

BID FOR
AVENUE OF THE OAKS REALIGNMENT

BID # 21/22-005

PWP # WA-2022-084

BIDS DUE NOT LATER THAN: 1:45 PM ON DECEMBER 16, 2021

PUBLIC BID OPENING: 2:00 PM ON DECEMBER 16, 2021

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



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



EXP 12/31/22

Company Name: _____

**CITY OF SPARKS
NOTICE TO BIDDERS
AVENUE OF THE OAKS REALIGNMENT
BID # 21/22-005 / PWP # WA-2022-084**

NOTICE IS HEREBY GIVEN that the City of Sparks, Nevada, will receive written sealed bids only, for the project listed above. Said bids must be in the hands of the Contracts and Risk Manager at 431 Prater Way, Sparks, Nevada, NO LATER THAN **1:45 PM ON DECEMBER 16, 2021**. Bids postmarked prior to, but not received until after this deadline will not be accepted. Vendor bid response submittals may not be sent to the City of Sparks via the Internet/e-mail and will not be entertained for award by the City of Sparks. The right is reserved to reject any Bid/Proposal or to accept the Bid/Proposal which is deemed by the City of Sparks to be in the best interest of the City of Sparks. The City of Sparks reserves the right to waive any irregularities and/or informalities in the bid process.

All Bids are to be marked clearly on the outside. Due to the City's response to the COVID-19 virus and associated reduction in staff, in-person staff availability is limited. Bidders wishing to physically deliver their bids on the bid due date shall note that the Purchasing Office will receive bids in the lobby of City Hall beginning at 1PM on December 16th. Bids are due no later than 1:45PM. Bids may also be delivered to the Purchasing Department physical dropbox/mailbox, also located in the lobby of City Hall.

Bids will be opened and publicly read at **2:00 PM ON DECEMBER 16, 2021**, at Sparks City Hall, 431 Prater Way Sparks, NV 89431. Due to social distancing concerns specific to the COVID-19 situation, the bid opening will be available to all interested parties via Zoom video/audio conferencing. Meeting # 818 8464 1764. Meeting Passcode: 847516 with a direct link of:

<https://us02web.zoom.us/j/81884641764?pwd=dUM3eExJbWJjajF5K3oyVS9jYUR3Zz09>

PROJECT DESCRIPTION: Demolition of an underground water fountain structure, removal and replacement of curb, gutter sidewalk, ADA ramps, drain inlets; removal of existing composite roadway improvements and placing PCC Pavement; placement of new striping on new PCC roadway on Avenue of the Oaks as identified within the project plans.

PRE-BID MEETING: There will be a **NON-MANDATORY** pre-bid meeting held at the job site, in front of the Galaxy Movie Theater located at 1250 Victorian Avenue, Sparks NV 89431 at 1:00PM on December 7, 2021.

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: December 1, 2021
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. _____ “Certificate of Eligibility” (Local Preference) - If bid exceeds \$250,000 and Contractor wishes to potentially apply their preference.
7. _____ Bid Bond
8. _____ Signed Bid Addenda (if applicable)

**CITY OF SPARKS
 BID ITEM SCHEDULE**

**BID TITLE: AVENUE OF THE OAKS REALIGNMENT
 BID #21/22-005 / PWP#WA-2022-084**

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)

Refer to Special Technical Section for a map depicting the street locations and plan sheets provided

Item No.	Quantity	Unit	Description	Unit Price	Total Price
1	13	EA	Remove Existing Street Lights including Foundations and Appurtenances, complete.	\$ _____ /EA	\$ _____
2	23	EA	Remove Existing Bollard Lights including Foundations and Appurtenances, complete.	\$ _____ /EA	\$ _____
3	8	EA	Remove and Dispose of Cast Stone Pedestals, complete.	\$ _____ /EA	\$ _____
4	1	LS	Remove Existing Hardscape Composite Materials to Subgrade Depth as outlined on Avenue of the Oaks Project Plan sheets DM-1 and DM-2, complete,	\$ _____ /LS	\$ _____
5	5,800	SF	Remove Existing Roadway Composite Materials to Subgrade Depth, complete.	\$ _____ /SF	\$ _____
6	1	LS	Remove / Abandon Fountain Vault Structure and all Appurtenances, as outlined in Avenue of the Oaks Project Plan Sheets DM-1 through DM-5, complete	\$ _____ /LS	\$ _____
7	1	LS	Remove / Abandon Fountain Electrical Vault Structure and all Appurtenances, as outlined in Avenue of the Oaks Plan Sheets DM1 Through DM-5, complete,	\$ _____ /LS	\$ _____
8	125	CY	Over-Excavation of Unsuitable Material,	\$ _____ /CY	\$ _____

