange deliveries to avoid larger accumulations of materials than can be suitably stored at site.
- F. Install equipment per manufacturer's recommendations. Conflicts between contract documents and these recommendations shall be referred to Engineer for remedy.
- G. Electrical or electronic equipment that has been damaged, exposed to weather or is, in the opinion of the Engineer or Architect, otherwise unsuitable because of improper fabrication, storage or installation shall be removed and replaced by this Contractor at his expense.

3.9 CLEANING AND PAINTING

- A. Clean equipment furnished in this Division after completion of work. Clean wipe the interior of all conduit, pullboxes, junction boxes, outlet boxes, and panelboard backboxes, soiled with dirt and debris prior to installation of wiring.
- B. Touch-up or re-paint damaged painted finishes as determined by the Engineer.
- C. Remove debris, packing cartons, scrap, etc., from site daily.

3.10 TRAINING

- A. Training for operation and maintenance of new systems or modifications to existing systems is specified in Technical sections. Contractor shall submit with record documents an itemized receipt signed by Owner's representative that all specified training has been received.

END OF SECTION 26 00 01

**SECTION 26 00 02
ELECTRICAL SUBMITTALS**

PART 1 – GENERAL

1.1 DESCRIPTION OF SUBMITTAL CATEGORIES

- A. The required submittals are defined below and specified in each section.
1. Requests for substitutions are written requests to use materials, equipment, etc., different from that specified.
 2. Shop Drawings include fabrication, layout, wiring diagrams, erection, setting, coordination, drawings and diagrams and performance data.
 3. Samples are units of work, materials or equipment items, showing the workmanship, pattern, trim and similar qualities proposed.
 4. Manufacturer's Data is standard printed product information concerning the standard portions of the manufacturer's products.
 5. Certifications are written statements, executed specifically for the project application by an authorized officer of the contracting firm, manufacturer, or other firm as designated, certifying to compliance with the specified requirements.
 6. Test Reports are specific reports prepared by independent testing laboratories, showing the results of specified testing.
 7. Industry Standards are printed copies of the current standards in the industry.
 8. Manufacturer's Product Warranties are manufacturer's standard printed commitment in reference to a specific product and normal application, stating that certain acts of restitution will be performed by the manufacturer if the product fails under certain conditions and times limits.
 9. Operating Instructions are the written instructions by the manufacturer, fabricator or installer of equipment or systems, detailing the procedures to be followed by the Owner's in operation, control and shut-down.
 10. Maintenance Manuals are the compiled information provided for the Owner's maintenance of each system of operating equipment.
 11. Maintenance Materials (spare parts) are extra stock of parts or materials for the Owner's initial use in maintaining the equipment and systems in operation.
 12. Record Drawings are accurate representations of the installed systems and wiring as recorded on a daily "as-installed" basis.
 13. Guarantees are signed commitments to the Owner that certain acts of restitution will be performed if certain portions of work fail within certain conditions and time limits.
 14. Product Data includes manufacturer's data pertaining to the products, materials and equipment of the work.
 15. Method of Procedures are detailed sequences of work required during interruption of service and/or connection to energized parts of systems requiring special sequences or protections.
 16. Training – Materials and sign-off of completion.
 17. Identification nomenclature – See section 26 05 53.

PART 2 – PRODUCTS

2.1 PROPOSED MATERIAL MANUFACTURERS

- A. Submit to Consultant within 30 days after award of contract a complete list of proposed material manufacturers. List does not preclude submission of shop drawings. Acceptance of manufacturer on list does not constitute acceptance of specific material or equipment. If shop drawings are submitted with non approved substitutions, the contractor will pay the expense incurred by the consultant to review the shop drawings of any re-submittal.

PART 3 – EXECUTION

3.1 SUBSTITUTIONS

- A. See General Conditions of the specifications for information regarding substitutions. Specified catalog numbers are used for description of equipment and standard of quality only. Equivalent material will be given consideration only if adequate comparison data including samples if requested by Engineer are provided. Alternate products shall meet or exceed design criteria.

3.2 SUBMITTAL FORM AND PROCEDURES

- A. Shop and Erection Drawings
1. Submit shop drawings for material and equipment furnished under Division 26 of specifications, to Consultant for review within 30 days after award of contract. Shop drawings shall be submitted on timely basis to allow adequate lead time for review, re-submission if necessary, manufacture and delivery to allow access of material to project at correct time based on schedule established by Consultant/Contractor. Provide index with thumb tabs collated with Table of Contents for sections. Include complete descriptive data with dimensions, operating data and weight for each item of equipment. Carefully examine shop drawings to assure compliance with drawings and specifications prior to submittal to Consultant. **Shop drawings and submittals shall bear the stamp of approval of the Electrical Contractor as evidence that they have checked the drawings.** Drawing submitted without this stamp of approval will not be considered and will be returned for proper re-submission. All shop drawings shall be submitted as a single one time complete package. Partial packages shall not be reviewed.
 2. Submit submittals electronically. Original PDF files are preferred over scans of prints.
 3. Clearly mark each shop drawing item to correspond to drawings and specifications. Any drawings not clearly marked will be rejected.
 4. Review of shop drawings does not relieve Contractor of responsibility for errors and omissions in shop drawings. Contractor is responsible for dimensions and sizes of equipment. Inform Engineer in writing of equipment differing from that specified.
- B. "Record" Drawings
1. One complete set of prints will be furnished to the Contractor to indicate actual location of conduit systems, outlets, and equipment. Keep set of prints on job and record day to day changes to Contract drawings with red pencil. Provide "Record" drawings as specified in the General Conditions or Division 01 of the specifications at the completion of job.
- C. Maintenance Materials
1. Submit a list of all warranties and guarantees.
 2. Submit with final close out documents a signed receipt for all maintenance materials (spare parts) specified. See Technical Sections for required materials.
- D. Product Warranties and Guarantees
1. Submit fully executed Product Warranties and Contractor Guarantees to the Owner with final close out documents.
- E. Maintenance Manuals
1. Submit to Consultant electronic PDF set of data prepared by manufacturer for each item and/or device of electrical equipment furnished in this contract completely describing and identifying equipment. Data to include serial numbers,

catalog/model numbers, parts lists, description of operation, final shop drawings, wiring diagrams, all electrical ratings, set-up and maintenance procedures and other literature required for maintenance of equipment. See Technical Sections for other required information.

- F. Summary of Project Closeout Items for Owner
1. Certificates of inspection and approval from authorities having jurisdiction.
 2. Executed Guarantees and Product Warranties.
 3. "Record" drawings.
 4. Final shop drawings.
 5. Final Erection drawings.
 6. Receipt for maintenance materials (spare parts).
 7. Maintenance manuals.
 8. Receipt for keys.
 9. Completed test reports.
 10. Signed off observation and punch lists.
 11. Lien waivers.

3.3 SPECIFIC SUBMITTAL REQUIREMENTS

- A. Shop Drawings shall include, but not be limited to the following:
1. Shall be drawn to accurate scale except where diagrammatic representations are specifically indicated.
 2. Shall show clearance dimensions of critical locations and show dimensions of spaces required for operation and maintenance of equipment.
 3. Shall show conduit and conductor connections and other service connections.
 4. Shall show interfaces with other work including structural support.
 5. Shall include complete descriptive data, with dimensions, operating data and weight.
 6. Shall indicate deviation from the contract documents.
 7. Shall explain deviations.
 8. Shall show short circuit current ratings for all electrical equipment.
 9. Shall show how deviations coordinate with portions of the work, currently or previously submitted.
- B. Review of shop drawings shall not relieve Contractor of responsibility for errors or omissions in shop drawings. Any equipment that will not fit into space shown on drawings shall be called to the attention of the Engineer in writing.
- C. Samples: Submit samples where requested by Engineer. Engineer's review of sample submittals
1. Shall be limited to general type, pattern and finish.
 2. Shall not include testing and inspection of the submitted samples.
 3. Shall not indicate complete compliance with specified requirements. Complete compliance with specifications is the exclusive responsibility of the Contractor.
- D. Manufacturer's Data
1. Where pre-printed data covers more than one distinct item, mark copy to *clearly* indicate which item is to be provided.
 2. Contractor shall delete portions of data not applicable.
 3. Contractor shall mark data showing portion of operating range required for project application.
 4. Elaboration of standard data describing a non-standard product shall be processed as a shop drawing.
 5. For each product Contractor shall include the following information summarized into a single sheet document for each product
 - a) Manufacturer's production specifications including catalog/model number.