**CITY OF SPARKS
 BID ITEM SCHEDULE**

**BID TITLE: AVENUE OF THE OAKS REALIGNMENT
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			complete, in place (Contingent)		
9	1	EA	Remove, Salvage and Relocate Existing Event Power Station, complete, in place	\$ _____ /EA	\$ _____
10	21	EA	Remove Existing Light Pull Boxes, complete.	\$ _____ /EA	\$ _____
11	1	LS	Remove / Abandon Miscellaneous Pipe, Ducts, Conduits and Appurtenances, complete.	\$ _____ /LS	\$ _____
12	2	EA	Remove Existing Drop Inlet and Appurtenances, complete.	\$ _____ /EA	\$ _____
13	1	LS	Salvage and Delivery of Plaques, Manhole Covers, Victorian Square Logo Nozzle Covers, Tree Grates, Bollards, and Light Poles to City of Sparks Salvage Site Located at 701 E. Nugget Ave or 431 Prater Way, complete.	\$ _____ /LS	\$ _____
14	248	LF	Install 12-Inch, SDR-35 PVC Storm Drain Pipe, Inserta-Tee, and All Appurtenances, Removal and Disposal of Existing Pipe, complete, in place.	\$ _____ /LF	\$ _____
15	2	EA	Install Type I – 48” Storm Drain Manhole, and Temporary Grate Cover, and All Appurtenances, complete, in place.	\$ _____ /EA	\$ _____
16	2	EA	Install Type IV – 60” Storm Drain Manhole and All Appurtenances, complete, in place.	\$ _____ /EA	\$ _____
17	5	EA	Install Type 3R Storm Drain Drop Inlet and All Appurtenances, complete, in place.	\$ _____ /EA	\$ _____
18	295	LF	Excavation and Backfill for NV Energy 2" and 4" PE Main/Service Replacements, complete, in place	\$ _____ /LF	\$ _____
19	4	EA	Excavation and Backfill for NV Energy Main and Service Tie-Ins, complete, in place.	\$ _____ /EA	\$ _____

**CITY OF SPARKS
BID ITEM SCHEDULE**

**BID TITLE: AVENUE OF THE OAKS REALIGNMENT
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20	300	LF	Install Two (2) - 4" AT&T PTS-77 (Type C) or Schedule 40 Conduits, complete, in place	\$ _____ /LF	\$ _____
21	1	EA	Install AT&T PTS-65 Intercept Telephone Manhole, complete, in place	\$ _____ /EA	\$ _____
22	1	EA	Install 48" Traffic Rated Electrical Manhole and All Appurtenances, complete, in place	\$ _____ /EA	\$ _____
23	330	LF	Install 3-Inch (3") Schedule 40 PVC Conduit, Including Trenching and Backfill, complete, in place	\$ _____ /LF	\$ _____
24	260	LF	Install 1-1/2-Inch (1-1/2") Schedule 40 PVC Conduit, Including Trenching and Backfill, complete, in place,	\$ _____ /LF	\$ _____
25	110	LF	Install 3/4-Inch (3/4") Schedule 40 PVC Conduit, Including Trenching and Backfill, complete, in place,	\$ _____ /LF	\$ _____
26	8	EA	Remove and Replace Existing Electrical Pull Boxes, complete, in place.	\$ _____ /EA	\$ _____
27	8	EA	Install N16 Handhole, Traffic Rated Box, complete, in place	\$ _____ /EA	\$ _____
28	1	EA	Install 50Amp, 208V, 1ph Power Panel, complete, in place	\$ _____ /EA	\$ _____
29	330	LF	Install #10 THWN Copper Wire, complete, in place	\$ _____ /LF	\$ _____
30	780	LF	Install #3 THWN Copper Wire, complete, in place	\$ _____ /LF	\$ _____
31	1,980	LF	Install #2 THWN Copper Wire, complete, in place	\$ _____ /LF	\$ _____
32	570	LF	Install Plaza Tapered PCC Curb, complete, in place.	\$ _____ /LF	\$ _____
33	50	LF	Install 8" PCC Retaining Curb, complete, in place	\$ _____ /LF	\$ _____