- b) Manufacturer's Serial Number.
 - c) Installation or fabrication instructions.
 - d) Source of supply.
 - e) Sizes, weights, speeds and operating capacities.
 - f) All electrical ratings, including temperature rating of terminals.
 - g) Conduit and wire connection sizes and locations.
 - h) All thermal ratings.
 - i) Statements of compliance with required standard and governing regulations.
 - j) Cooling requirements and makeup and/or ventilating air requirements.
 - k) Performance data, where applicable.
 - l) All sound ratings.
 - m) Other information needed to confirm compliance.
 - n) Manufacturers recommended parts list.
 - o) Other information required by Technical Sections.
- E. Source Codes: Provide Source Code in both electronic and paper format and Source Code Licenses for all equipment that is computer driven. Provide Development licenses so Source Code can be examined, modified, and maintained. These Development Licenses, along with all software licenses shall become property of the Owner. At the discretion of the owner, third parties will be allowed to use the software as necessary, for the life of the work in this project. No encryption or other obfuscation will be allowed.
- F. Certifications: Contractor shall submit with notarized execution.
- G. Test Reports: Submit notarized test reports signed and dated by firm performing test.
- H. Manufacturer's Product Warranties: Contractor shall submit product warranties in accordance with the technical sections. Where published warranty includes deviation from required warranty, product is disqualified from use on project, unless manufacturer issues a specific project warranty.
- I. Operating Instructions required
- 1. Submit manufacturer's operating instructions for each item of electrical equipment.
 - 2. Submit supplement with additional project application instructions where necessary.
 - 3. Submit specific operating instructions for each electrical system that involves multiple items of equipment.
 - 4. Submit instructions for charging, start-up, control or sequencing of operation, phase or seasonal variations, shut-down, safety and similar operations.
 - 5. All operating instructions shall be typewritten in completely explained and easily understood English language.
- J. Maintenance Manual Requirements
- 1. Provide emergency instructions including addresses and telephone numbers for service sources.
 - 2. Provide regular system maintenance procedures.
 - 3. Indicate proper use of tools and accessories.
 - 4. Provide wiring and control diagram for each system.
 - 5. Provide manufacturer's data for each operational item in each system.
 - 6. Provide source code submittal for all software controlled equipment.
 - 7. Provide manufacturer's product warranties, and guarantee relating to the system and equipment items in the system.
 - 8. Provide Final Shop and Erection drawings relating to the system.

9. Bind each operating and maintenance manual in one or more vinyl-covered, 2" 3-ring binders, plus pocket-folders for folded drawings. Index with thumb tab collated with Table of Contents for sections. Mark the back spine and front cover of each binder with system identification and volume number.

- K. Maintenance Materials: Deliver all materials to the Owner in fully identified containers or packages suitable for storage. Obtain receipt for all delivered materials signed by the Owner's Representative.

- L. Guarantees: Where indicated as "Certified", provide guarantee which, in addition to execution by an authorized officer of each guarantor, is attested to by the Secretary of each guarantor and bears the corporate seal. Submit draft of each guarantee prior to execution.

END OF SECTION 26 00 02

SECTION 26 05 19
LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 – GENERAL

1.1 SUMMARY

- A. Section includes building wire and cable and wiring connectors and connections.
- B. Related Sections:
 - 1. Section 26 05 53 - Identification for Electrical Systems: Product requirements for wire identification.

1.2 REFERENCES

- A. International Electrical Testing Association:
 - 1. NETA ATS - Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems.
- B. National Fire Protection Association:
 - 1. NFPA 70 - National Electrical Code.
 - 2. NFPA 262 - Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces.
- C. Underwriters Laboratories, Inc.:
 - 1. UL 1277 - Standard for Safety for Electrical Power and Control Tray Cables with Optional Optical-Fiber Members.

1.3 SYSTEM DESCRIPTION

- A. Product Requirements: Provide products as follows:
 - 1. Stranded conductors for all feeders and branch circuits.
 - 2. Stranded conductors for control circuits.
 - 3. Conductor not smaller than 12 AWG for power and lighting circuits.
 - 4. Conductor not smaller than 16 AWG for control circuits.
 - 5. Increase wire size in branch circuits to limit voltage drop to a maximum of 3 percent.
- B. Wiring Methods: Provide the following wiring methods:
 - 1. All Locations Unless Noted Otherwise: Use only building wire, Type THHN/THWN or XHHW insulation, in raceway.

1.4 DESIGN REQUIREMENTS

- A. Conductor sizes are based on copper unless indicated as aluminum or "AL".

1.5 SUBMITTALS

- A. General Conditions: Requirements for submittals.
- B. Product Data: Submit for building wire.
- C. Design Data: Indicate voltage drop and ampacity calculations for aluminum conductors substituted for copper conductors.

D. Test Reports: Indicate procedures and values obtained.

1.6 CLOSEOUT SUBMITTALS

A. General Conditions: Requirements for submittals.

B. Project Record Documents: Record actual locations of components and circuits.

1.7 QUALITY ASSURANCE

A. Provide wiring materials located in plenums with peak optical density not greater than 0.5, average optical density not greater than 0.15, and flame spread not greater than 5 feet (1.5 m) when tested in accordance with NFPA 262.

B. Maintain one copy of each document on site.

1.8 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

1.9 FIELD MEASUREMENTS

A. Verify field measurements are as indicated on Drawings.

1.10 COORDINATION

A. General Conditions: Requirements for coordination.

B. Where wire and cable destination is indicated and routing is not shown, determine routing and lengths required.

C. Wire and cable routing indicated is approximate unless dimensioned.

PART 2 – PRODUCTS

2.1 BUILDING WIRE

A. Product Description: Single conductor insulated wire.

B. Conductor: Copper.

C. Insulation Voltage Rating: 600 volts.

D. Insulation Temperature Rating: 90 degrees C.

E. Insulation Material: Thermoplastic.

2.2 ARMORED CABLE

A. Type AC Cable may not be used on this project.

2.3 METAL CLAD CABLE

- A. Type MC Cable may not be used on this project and is strictly prohibited.

2.4 CONNECTORS AND SPLICES

- A. Provide UL-listed factory-fabricated wiring connectors of size, ampacity rating, material, type and class for application and for service indicated. Select connectors to comply with Project's installation requirements and as specified in Part 3 "Applications" of this Article.
- B. For Conductors #10 AWG and Smaller: Wire and cable connectors shall be solderless, twist on, 600 volts, 105°C., shall comply with UL 486A/C standards. Connectors coded for easy selection compatible with wiring to be spliced. Install connectors as recommended by manufacturer. Use proper crimping tool where crimp sleeves are used.
 - 1. Acceptable Connector Manufacturers
 - a) 3M- "Scotchlock"
 - b) Buchanan - "B Cap"
 - c) Thomas & Betts - "Stak-On"
 - d) Ideal - "Wing Nuts"
- C. Compression Splices: Splice conductors #8 and larger with solid copper barrel, type fittings applied with an appropriate hydraulic tool. Splices used only where approved. Splice fittings: Burndy "Hydent". Insulate splices with 600 volt, 105°C, "heat shrink", "cold shrink" covers, or taped insulation consisting of rubber, friction and vinyl tapes applied per manufacturer for 600 volt, 105°C covering to 150 percent of installation rating of conductor.
 - 1. Acceptable Splice and Tape Manufacturers
 - a) Burndy
 - b) Thomas & Betts
 - c) IIsco
 - d) Anderson
 - e) Blackburn
 - f) Oz/Gedney
- D. Connectors and/or Terminations for Conductors #6 AWG and larger: Tin plated, 98% copper, dual crimp long barrel compression lugs with two bolt holes, insulated with molded covers to accommodate 1/2" bolts. Apply with hydraulic tool recommended by manufacturer.
 - 1. Acceptable Manufacturers and Products
 - a) O-Z Gedney
 - b) Burndy Engineering Company "Hylugs"
 - c) Thomas and Betts, "Color Keyed"
 - d) Anderson
- E. Use pulling lubricant which will not be detrimental to insulation of conductors indicated by published user information.
 - 1. Acceptable Manufacturers of Lubricant
 - a) Ideal Industries
 - b) Panduit Corp.
 - c) OZ/Gedney
 - d) Plymouth/Bishop
 - e) American Polywater Corp.
 - f) Thomas & Betts
- F. Insulate all live joints to 600 volts with strip rubber, friction tape, and electrical vinyl tape installed in accordance with manufacturers recommendations.
 - 1. Acceptable Tape Manufacturers
 - a) 3M

b) Plymouth

PART 3 – EXECUTION

3.1 EXAMINATION

- A. General Conditions: Coordination and project conditions.
- B. Verify interior of building has been protected from weather.
- C. Verify mechanical work likely to damage wire and cable has been completed.
- D. Verify raceway installation is complete and supported.