**CITY OF SPARKS
 BID ITEM SCHEDULE**

**BID TITLE: AVENUE OF THE OAKS REALIGNMENT
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34	45	LF	Install Handrail, complete, in place	\$ _____ /LF	\$ _____
35	4	EA	Install ADA Accessible Ramps, complete, in place.	\$ _____ /EA	\$ _____
36	830	SF	Install PCC Decorative/Colored Crosswalk, complete, in place.	\$ _____ /SF	\$ _____
37	15,750	SF	Install PCC for Roadway and PCC Pave Area, complete, in place.	\$ _____ /SF	\$ _____
38	360	SF	Install Permanent PCC Pavement Trench Patching, complete, in place	\$ _____ /SF	\$ _____
39	3,230	SF	Install Concrete Pavers and All Appurtenances, complete, in place.	\$ _____ /SF	\$ _____
40	5	EA	Lower and Raise Manholes, including New Frame and Covers, complete, in place.	\$ _____ /EA	\$ _____
41	8	EA	Lower and Raise Utility Valve Boxes, Sewer and Storm Drain Cleanouts, complete, in place.	\$ _____ /EA	\$ _____
42	39	EA	Install Decorative Bollard and All Appurtenances, complete, in place	\$ _____ /EA	\$ _____
43	8	EA	Install Collapsible Bollard and All Appurtenances, complete, in place	\$ _____ /EA	\$ _____
44	8	EA	Install New Light Pole with new Decorative LED Fixture Including Foundation, complete, in place	\$ _____ /EA	\$ _____
45	4	EA	Remove & Replace Existing Plastic Irrigation Control Valve Box & Lid with Traffic Rated Control Valve Box & Lid, complete, in place.	\$ _____ /EA	\$ _____
46	2	EA	Install Ground Hydrant and All Appurtenances, complete, in place.	\$ _____ /EA	\$ _____

**CITY OF SPARKS
BID ITEM SCHEDULE**

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47	120	LF	Install 1-1/4" CTS HDPE Water Service and All Appurtenances, complete, in place.	\$ _____ /LF	\$ _____
48	200	LF	Install 4-Inch (4") Schedule 40 PVC Conduit, Including Trenching and Backfill, complete, in place (Contingent Item)	\$ _____ /LF	\$ _____
49	200	LF	Install 12-Strand Irrigation Control Wire, complete, in place (Contingent Item)	\$ _____ /LF	\$ _____
50	4	EA	Install 3-1/2" Caliper "Red Oak" Tree, including Porous Pave per plan & details, complete, in place	\$ _____ /EA	\$ _____
51	4	EA	Install Exterior Receptacles under Tree Grates, complete, in place.	\$ _____ /EA	\$ _____
52	4	EA	Install Irrigation to Street Tree per plan & details, complete, in place.	\$ _____ /EA	\$ _____
53	280	LF	Install 4-inch Solid Double Yellow Stripe (Type II Waterborne), complete, in place.	\$ _____ /LF	\$ _____
54	60	LF	Install 24-Inch Stop Bar (Thermoplastic), complete, in place.	\$ _____ /LF	\$ _____
55	2	EA	Install 8-foot Stop Legend (Thermoplastic), complete, in place.	\$ _____ /EA	\$ _____
56	18	EA	Install Roadway Delineators, complete, in place.	\$ _____ /EA	\$ _____
57	11	EA	Install Permanent Traffic Sign, complete, in place	\$ _____ /EA	\$ _____
58	70	LF	Paint Curb, complete, in place.	\$ _____ /LF	\$ _____
59	1	LS	Force Account	\$75,000	\$75,000