3.2 PREPARATION

- A. Completely and thoroughly swab raceway before installing wire.

3.3 EXISTING WORK

- A. Remove exposed abandoned wire and cable. Patch surfaces where removed cables pass through building finishes.
- B. Disconnect abandoned circuits and remove circuit wire and cable. Remove abandoned boxes when wire and cable servicing boxes is abandoned and removed. Install black cover for abandoned boxes not removed.
- C. Provide access to existing wiring connections remaining active and requiring access. Modify installation or install access panel.
- D. Extend existing circuits using materials and methods compatible with existing electrical installations, or as specified.
- E. Clean and repair existing wire and cable remaining or wire and cable to be reinstalled.

3.4 INSTALLATION

- A. Route wire and cable to meet Project conditions.
- B. Neatly train and lace wiring inside boxes, equipment, and panelboards.
- C. Identify and color code wire and cable under provisions of Section 16075. Identify each conductor with its circuit number or other designation indicated.
- D. Install wiring complete with connections to equipment.
- E. Install wiring so conductors are not in tension in completed system.
- F. Form wiring neatly and group in circuit. Tie grouped conductors with nylon ties, T&B "Tyrap" or approved equivalent.
- G. Each conduit run shall be run complete end to end before conductors are installed.

- H. Use pulling lubricant to decrease pulling tension for all feeder cables, and all difficult cable pulls of any type or size. Pull all conductors into raceway at the same time.
- I. Provide cable supports, at locations required by NEC and/or as shown. Supports with malleable screwed conduit fitting and non-conductive wedges drilled for the size conductors installed. Provide supports rated for all types of insulation and all voltage. Cable supports shall be O.Z./Gedney type "R" or accepted equivalent. Furnish pullbox, sized per NEC for each cable support.
- J. Bond circuit ground wires where installed to all devices, equipment, outlet and junction boxes, and grounding bushings (where provided) with a full size conductor and lugged type connection.
- K. Securely fasten non-ferrous identifying tapes, pressure sensitive labels or engraved nameplates to all cables, feeders and power cables exposed in vaults, inside pull boxes, exposed in manholes, exposed in switchboard, termination compartments, etc.
- L. Join and terminate copper conductors individually. Do not mix voltages in the same raceway.
- M. Provide lugs where not furnished as part of equipment - furnish as specified above, to connect all conductors.
- N. Furnish lugs for conductors #1/0 and larger with two bolt tongue or accepted equivalent single bolt tongue with anti-turn devices.
- O. Mark all branch circuit conductors at panel terminations including neutrals with pressure sensitive numbers to correspond to circuit numbers connected. See Section 16040 for labels.
- P. Connect circuits and feeders as shown on drawings. Drawings are diagrammatic and do not show every detail required in the wiring system. Detail wiring accomplished per NEC.
- Q. All conductors making up parallel feeders to be same size, same type, and same insulation, all cut same length. Bond each group of conductors making up a phase or neutral at both ends in an approved manner. Parallel conductors shall not be run in the same raceway.
- R. DO NOT COMBINE CIRCUITS into more than three circuits per homerun unless specifically approved by the Consultant.
- S. Neutral conductors shall not be used for equipment grounding.
- T. Circuitry shall not be run in elevator shafts and hoistways.
- U. Provide a separate neutral and grounding conductor for all GFI circuits or GFI devices to ensure an adequate ground-fault return path.
- V. Use #10 AWG for all 20 amp, 120 volt homerun circuits that exceed 75 feet from center of load and 150 feet for 277 volt circuits.
- W. Panelboards may not be used as raceways.
- X. Install crimp on fork terminals for device terminations. Do not place bare stranded conductors directly under screws.
- Y. Install terminal lugs on ends of 600 volt wires unless lugs are furnished on connected device, such as circuit breakers.

- Z. Size lugs in accordance with manufacturer's recommendations terminating wire sizes. Install 2-hole type lugs to connect wires 4 AWG and larger to copper bus bars.
- AA. For terminal lugs fastened together such as on motors, transformers, and other apparatus, or when space between studs is small enough that lugs can turn and touch each other, insulate for dielectric strength of 2-1/2 times normal potential of circuit.
- BB. Clean conductor surfaces before installing lugs and connectors.
- CC. Make splices, taps, and terminations to carry full ampacity of conductors with no perceptible temperature rise.

3.5 WIRE COLOR

- A. General:
 - 1. For wire sizes 10 AWG and smaller, install wire colors in accordance with the following:
 - a. Black and red for single phase circuits at 120/240 volts.
 - b. Black, red, and blue for circuits at 120/208 volts single or three phase.
 - c. Orange, brown, and yellow for circuits at 277/480 volts single or three phase.
 - 2. For wire sizes 8 AWG and larger, identify wire with colored tape at terminals, splices and boxes. Colors are as follows:
 - a. Black and red for single phase circuits at 120/240 volts.
 - b. Black, red, and blue for circuits at 120/208 volts single or three phase.
 - c. Orange, brown, and yellow for circuits at 277/480 volts single or three phase.
- B. Neutral Conductors: White. When two or more neutrals are located in one conduit, individually identify each with proper circuit number.
- C. Branch Circuit Conductors: Install three or four wire home runs with each phase uniquely color coded.
- D. Feeder Circuit Conductors: Uniquely color code each phase.
- E. Ground Conductors:
 - 1. For 6 AWG and smaller: Green.
 - 2. For 4 AWG and larger: Identify with green tape at both ends and visible points including junction boxes.

3.6 FIELD QUALITY CONTROL

- A. General Conditions: Field inspecting, testing, adjusting, and balancing.
- B. Inspect and test in accordance with NETA ATS, except Section 4.
- C. Perform inspections and tests listed in NETA ATS, Section 7.3.1.

END OF SECTION 26 05 19

SECTION 26 05 26
GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 – GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Rod electrodes.
 - 2. Wire.
 - 3. Grounding well components.
 - 4. Mechanical connectors.
 - 5. Exothermic connections.

1.2 REFERENCES

- A. Institute of Electrical and Electronics Engineers:
 - 1. IEEE 142 - Recommended Practice for Grounding of Industrial and Commercial Power Systems.
 - 2. IEEE 1100 - Recommended Practice for Powering and Grounding Electronic Equipment.
- B. International Electrical Testing Association:
 - 1. NETA ATS - Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems.
- C. National Fire Protection Association:
 - 1. NFPA 70 - National Electrical Code.

1.3 SYSTEM DESCRIPTION

- A. Grounding systems use the following elements as grounding electrodes:
 - 1. Existing grounding system.

1.4 PERFORMANCE REQUIREMENTS

- A. Grounding System Resistance: 5 ohms maximum.

1.5 SUBMITTALS

- A. General Conditions: Requirements for submittals.
- B. Product Data: Submit data on grounding electrodes and connections.
- C. Test Reports: Indicate overall resistance to ground and resistance of each electrode.
- D. Manufacturer's Installation Instructions: Submit for active electrodes.
- E. Manufacturer's Certificate: Certify Products meet or exceed specified requirements.

1.6 CLOSEOUT SUBMITTALS

- A. General Conditions: Requirements for submittals.

- B. Project Record Documents: Record actual locations of components and grounding electrodes.

1.7 QUALITY ASSURANCE

- A. Provide grounding materials conforming to requirements of NEC, IEEE 142, and UL labeled.
- B. Maintain one copy of each document on site.

1.8 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing Products specified in this section with minimum three years documented experience.
- B. Installer: Company specializing in performing work of this section with minimum three years documented experience.

1.9 PRE-INSTALLATION MEETINGS

- A. General Conditions: Pre-installation meeting.
- B. Convene minimum one week prior to commencing work of this section.

1.10 DELIVERY, STORAGE, AND HANDLING

- A. General Conditions: Requirements for transporting, handling, storing, and protecting products.
- B. Accept materials on site in original factory packaging, labeled with manufacturer's identification.
- C. Protect from weather and construction traffic, dirt, water, chemical, and mechanical damage, by storing in original packaging.
- D. Do not deliver items to project before time of installation. Limit shipment of bulk and multiple-use materials to quantities needed for immediate installation.

1.11 COORDINATION

- A. General Conditions: Requirements for coordination.
- B. Complete grounding and bonding of building reinforcing steel prior concrete placement.

PART 2 – PRODUCTS

2.1 WIRE

- A. Material: Stranded copper.
- B. Foundation Electrodes: As shown on drawings.
- C. Grounding Electrode Conductor: Copper conductor bare.

- D. Bonding Conductor: Copper conductor bare.

2.2 GROUNDING WELL COMPONENTS

- A. Well Pipe: 8 inches NPS (DN200) by 18 inches (600 mm) long concrete pipe with belled end.
- B. Well Cover: Cast iron with legend "GROUND" embossed on cover.

2.3 MECHANICAL CONNECTORS

- A. Description: Bronze connectors, suitable for grounding and bonding applications, in configurations required for particular installation.

2.4 EXOTHERMIC CONNECTIONS

- A. Product Description: Exothermic materials, accessories, and tools for preparing and making permanent field connections between grounding system components.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. General Conditions: Verification of existing conditions before starting work.
- B. Verify final backfill and compaction has been completed before driving rod electrodes.

3.2 PREPARATION

- A. Remove paint, rust, mill oils, surface contaminants at connection points.

3.3 EXISTING WORK

- A. Modify existing grounding system to maintain continuity to accommodate renovations.
- B. Extend existing grounding system using materials and methods as specified.

3.4 INSTALLATION

- A. Install in accordance with IEEE 142.
- B. Install grounding and bonding conductors concealed from view.
- C. Install grounding well pipe with cover at each rod location. Install well pipe top flush with finished grade.
- D. Install grounding electrode conductor and connect to reinforcing steel in foundation footing as indicated on Drawings. Electrically bond steel together.
- E. Equipment Grounding Conductor: Install separate, insulated conductor within each feeder and branch circuit raceway. Terminate each end on suitable lug, bus, or bushing.

- F. Install continuous grounding using underground cold water system and building steel as grounding electrode. Where water piping is not available, install artificial station ground by means of driven rods or buried electrodes.
- G. Accomplish grounding of electrical system by using insulated grounding conductor installed with feeders and branch circuit conductors in conduits. Size grounding conductors in accordance with NEC. Install from grounding bus of serving panel to ground bus of served panel, grounding screw of receptacles, lighting fixture housing, light switch outlet boxes or metal enclosures of service equipment. Ground conduits by means of grounding bushings on terminations at panelboards with installed number 12 conductor to grounding bus.
- H. Grounding electrical system using continuous metal raceway system enclosing circuit conductors in accordance with NEC.
- I. Permanently attach equipment and grounding conductors prior to energizing equipment.

3.5 FIELD QUALITY CONTROL

- A. General Conditions: Field inspecting, testing, adjusting, and balancing.
- B. Inspect and test in accordance with NETA ATS, except Section 4.
- C. Grounding and Bonding: Perform inspections and tests listed in NETA ATS, Section 7.13.
- D. Perform ground resistance testing in accordance with IEEE 142.
- E. Perform continuity testing in accordance with IEEE 142.
- F. When improper grounding is found on receptacles, check receptacles in entire project and correct. Perform retest.

END OF SECTION 26 05 26

**SECTION 26 05 53
ELECTRICAL IDENTIFICATION**

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide and install required identification for the systems and equipment shown on the drawings and/or specified. The extent of identification is specified herein and in individual technical sections of work.
- B. Coordinate with Consultant and Owner for proper equipment identification nomenclature. Nameplates must be approved by Consultant prior to ordering and installation.
- C. Types of electrical identification include:
 - 1. Conduit labeling.
 - 2. Buried cable and conduit warnings.
 - 3. Cable/conductor identification.
 - 4. Operational instructions and warnings.
 - 5. Danger signs.
 - 6. Equipment/system identification labels and signs.
 - 7. Device plate labeling.
 - 8. Junction box labeling.

1.2 RELATED WORK

- A. Painting of conduit and color coded painting of conduit if required. See Division 9.

1.3 SUBMITTALS

- A. Manufacturer's Data
 - 1. Product specifications and installation instructions for each material and device.
- B. Samples
 - 1. Provide for each color, lettering style and other graphic representation.
- C. Labels
 - 1. Provide a list of labels with actual designations as they will be printed.

PART 2 - PRODUCTS

2.1 ELECTRICAL IDENTIFICATION MATERIAL

Conform to ANSI A13.1, Table 3 for minimum size of legend letters and minimum length of color field for each raceway or cable size. Use colors prescribed by ANSI A13.7, NFPA 70 and these specifications.

- A. Color-Coded Conduit Markers
 - 1. Manufacturer's standard preprinted, flexible or semi-rigid, permanent, plastic-sheet conduit markers, extending 360 degrees around conduits. Attach with adhesive, adhesive lap joint of marker, matching adhesive plastic tape at each end of marker, or pre-tensioned snap-on. Lettering to indicate voltage, function of conductors in conduit and shall be 8" minimum length (i.e. ac power, dc power, fire alarm).

- B. Color-Coded Plastic Tape
 - 1. Manufacturer's standard self-adhesive vinyl tape, minimum 3 mils thick by 1-1/2" wide.
 - 2. Color: Orange.
- C. Underground Plastic Line Marker
 - 1. Manufacturer's standard permanent, bright-colored, continuous-printed plastic tape, for direct-burial service; minimum 4" wide x 4 mils thick. Printing to indicate type service of cable; with large (minimum 2-1/2") high letters.
- D. Cable/Conductor Identification Bands
 - 1. Manufacturer's standard vinyl self-adhesive self laminating cable/conductor markers, wrap-around type; pre-numbered plastic coated, or write-on type with clear plastic self-adhesive cover flap, lettered to show circuit identification. Similar to Panduit "Instacode" or accepted equivalent by T&B, or Tyton. Refer to Section 26 05 19 Low Voltage Electrical Power Conductors and Cables.
- E. Self-Adhesive Plastic Signs
 - 1. Manufacturer's standard, self-adhesive, pre-printed, flexible vinyl signs for operational instructions or warnings. Sizes suitable for application and visibility, with proper wording for application.
 - 2. Color: Orange or Yellow with black lettering.
- F. Danger Signs
 - 1. Manufacturer's standard "DANGER" signs, baked enamel finish on 20 gage steel; standard red, black and white graphics; 14" x 10" unless 10" x 7" is largest which can be applied, or where larger size is needed for visibility use recognized explanation wording (as examples: HIGH VOLTAGE, KEEP AWAY, BURIED CABLE, DO NOT TOUCH SWITCH, DANGER-STARTS AUTOMATICALLY).
- G. Engraved Signs (Nameplates)
 - 1. Use 1/8" thick melamine plastic laminate, complying with FS LP-387, sizes as indicated, engrave with standard letter style of sizes and wording indicated (1/4" letters minimum).
 - 2. Color: Black field with white letters for normal power service;
Red field, white letters for emergency/standby service;
Orange field, white letters for UPS service
 - 3. Fasteners: Self adhesive backing or double stick tape.
- H. Permanent Polyester Tape:
 - 1. Use Permanent Metalized Polyester Tapes for Industrial purposes that are resistant to oil, solvents and chemicals, these durable tapes adhere to all surface.
 - 2. DYMO #18485, Black on Silver, 3/8" wide, or equivalent.
- I. Lettering and Graphics
 - 1. Coordinate names, abbreviations and other designations used with those shown or specified. Provide numbers, lettering, and wording as indicated or required for identification and operation/maintenance.

PART 3 - EXECUTION

3.1 APPLICATION AND INSTALLATION

- A. General Installation Requirements
 - 1. Install after completion of painting.