**CITY OF SPARKS
BID ITEM SCHEDULE**

**BID TITLE: AVENUE OF THE OAKS REALIGNMENT
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<p>Total Price for AVENUE OF THE OAKS REALIGNMENT</p> <p>\$ _____</p> <p>(written total bid price)</p>	<p>\$ _____</p>
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Bidder Information

COMPANY INFORMATION:

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

COMPANY BACKGROUND

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

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

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

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

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

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

Bidder Information

CONTRACTOR LICENSE INFORMATION:

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

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

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

Bidder Information

DISCLOSURE OF PRINCIPALS:

a) Individual and/or Partnership:

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

b) Corporation:

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

Awarded Contract Information

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

COMPANY INFORMATION:

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

SUBCONTRACTOR DETAIL
SUBCONTRACTORS EXCEEDING FIVE PERCENT OF BID AMOUNT

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

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

Bidder Name: _____

Authorized Signature: _____

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

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

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

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

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

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

CITY OF SPARKS ACKNOWLEDGMENT AND EXECUTION:

STATE OF _____)
) SS
County of _____)

_____(Name of Principal) being first duly sworn, deposes and says: That he/she is the Bidder, or authorized agent of the Bidder for whom the aforesaid described work is to be performed by; that he/she has read the Plans, Specifications, and related documents including but not limited to, any addenda issued and understands the terms, conditions, and requirements thereof; that if his/her bid is accepted that he/she agrees to furnish and deliver all materials except those specified to be furnished by the City of Sparks (Owner) and to do and perform all work for the **AVENUE OF THE OAKS REALIGNMENT, Bid # 21/22-005**, 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 _____, 2021.

State of Nevada)
) SS.
County of _____)

On this _____ day of _____, in the year 2021, 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 _____

Local Preference Affidavit

NEW Instructions: This form is required to receive a preference in bidding on projects exceeding \$250,000. This form must be submitted no later than two (2) hours following the opening of bids, only if the bidder wishes for their preferential status(established by their current Certificate of Eligibility) to be considered in the evaluation of bids. A copy of the bidder’s Certificate of Eligibility must be submitted at the time the contractor submits their bid.

I, _____, on behalf of the Contractor, _____, swear and affirm that in order to be in compliance with NRS 338.0117 and be eligible to receive a preference in bidding **AVENUE OF THE OAKS REALIGNMENT (Bid #21/22-005)** certify that the following requirement will be adhered to, documented and attained on completion of the contract. Upon submission of this affidavit on behalf of _____, I recognize and accept that failure to comply with any requirements is a material breach of the contract and entitles the City to damages. In addition, the Contractor may lose their preference designation and/or lose their ability to bid on public works for a period of time, pursuant to NRS 338:

1. The Contractor shall ensure at least 50 percent of workers employed on the public work possess a Nevada driver’s license or identification card;
2. The Contractor shall ensure all vehicles used primarily for the public work will be registered and (where applicable) partially apportioned to Nevada;
3. The Contractor shall ensure payroll records related to this project are maintained and available within the State of Nevada.

These requirements are not applicable to Contractors who do not use the “Bidder’s Preference” eligibility certificate in their bid or do not receive an advantage in ranking of bids due to their preference status.

By: _____ Title: _____

Signature: _____ Date: _____

Signed and sworn to (or affirmed) before me on this _____ day of _____, 20____, by _____ (name of person making statement).

State of _____)
)ss.
County of _____)

_____ STAMP AND SEAL
Notary Signature

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 # **21/22-005**, PWP # **WA-2022-084**, for the **AVENUE OF THE OAKS REALIGNMENT**.

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 **AVENUE OF THE OAKS REALIGNMENT**, 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.