2. Comply with governing regulations and requests of governing authorities for identification of electrical work.

B. Conduit Identification

1. Use adhesive marking tape labels, Brother or Kroy labels 1" high x 12" long (min.), at 20 foot intervals to identify all conduits run exposed or located above accessible ceilings. Conduits located above non-accessible ceiling or in floors and walls shall be labeled within 3 feet of becoming accessible. Labels for multiple conduits shall be aligned. Use the following colors:
 - a. Above 600 Volts: Conduit 2" and larger - Black letters on orange background indicating feeder identification and voltage. Feeders within walls: provide identification on wall surfaces directly external to the conduits. Alternate identification labels with "DANGER - HIGH VOLTAGE" warning signs of the same color.
 - b. 600 Volt and Below Normal: Conduit 2" and larger - White letters on black background indicating feeder identification and voltage. Not required unless otherwise noted.
 - c. 600 Volt and Below Emergency: All conduit - White or black letters on red background indicating feeder identification and voltage. Not required unless otherwise noted
 - d. 600 Volt and Below UPS: All conduit - Black letters on yellow background indicating feeder identifications, circuit number and voltage. Not required unless otherwise noted
 - e. Fire Alarm: All conduit shall be manufactured red.
 - f. Temperature Control: White or black letters on blue background indicating "TEMP. CONTROL"
 - g. Ground: All conduit - White or black letters on green background
 - h. Network Fiber: All conduit - Black letters on white background indicating "NETWORK FIBER."
2. Where conduits enter or exit a panelboard, pull or junction box, switchboard, or other distribution equipment, conduit labels shall include circuit number in addition to feeder identification and voltage.
3. For overhead conduits, place identification such that it can be read standing on the floor below.

C. Underground Cable Identification

1. During back-filling of underground cable, install continuous underground marker, directly over buried line 6" to 8" below finished grade. Where multiple lines are buried in common trench not exceeding 24" width, install a single line marker. Install additional line markers for each increment of 24" width, i.e., 36" wide trench - 2 markers; 54" wide trench, 3 markers. Install multiple markers evenly spaced.
2. Install line marker for every buried ductbank and/or conduits 3" diameter or larger.
3. Electric Lines: Use red colored tape with lettering stating "CAUTION BURIED ELECTRIC LINE BELOW".
4. Communication Lines: Use orange colored tape with lettering stating "CAUTION COMMUNICATION LINE BELOW".

D. Operational Identification and Warnings

1. Provide operational signs for:
 - a. Switchgear
 - b. Automated breakers
 - c. Transfer switches
 - d. Large motor starters
 - e. Engine-generator
 - f. All rotating equipment
 - g. Decommissioned equipment to read "Retired in Place."

- E. Danger Signs
 - 1. Provide for medium voltage switchgear, sectionalizing loop switches, etc., as shown and described herein.
 - 2. Provide for engine generators and other automatic equipment, i.e.: "Danger-Starts Automatically".
 - 3. Provide as required by codes.

- F. Engraved Plastic Laminated Signs
 - 1. Install on each major unit of electrical equipment in the building. Provide single line of text, 1/4" high lettering on 1" high sign (1-1/2" high where 2 lines required). Matching terminology and numbering as indicated in contract documents.
 - 2. Provide signs for each unit of the following categories:
 - a. Electrical cabinets and enclosures: Indicate cabinet designation, voltage, phase and feeder origin.
 - b. Access panel/doors to electrical facilities: Indicate room name and use.
 - c. Major electrical switchgear: Indicate equipment designation, voltage, phase and feeder origin.
 - d. Electrical substations: Indicate equipment designation, voltage, phase and feeder origin.
 - e. Safety switches, circuit breakers and portable engine disconnects: Indicate equipment designation, voltage, phase, feeder origin and circuit number.
 - f. Transformers: Indicate transformer designation, voltages, phases, feeder origin, circuit number and equipment served.
 - g. Feeder cables inside pull and junction boxes and inside all switchgear at terminals indicating source and destination: Fasten with nylon ties.
 - h. All equipment furnished in this Division of the specifications: Indicate equipment designation, voltage, phase, feeder origin and circuit number.

- G. Install signs where indicated or most visible. Secure with at least two cadmium-plated screws. Where substrate cannot receive screws, use industrial epoxy cement to secure signs. Self-adhesive or double stick tape is acceptable. Secure with cadmium plated screws on porous surfaces.

- H. Identify all conduits installed for future use.

- I. Junction, Pull and Connection boxes. Identification of systems and circuits shall indicate system voltage and identity of contained circuits on outside of box cover. Color code shall be same as conduits for pressure sensitive labels. Use self-adhesive marking tape labels at exposed locations and indelible black marker at concealed boxes. All fire alarm boxes shall have red covers. All temperature control boxes shall have blue covers.

- J. Branch Circuit Conductors shall be identified in each junction box and pull box with wire markers as manufactured by T & B, Panduit, 3M or Ideal to indicate panel/circuit number.

- K. Junction Boxes in branch circuit wiring shall be labeled with panel and circuit numbers. Junction boxes for special systems shall be labeled with system name and other identification as directed; for example, "fire alarm-zone 1". Where boxes are installed flush mounted in finished areas or surface mounted in unfinished areas, labeling shall be with engraved plastic nameplate as specified herein. Where boxes are installed above accessible ceilings, labeling may be neat hand written lettering with indelible marker.

- L. Device Plates – switches and receptacles. Identify the panelboard and branch circuit number from which served on the front of the device plate with Permanent Polyester Clear

Tape with black letters. Locate all labels at the bottom of the plate in the same location throughout.

END OF SECTION 26 05 53

SECTION 26 18 39
MEDIUM VOLTAGE MOTOR CONTROLLERS

PART 1 – GENERAL

1.1 GENERAL

- A. The starter shall provide smooth, step-less acceleration and deceleration, reducing inrush current and mechanical shock, providing motor protection, remote control and supervision, according to the technical specification shown here below.
- B. Line voltage: 2.3 to 6.9kV +10% - 15% (see paragraph 19.0 for Voltage Selection, see also section 1.6 below for generator supplied systems).
- C. Nominal Current: continuous (see paragraph 19.0 for Current Rating Selection).
- D. Control voltage: 115V +10% / - 15% (other control voltages: 220VAC, 115 or 220VDC optional)
- E. Frequency: 45-65Hz (See 1.6 below for Generator Supply Systems).
- F. When starter power is supplied from a stand-by diesel generator: The starter shall be capable of operating with a diesel generator supply where voltage and frequency may be unstable (voltage drop up to 35% and frequency range of 45-66Hz). Starting & stopping curves shall be designed for operating from a diesel generator supply. The supplier shall provide a reference list of operation with a diesel generator supply.
- G. Ambient temperature: 0°C - 50°C, Relative humidity: 95% non-condensed.
- H. Maximum number of starts: unit shall be selected and sized for operation at maximum current and temperature rating for no less than 2 starts per hour.
- I. Altitude: up to 1000m without de-rating.
- J. EMC Certificate – Starter shall have EMC certificate according to Article 10(2) of EMC directive 89/336/EEC.
- K. UL/cUL – 2.3kV-4.16kV models up to 360A rating shall be UL /cUL listed.
- L. Minimum SCR PIV Rating shall be 3 times system voltage

1.2 SCOPE OF SUPPLY

- A. Digital soft starter in NEMA12 cabinet with fault make/load break disconnect switch, line and bypass vacuum contactors.
- B. When required, the starter shall include optional cabinet construction and features as listed in the specification.
- C. The starter shall be supplied as a Class E2 type starter with a fault make/load break disconnect switch with grounding bar and power fuses or vacuum circuit breaker.
- D. BIL ratings:
- E. - Up to 3.6KV - BIL 45
- F. - Up to 7.2KV - BIL 60
- G. Short time current – 12KA
- H. Short circuit making capacity 31.5KA
- I. The disconnect switch shall incorporate a handle mechanism that can be padlocked in the Off position.
- J. Viewing window for viewing the main switch contacts shall be included.

- K. Three phase MV fuse system with R type fuses shall be included.
- L. The manufacturer shall supply 2 sets of instruction manuals with control diagrams "As Built".
- M. The manufacturer shall offer commissioning and training on site.
- N. The manufacturer shall offer spare parts required for commissioning and 5 years operation.

1.3 STARTER CONSTRUCTION

- A. Starter shall be designed for heavy duty applications and ambient temperature of 50°C.
- B. To ensure long term reliability and safety, each starter shall be tested for Partial Discharge (Corona Free) according to EN50178 & HD 625.1 S1:1996 Electronic Equipment for use in power installations.
- C. SCR firing system shall be via fiber optics to provide complete isolation of the low voltage control from the Medium Voltage power circuitry.
- D. The SCR firing system shall include LED indicators for easy trouble shooting.
- E. Heat-sink over-temperature protection shall be provided for each of the 3 phases using fiber optic connections.
- F. Each phase shall be protected on the sides and front by reinforced insulation material..
- G. Each phase shall have the capability of being disassembled on site for maintenance.
- H. All printed circuit boards shall be varnished (conformal coated) on both sides, to protect from harsh environmental conditions. Top spray only is not acceptable.
- I. When required, preparation for connecting power factor capacitors (capacitors are not a part of the standard scope of supply) shall be made at starter input side, switched on by the Line Contactor and without the need for a separate capacitor contactor.
- J. Three phase voltage measurement shall be via an Electronic Potential Transformer (EPT), with fiber-optic connection, to provide complete isolation of the low voltage control from the Medium Voltage power circuitry.
- K. Selectable curves shall enable field setting of the starting characteristics - Voltage Ramp, Current Ramp or Torque Ramp for optimizing soft start and soft stop processes based on the line voltage, motor and load requirements.
- L. All control inputs shall be via opto-couplers allowing isolation of the micro controller board and to meet EMC requirements.

1.4 SETTINGS & SUPERVISION

- A. The starter shall be programmed according to the driven load characteristic. Starting and stopping process shall be as specified here below.
- B. Starter settings shall be made on a keypad and illuminated LCD. Illuminated LCD shall have 2 lines, 16 characters each for ease of use
- C. Display language shall be English with additional languages: German, French, Spanish selectable as standard feature (optional languages: Chinese, Russian, Turkish and others available upon request).
- D. The LCD shall display motor current, fault description and statistical data including: total run time, number of starts, last start current, last start time duration, description of last trip, last 10 trips data and total number of trips.
- E. LCD shall enable selection between viewing of minimum parameters for basic applications and viewing full parameters for more demanding applications.

- F. The following front panel LEDs shall enable quick status display: control voltage on, motor starting, motor running, motor soft stopping, motor stopped, test, operation using dual adjustment settings and fault.
- G. Keys on the keypad shall be clearly marked and setting software shall have easy-to-use default parameters.
- H. Software lock, preventing parameter changes shall be made via an internal dip switch.

1.5 STARTING & STOPPING CHARACTERISTICS

- A. The starter shall have the following starting and stopping settings:
 - 1. Initial voltage: adjustable 10-80% nominal voltage.
 - 2. Current limit: adjustable 100-700%.
 - 3. Ramp-up time: adjustable 1-90 seconds.
 - 4. Ramp-down time: adjustable 1-90 seconds.
 - 5. Pulse start: Selectable pulse of either 80% nominal voltage without current limit, for 0.1-1 seconds or 1-2 seconds at current limit setting.
 - 6. Torque control for linear acceleration and deceleration with selectable torque curves.
 - 7. Current ramp control with initial current adjustable from 100-400%, ramp-up time 1-90 seconds.
 - 8. Pump control with selectable starting and stopping curves to prevent over pressure and water hammer. Separate settings shall be available for starting and stopping.
 - 9. Dual adjustment with two start/stop and two FLA settings (used for varying loads and for two speed motors).

1.6 MOTOR & STARTER PROTECTION

- A. The starter shall have the following protection functions:
 - 1. Excessive starts with adjustable max. number of starts, time period and waiting time (time delay after exceeding maximum number of starts).
 - 2. Long start time (stall protection).
 - 3. Electronic shear-pin (jam protection) - trips instantaneously (in less than 1 cycle) when current reaches 850% FLA. An adjustable time delay shall be available for lower currents.
 - 4. Electronic overload with selectable IEC or NEMA overload curves.
 - 5. Under current with time delay
 - 6. Ground fault current with adjustable time delay
 - 7. Current imbalance - trip time will be related to motor load
 - 8. Phase loss
 - 9. Phase reversal
 - 10. Starter over-temperature
 - 11. Shorted SCR & wrong motor connection
 - 12. External fault A – from a N.O. contact
 - 13. External fault B – from a N.O. contact
 - 14. Bypass contactor open - trips the starter if bypass contactor does not close after end of acceleration. When bypass is in a separate panel, Bypass Contactor Open protection can be disabled.
 - 15. No start signal - trips the line contactor in the event power is connected to soft starter but start signal has not been received. This feature can be disabled.
 - 16. Motor currents shall be measured via the soft starter current transformers (CTs) on all three phases. Upstream protection shall operate before and after bypass contactor closes.
 - 17. Protection disable functions: protection functions (except for no-voltage protection) can be disabled once the bypass contactor has been closed. A special disable mode of

“bypass contactor open” function can be set when the bypass contactor is mounted remotely.

1.7 RESETTING AFTER FAULT

- A. Upon fault, the starter shall trip and lock in a fault mode, also if line voltage disappears (blown fuse or voltage outage).
- B. For maximum safety, resetting shall be possible only after the start signal is removed.
- C. Resetting shall be possible either via local reset key or remotely via hard wire or communications.
- D. Auto-reset shall be possible for the following faults: Under-Voltage, Phase Loss, Under Current and Open Bypass Contactor.

1.8 AUXILIARY CONTACTS

- A. The soft starter shall incorporate a minimum of three auxiliary relays, each with 1 change of state contact rated 8A, 250V, 2000VA, with the following functions:
 - 1. Immediate Relay - shall operate upon start signal, with adjustable On and Off delays. The contact shall return to original position upon voltage outage, fault, stop signal and upon soft stop signal – at the end of soft stopping process. The Immediate Relay can be also programmed for over current shear-pin function.
 - 2. End of Acceleration Relay - shall operate upon completion of starting process, with adjustable On-delay. The contact shall return to original position upon voltage outage, fault and upon stop and soft stop signals.
 - 3. Fault Relay – shall be programmed either as:
 - a. Fault – changes position upon Fault and returns to original position upon Reset, after fault has been removed.
 - b. Fault-Fail-Safe - changes position when control voltage connection returns upon fault (can be used for "Control Voltage Disconnected" alarm).

1.9 TEST MODE

- A. Full functional test of all starter circuits shall be possible using a standard low voltage motor (typically 3HP-10HP rating). A special testing harness for the low voltage test shall be provided. Special warning signs preventing connection of high voltage to the starter during low voltage test shall be provided.

1.10 LINE & BY-PASS CONTACTORS

- A. Line and bypass contactors shall be vacuum type. For system voltages higher than 7200V with currents higher than 600A, a fixed type motor operated circuit breaker shall be used. Contactors or circuit breakers shall be fixed mounted, rated according to motor current and voltage, having a minimum of 2 N.O & 2 N.C auxiliary contacts. Draw-out vacuum breakers may be supplied as an option.

1.11 CABINET

- A. The cabinet shall be designed and constructed according to UL and NEMA standards with soft starter keypad mounted behind a transparent window.
- B. All exterior and interior metal parts shall be coated and painted under the following procedure:
 - 1. Preparation - Alkaline wash / rinse / iron phosphates / rinse/non chrome sealer rinse / re-circulated de-ionized water rinse and distilled de-ionized water rinse.
 - 2. Painting – Air atomized electrostatic spray, Hybrid Epoxy Polyester powder paint.

3. Semi-matt. Paint thickness shall be at least 0.07 mm.
4. Color shall be ANSI-61 or other ANSI or RAL color as specified.
- C. Field "touch-up" spray can(s), matching the enclosure color, shall be available if required.
- D. Cabinet doors shall be provided with heavy duty hinges and locks.
- E. Ground Bus - A continuous bare copper ground bus, 5 X 50 mm, shall be provided along the entire width of the enclosure, at the bottom.
- F. Cable access shall be from bottom with a minimum of 30 cm available space for cable connections. No components shall be mounted in this space. Top entry option shall be available upon request.
- G. An optional door switch with 1 N.O. + 1 N.C. contacts shall be mounted on the MV door, operated when the door is opened and wired to the terminal blocks. When indicated – the Door switch shall be wired so as to trip open the line contactor when door is opened.
- H. Cabinet Heater - A 250W heater supplied from a dedicated miniature C.B. shall be optional.
- I. Enclosure shall be equipped with top lifting hooks, capable of supporting 1.5 times cabinet weight.