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

5. Samples:

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

6. Withdrawal of Bids:

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

7. Late Bids, Modifications, or Withdrawals:

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

8. Mistake in Bid:

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

9. Signature:

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

10. Exceptions:

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

11. Confidential Information:

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

12. Quality:

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



13. Litigation Warranty:

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

14. Royalties, Licenses and Patents:

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

15. Performance Standards:

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

16. Americans with Disabilities Act (ADA) Standards:

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

17. Warranties:

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

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

18. Addenda:

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

General Conditions



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

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

19. Specifications to Prevail:

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

20. Taxes:

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

21. Prevailing Wages:

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

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

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

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

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

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

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

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

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

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

23. Conflict of Interest:

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

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

24. Disqualification of Bidder:

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

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

25. Gratuities:

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

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

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



27. Performance and Payment Bonds:

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

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

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

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

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

28. Indemnification:

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

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

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

General Conditions



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

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

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

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

29. Insurance:

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

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

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

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

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

General Conditions



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

Commercial General Liability

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

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

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

Minimum Limits of Insurance

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

\$2,000,000 General Aggregate Limit

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

\$10,000 Medical Expense Limit

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

Coverage Form

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



Additional Insured

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

Primary and Non-Contributory

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

Waiver of Subrogation

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

Endorsements

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

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

Electronic Data Liability

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

Railroad Protective Liability

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

General Conditions



Business Automobile Liability

Minimum Limits of Insurance

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

Coverage Form

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

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

Additional Insured

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

Endorsements

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

Waiver of Subrogation.

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

Workers’ Compensation and Employer’s Liability

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

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

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

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

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

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

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

Minimum Limits of Insurance

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

Coverage Form

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

OTHER INSURANCE COVERAGES (IF APPLICABLE)

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

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

General Conditions



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

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

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

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

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

ALL COVERAGES

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

DEDUCTIBLES AND RETENTIONS

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

OTHER INSURANCE PROVISIONS

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

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

ACCEPTABILITY OF INSURERS

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

General Conditions



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

VERIFICATION OF COVERAGE

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

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

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

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

SUBCONTRACTORS

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

MISCELLANEOUS CONDITIONS

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

General Conditions



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

30. Safety Program:

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

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

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

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

31. Award of Contract:

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

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

32. Request for Proposal (RFP) Submittals:

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

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

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

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

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

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

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

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

General Conditions



related to the Project.

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

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

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

34. Tie Bids:

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

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

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

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

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

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

36. Documentation:

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

37. Discounts:

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

38. Seller's Invoice:

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

39. Inspection and Acceptance:

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



40. Lost and Damaged Shipments:

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

41. Late Shipments:

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

42. Document Ownership:

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

43. Advertisements, Product Endorsements:

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

44. Vendor Workplace Policies

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

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

45. Business License Requirement:

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

46. City Provisions to Prevail:

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

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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

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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
AVENUE OF THE OAKS REALIGNMENT
BID #21/22-005 / PWP# WA-2022-084**

These Special Provisions supplement and modify the Standard Specifications for Public Works Construction, 2012 version as 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

Workscope: The work includes but is not limited to the realignment of a section of roadway, Avenue of the Oaks, in downtown Sparks. The project includes the demolition of an underground water fountain structure, removal and replacement of curb, gutter sidewalk, ADA ramps, drain inlets; removal of existing composite roadway improvements and placing PCC Pavement; placement of new striping on new PCC roadway on Avenue of the Oaks as identified within the project plans and the bid document. The location of the work is within the city limits of the City of Sparks, Washoe County, Nevada, and is more specifically designated in the plans/maps for this project

SECTION 2: SPECIAL PROVISIONS

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

SECTION 3: STANDARD SPECIFICATIONS

All materials furnished and work performed shall be done in accordance with the 2012 version 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 City of Sparks "Standard Details" located in Appendix A of these specifications. For any work not specifically covered in Appendix A of these specifications, the contractor shall refer to the "Standard Details for Public Works Construction" (Orange Book) and any revisions thereto if not covered by these specifications.

SECTION 5: PRE-BID MEETING

There will be a NON-MANDATORY pre-bid meeting held at the job site, in front of the Galaxy Movie Theater located at 1250 Victorian Avenue, Sparks, NV 89431 at 1:00 PM on December 7, 2021.