1.12 L.V. CONTROL

- A. The starter shall have a separate, completely segregated, front accessible low voltage compartment. This compartment shall include at least the following components:
 1. Soft starter control module, with fiber optic wires.
 2. Selector switch - Local / Remote (for door mounted Start/Stop buttons or Remote by hard wires).
 3. Selector switch - Soft Starter / DOL starting (enabling DOL starting in case of a fault in the soft starter).
 4. Interposing relays shall be used for starters built-in output relays.
 5. Holding relay shall be provided when external Start / Stop push buttons are used.
 6. All control components mounted in the L.V. compartment shall be wired to terminal blocks.
 7. Control copper wires shall be insulated, flexible stranded, flame retarding thermoplastic compound, 690V, 70°C (Standard), Halogen free 90°C (optional), neatly bundled.
 8. Each wire shall be marked with cable marking sleeves or direct printing on the wires, numbered according to the electrical diagram. Control wire terminations shall be screw-type, copper compression type, non-insulated, locking type, fork tongue lugs shall be provided on the current transformers.
 9. Optional RF filter shall be supplied for the control circuit.

1.13 DOOR MOUNTED CONTROL COMPONENTS

- A. The following components shall be mounted on L.V. door:
 1. Motor protection relay (when specified)
 2. Motor insulation protection (when specified)
 3. Digital power meter (when specified)
 4. Start / Stop pushbuttons.
 5. Emergency Stop pushbutton.
 6. Indication lights: Run (red), Stop (green), Fault (amber). Indicating lamp test feature is available upon request.

1.14 COMMUNICATIONS

- A. The starter shall be equipped with one of the following protocols, as specified:
1. MODBUS RTU RS 485 half duplex (standard), enabling parameter settings, control (start/stop, etc.) and supervision.
 2. PROFIBUS DP (optional) enabling control (start/stop, etc.) and supervision, non-bridge type.
 3. DeviceNet (optional) enabling control (start/stop, etc.) and supervision, non-bridge type.
 4. TCP/IP (optional) enabling control (start/stop, etc.) and supervision
 5. Motor can be remotely controlled – start, stop, via communication.
 6. Configuration software shall be available for parameter setting and actual data reading.

1.15 ANALOG OUTPUT

- A. The starter shall be equipped with analog output, proportional to motor current, 0–10VDC or 0/4–20mA as standard.

1.16 REMOTE SUPERVISION SYSTEM (WHEN SPECIFIED)

- A. Remote supervision system enables the user to control and monitor all parameters of the soft starter from a remote location. The system incorporates the following features:
1. Parameter setup
 2. Remote start and stop
 3. Remote monitoring of actual parameters such as current, power, statistical data etc.
 4. Remote fault analysis
 5. Communication with up to 28 local stations using one transmitter
 6. Communication to remote location using LAN, GSM (GPRS), satellite
 7. Security levels
 8. No need for special control servers
 9. Operate from normal windows based PC and handheld computer based on windows CE
 10. Customized comprehensive, friendly user active user interface
 11. Plug and play system – easy to install and commission
 12. Internal, on-line, messaging system (ICQ style)

1.17 MOTOR INSULATION PROTECTION (WHEN SPECIFIED)

- A. Motor insulation protection monitors the insulation level of the motor. This protective device consists of a resistance box on the medium voltage side and a factory pre-installed PCB in the main control module of the starter.
1. Monitoring is implemented using up to 48 VDC for maximum safety.
 2. Microprocessor based control
 3. Monitors while motor is de-energized
 4. Two distinct levels can be set for Alarm and Trip functions:
 5. Alarm level, Range: 0.1(OFF) – 10 M Ω
 6. Trip level, Range : 0.1 (OFF) – 10 M Ω
 7. When insulation decreases below Alarm Level set point for more than 120 seconds, the LCD displays an alarm message and the insulation level can be read in M Ω on the display. The Fault LED flashes and the Insulation Alarm Relay is activated. Alarm signal will disappear automatically 60 seconds after insulation level returns to normal.
 8. Trip does not reset automatically.

1.18 MOTOR PROTECTION RELAY (WHEN SPECIFIED)

- A. The starter shall incorporate a digital, microprocessor based Motor Protection System (MPS) as a full motor protection package in addition to the motor protection and metering features built into

the soft starter. Upon fault that is not cleared by the soft starter, the MPS shall trip open the line contactor. In case of a high current fault, above the maximum opening current of the vacuum contactor, the MPS shall not trip the line contactor but shall let the fuses clear the fault, thereafter opening the contactor. The MPS shall have the following protection and settings:

1. Under-current alarm with adjustable time delay
2. Maximum start time (stall protection)
3. Under current trip with adjustable time delay
4. Load increase alarm
5. Low set over-current (overload) with adjustable time delay
6. High set over-current (short circuit) with adjustable time delay
7. Thermal alarm (modeling motor heating, with adjustable time to trip at $6xI_n$, hot/cold ratio, cool time factor, stall time factor)
8. Thermal trip with adjustable time delay
9. Unbalance current alarm with adjustable time delay (negative – positive sequence)
10. Unbalance trip with adjustable time delay
11. Ground fault alarm with adjustable time delay
12. Ground fault trip with adjustable time delay
13. Under voltage with adjustable time delay
14. Over voltage alarm with adjustable time delay
15. Over voltage trip with adjustable time delay
16. Under power trip with adjustable time delay
17. Phase loss
18. Phase sequence
19. Motor over temp – input from thermistor PTC / NTC or RTD (Pt100), as shown in drawing.
20. External Fault 1 (entry from a N.O. contact)
21. External Fault 2 (entry from a N.O. contact)
22. Internal fault
23. Serial communication fault
24. Function shall be programmable for each fault as: Disable, Alarm Only, Trip Only, Alarm & Trip
25. Authorization key: preventing unauthorized parameter changing
26. Trip contact shall be 5A, 250VAC/DC
27. Four analog inputs, selectable 0/4-20mA
28. Four analog outputs, selectable 0/4-20mA, proportional to selectable actual values
29. Settings and supervision shall be by a LCD, 2 line, 16 characters each
 - a. Displays measured data: phase voltage, line voltage, line current, ground current, frequency, real power, active power, reactive power, power factor, each RTD sensor temperature, analog inputs 1-4 value.
 - b. Displays calculated data: motor current (% of motor FLC), equivalent current (calculated according to unbalance K factor), unbalance current, thermal capacity, time to trip via overload, time to start (after trip).
 - c. Displays discrete input status: status of each digital input (open or closed)
 - d. Displays statistical data: total run time, total number of starts, total number of trips, last start period, last start maximum current, total energy, minimum voltage, maximum voltage, minimum current, maximum current.
 - e. Displays fault data: last trip, last alarm, trip 3 line current values, trip ground current, trip phase voltage, last 10 trips with time stamp, external fault with time stamp, RTD value before last trip, over-current level 2 (short circuit).
30. Maintenance options: run test, simulation test.
31. Reset function shall be programmable for each fault as auto reset, local reset and remote reset.
32. The MPS shall be equipped with RS 485 communications, with Modbus protocol. Other protocols shall be optional.

33. Configuration software shall be provided for parameter setting and actual data reading

1.19 STARTER SELECTION & AVAILABLE OPTIONS

- A. Mains Voltage Selection: 2300, 3300, 4160, 5500, 6000, 6600, 6900, 7200 (10000, 11000 & 13800 also available. Refer to separate specification guide for these higher voltage rated products).
- B. Current Rating Selection: System voltages: 4160V and below – 100, 200, 360, 400, 600, 800, 1000A (above this, consult factory). For system voltages: 6kV and above – 70, 140, 250, 300, 400, 500, 700, 800, 1000, 1200A (above this, consult factory).
- C. Re-rating factor for frequent starting (check motor data sheet to verify the number of starts per hour allowed by the motor manufacturer). Soft starter manufacturer shall provide a detailed starting analysis (including starts per hour recommendations) based on the motor and load speed/torque curves and application requirements. This starting analysis shall be supplied at no additional charge.
- D. Cabinet protection: Standard cabinet is rated NEMA12 (indoor use). Optional NEMA4, NEMA3R and MetalClad type construction are also available. Contact factory.
- E. De-rating factor for higher altitudes: The starter is designed to operate at altitudes of up to 1000m above sea level. Contact factory for installations at higher altitudes.
- F. Synchronous Motors: for synchronous motor applications, add the following paragraph: The starter shall be equipped with an "At Speed Contact" to initiate the excitation system.
- G. Multi-start system: multi-motor starting (sequential starting) design is available – contact factory for detailed specifications.
- H. Marine applications: Marine duty features are available - contact factory for "Specification Guide – Marine Applications" and available Type test certifications.
- I. Other available options

In the L. V. Section	<ul style="list-style-type: none"> * 220VDC Control Supply * Synchronization card – for synchronous motors * MPS 3000C motor protection relay (with Control functions) * Additional Signal lights, Control Relays, Push buttons, Selector switches, etc.
In the MV Section	<ul style="list-style-type: none"> * Exhaust fan + filter + timer + fan duct (required for frequent starting like multi-start applications or higher ambient temperatures) * Humidity control, heater + control + miniature C/B
General	<ul style="list-style-type: none"> * Door stoppers * Cabinet light * Rear access – via rear doors with hinges and locks or panels with screws. * Non-standard painting (standard is ANSI 61 grey) * Special thick painting * Bus bars

1.20 APPLICABLE IEC & UL STANDARDS

- A. IEC 62271-200 High Voltage switchgear and control gear.
- B. IEC 60061-1 High Voltage test techniques, General definitions and test requirements.

C. IEC 60694	Common specifications for high voltage switchgear and control gear standard.
D. IEC 71-1	Insulation coordination.
E. IEC 71-2	Insulation coordination.
F. EN 50178:1998	Electronic equipment for use in power installation.
G. IEC 664	Insulated coordination within low voltage systems including clearances and creepage distances for equipment.
H. EN 60265-1	Load break switch.
I. EN 60420	Load break switch.
J. IEC 129	Double section rotary disconnects.
K. IEC 129	Earthing/ground switch.
L. IEC 60470, UL 347	Vacuum contactors.
M. IEC 282-1	Vacuum contactors + fuses.
N. IEC 60282-1	Medium voltage fuse
O. IEC 420	Medium voltage fuse
P. DIN 43624	Fuse base for indoor mounting
Q. DIN 46234	Cable lugs
R. DIN 0472+IEC 754	Medium voltage cables
S. EN 61000-6-2	Electromagnetic compatibility (EMC) - Immunity
T. EN 61000-6-4	Electromagnetic compatibility (EMC) - Emission
U. EEC/72/23	Electrical safety - Council Directive
V. UL347	

END OF SECTION 01 75 10

**SECTION 26 60 00
ELECTRICAL SYSTEMS TESTING**

PART 1 – GENERAL

- A. The Contractor shall retain the services of an independent testing firm to perform International Electrical Testing Association (NETA) testing. Testing services shall be as described in this specification and shall be paid for and coordinated by the Contractor.
- B. NETA testing procedures and requirements for tested values shall be in accordance with the most current edition of the NETA Acceptance Testing Specifications.
- C. Any deficiencies or failures discovered during the NETA testing procedures shall be promptly corrected by the Contractor to ensure timely completion of the project and to minimize the time required for the independent testing firm to complete their work.
- D. Independent testing firms shall be as listed below, or approved equal.
 - 1. Electrical Reliability Services Northern Nevada Office (775) 746-4466
 - 2. Electrical Reliability Services Southern Nevada Office (702) 597-0020
 - 3. SouthWest Electritech Services Northern Nevada Office (775) 410-0430
 - 4. SouthWest Electritech Services Southern Nevada Office (888) 296-0625

1.1 TEST REPORTS

- A. Intermediate Test Reports
 - 1. Intermediate test reports shall be issued by the independent testing firm immediately following each site visit. Intermediate test reports shall identify the general results of all field testing and field observations, and shall specifically identify any deficiencies, problems, or failures noted during the site visit.
 - 2. Intermediate test reports shall be issued/distributed to the electrical subcontractor, the general contractor, the electrical engineer, and to the Owner. The intent of this direct communication and/or notification to multiple parties is to ensure the 'independent' function of the independent testing firm and to prevent such information from being delayed or filtered by processing it through the electrical subcontractor and/or the general contractor.
- B. Final Test Report
 - 1. Six copies of the final test report shall be issued by the independent testing firm following successful completion all required electrical systems testing. The final test report shall be typed, bound, and indexed, and shall include a cover page that identifies the project name, project location, and project number. The final test report shall include a separate section for each area of required testing (tests as summarized below).
 - a. Grounding Systems

1.2 TESTING REQUIREMENTS

- A. Grounding Systems
 - 1. The following grounding system testing shall be conducted on two separate occasions, once prior to initializing electrical power for construction activities, and once when all electrical systems have been finalized.

2. Perform fall-of-potential testing of the main grounding electrode or grounding system in accordance with IEEE Standard No. 81. If suitable locations for test rods are not available, a low resistance dead earth or reference ground shall be utilized.
3. Perform point-to-point testing to determine the resistance (bonding) between the main grounding system and all major electrical equipment frames, system neutral, and/or derived neutral points.
4. Measure system neutral-to-ground insulation resistance with the neutral disconnect link temporarily removed (replace neutral disconnect link after testing).
5. This testing shall be performed at the origination point of all separately derived systems.

END OF SECTION 26 60 00

Forms

(to be used following award of bid)

- 1) Contract Form**
- 2) Performance Bond**
- 3) Payment Bond**



PROJECT TITLE

BID #

PWP#

THIS CONTRACT made and entered into on this ____ day of MONTH, 20____, 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 **CONTRACTOR**, 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 **COST** 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 Agreement, Contractor agrees not to discriminate against any employee or applicant because of race, creed, color, national origin, disability, sex, sexual orientation or age. Such agreement shall include, but not be limited to, the following: recruitment or recruitment advertising, rates or pay or other forms of compensation, and selection. 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 Two Hundred Fifty Thousand Dollars (\$250,000) or more, or when required by the Supplementary Conditions. If a Change Order causes a Contract to exceed Two Hundred Fifty Thousand Dollars (\$250,000), 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.

The Remainder of this Section (Section 8) IS IS NOT Applicable to this contract):

- 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. 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.

10. 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.

11. 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:



12. 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.

13. 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.

14. 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.

15. 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."

16. 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.

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.

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, employment-related practices, 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.

Any failure by the Contractor to comply with reporting provisions of the policies shall not affect its obligations to the additional insureds.

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.

Separation of Insureds

Contractor's insurance shall apply separately to each insured against whom a claim is made or suit is brought, except with respect to the limits of the insurer's liability.

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

A policy form or endorsement is required confirming coverage for all required additional insureds. The endorsement for CGL shall be at least as broad as the unmodified ISO additional insured endorsement CG 20 10 11/85 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.

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).

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.

Workers’ Compensation and Employer’s Liability

Contractor shall carry and maintain workers’ compensation and employer’s liability insurance as required



by NRS 616B.627 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.

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 per occurrence 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 with a minimum of three (3) years reporting of claims 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.

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.

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 on the Insurance Commissioner's approved but not admitted list.

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.

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 of 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.
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.

17. 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) \$_____ 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.

18. 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.

19. 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.

20. 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.

21. 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.

22. 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.

23. 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.

24. 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.



25. 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.

26. 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.

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: _____
Geno R. Martini, Mayor

(Title)

APPROVED AS TO FORM

ATTEST:

City Attorney

Teresa Gardner, 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 **(CONTRACTOR NAME)** hereinafter designated as the "Principal" a contract for Bid # **BID NUMBER**, PWP # **PWP NUMBER**, for the **PROJECT 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 **(WRITTEN COST)** dollars (\$_____), 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 **(WRITTEN COST)** dollars (\$_____) 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 **CONTRACTOR**, hereinafter designated as the "Principal" a Contract for Bid # **BID NUMBER**, PWP # **PWP NUMBER**, for the **PROJECT 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 **WRITTEN AMOUNT** dollars (\$_____), 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 _____