SECTION 6: 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 **forty (40) working days** from the time of issuance of the Notice to Proceed. **All work shall be completed no later than May 20, 2022.**

SECTION 7: 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 (\$1000.00) for each and every working day delay after the forty (40) working day completion time limit.

In finishing the work in excess of the dates prescribed and the City shall further have the right to charge to the CONTRACTOR, his heirs, assigns or sureties and to deduct from the final payment for the work, all or any part as it may deem proper of the actual cost of which are directly chargeable to the contract and which accrue during the period of such extensions, except that the cost of the final surveys and preparation of final estimate shall not be included in such charges.

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

SECTION 8: 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 9: INTENT OF THE PLANS AND SPECIFICATIONS

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

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

SECTION 10: 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 City shall provide an inspector who will represent the City and shall make inspections of all work, sample and test materials and do such other work relative to supervision of the project as he may be assigned by the City. All instructions given by the inspector are subject to approval by the Project Coordinator.

SECTION 11: 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 12: 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 13: 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 14: 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 15: PROTECTION OF EXISTING UTILITIES

The location of existing utilities and drain lines shown on the plans are not guaranteed, but indicates generally their location according to the best knowledge of the Project Coordinator. The CONTRACTOR shall notify Underground Services Alert (USA Dig) at 1-800-227-2600, and NV Energy, Truckee Meadows Water Authority (TMWA), AT&T, 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 16: 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 17: PRECONSTRUCTION CONFERENCE

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

SECTION 18: MEASUREMENT 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.

SECTION 19: 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 20: 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 DVD will be provided to the City. Areas near the property lines, back of sidewalk and driveways, landscaping, mow strips, fences and edging should be videoed 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 21: WORKING DAY, WORK HOURS, SATURDAY, SUNDAY, HOLIDAY AND OVERTIME WORK

Sparks Municipal Code 20.04.005.D restricts construction hours to 5:00 A.M. until 7:00 P.M., Monday through Friday and 8:00 A.M. until 5:00 P.M. on Saturday. For this project, the defined construction hours will be 7:00 A.M. until 7:00 P.M., Monday through Friday unless otherwise required by these specifications or requested by the City Project Coordinator. 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.

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

When requesting to work outside of the permitted construction hours defined above, the CONTRACTOR shall first obtain approval from the City Project Coordinator at least seventy-two (72) hours prior to commencing such overtime work. If the CONTRACTOR plans to perform work on Saturday or Sunday, he/she shall obtain approval by the Wednesday prior to work on the Saturday or Sunday for which work is planned. If the CONTRACTOR plans to perform work on a legal Holiday, he/she shall first obtain approval from the City Project Coordinator at least 72 hours in advance.

CONTRACTOR shall obtain approval through the Temporary Use Permit (T.U.P.) and pay a fee of one hundred (\$100.00) dollars to work outside of the above legally permitted construction hours. The request shall include justification of how public safety or project performance will be enhanced through working outside of the restricted construction hours. Submittal and payment of fees does not guarantee approval.

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. In addition to the charge for the City employee(s) time outside a standard workday,

The City of Sparks downtown and surrounding area host various special events throughout the year. The Contractor will be made aware of any special events that may impact the project at least 7-days prior to event and may require accommodation be made which may include but not limited to, adding safety measures, additional signage, and/or modified work hours to accommodate the special event. This work shall be considered incidental to the project and no direct payment will be made.

The City of Spark recognizes the following legal Holidays:

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

SECTION 22: SUBMITTALS

Submittals for the following items shall be provided at the time of the preconstruction meeting and shall have been performed within the previous 12 months. Two (2) copies of each item should be submitted.

- New Aggregate Base
- Drain Rock
- Fabric – Filter and Stabilizing
- Portland Cement Concrete Mix Design – Roadway, Pave Areas, Colored, Paver sub-slab

- Concrete Reinforcing Fibers
- Reinforcing Dowels
- Concrete Pavers
- Asphalt Mix Design (if applicable)
- Manhole Components including Rings and Covers
- Catch Basins
- Storm Drain Pipe
- Conduit, Wire and Appurtenances
- Streetlights
- Landscape Materials – Soils, Trees, Porous Pave Materials, Pipe, Conduit, Valves, Wire, Boxes and Appurtenances
- ADA Truncated Dome Warning Panel
- Hand Rail – Shop Drawings
- Trees
- Concrete Curing Compound
- Pavement Markings

SECTION 23: TRAFFIC CONTROL PLANS

All traffic control shall conform to the latest editions of the NDOT Work Zone Traffic Control Handbook and the Manual on Uniform Traffic Control Devices (MUTCD) and as directed by the City of Sparks Community Services Department.

The CONTRACTOR shall designate a Traffic Control Supervisor (TCS), certified by the American Traffic Safety Services Association (ATSSA), who shall be responsible for planning, initiating, installing and maintaining all traffic control devices, as shown on the traffic control plan, as specified in the MUTCD and these specifications. The designated construction TCS shall be available to be contacted twenty-four (24) hours a day, seven (7) days a week, for the life of this Contract.

The traffic control plan shall scaled such that all proposed signage and traffic control for all streets in the entire unit can be seen on one full size (24"x 36") or half size (11"x17") plan sheet. The CONTRACTOR shall submit two (2) copies of proposed traffic control plan to the Project Coordinator for review and comments five (5) working days prior to the pre-construction meeting. The proposed traffic control plan shall be prepared and signed by a certified TCS, retained by the CONTRACTOR.

The CONTRACTOR's traffic control plans shall include, but not be limited to, the following:

- Proposed construction zone and existing speed limits
- All construction signing
- Message board locations
- Location of flaggers
- Types and locations of traffic control devices
- Temporary lane striping
- Construction phasing
- Lane crossovers between construction phases
- Method for maintaining traffic signal functions
- Special events accommodations
- Detours
- Accommodations for pedestrian, bicycle, and transit facilities

If, during construction, revisions to the accepted plan is necessary or safety or accommodation to traffic, these changes must also be prepared by the ATSSA certified, Traffic Control Supervisor.

The Project Coordinator may authorize a suspension of work during unfavorable weather or other conditions beyond the control of the CONTRACTOR. During such a suspension, the CONTRACTOR shall make passable and shall open to traffic such portions of the project under improvement and such temporary roadways or portions thereof as may be agreed upon between the CONTRACTOR and the City of Sparks Project Coordinator for the accommodation of necessary traffic during the period of suspension. The maintenance of the temporary route, replacement or renewal of any work or materials lost or damaged, removal of any work or materials and temporary maintenance shall be at the expense of the CONTRACTOR.

Existing roadways will only be allowed to be closed to thru traffic only. Flaggers will be required if Project Coordinator believes it is needed due to current activity or traffic safety. Failure to comply with Flagger requirements will result in an immediate shut down of all construction activity. Work will resume when the flagger requirement has been satisfied.

During non-working hours any hazardous section of the work shall be outlined with markers and flares. If deemed necessary by the Project Coordinator, barricades shall be erected to protect public traffic or he may direct the CONTRACTOR to furnish flagger(s) and pilot cars. Such markers, flares, barricades, flagging or piloting shall be at the expense of the CONTRACTOR.

When the CONTRACTOR's hauling equipment is required to merge with a cross traffic and at such other points which may be necessary to maintain safe traffic conditions, flaggers shall be provided to each side of the impairment to stop and direct traffic.

In case of damage to detours due to storms or other causes, the CONTRACTOR shall at once repair the damage, provide other detours or provide for carrying traffic through construction operations. Water shall be applied at points and in amounts as directed by the Project Coordinator, to keep the roadbed firm, smooth, stable and to reduce the dust hazard to a minimum.

Construction Zone Signs shall be placed on all cross streets where traffic is to be maintained. They shall be placed a sufficient distance from the construction to give motorist's adequate warning of the construction. None of the provisions herein shall be construed to restrict or prohibit, at any time, the prosecution of items of work, which will not interfere with the use of existing streets.

All flagging, piloting, signs, barricades, maintenance of work, streets, structures, detours, temporary approaches, replacement or renewal of work, water applied for these items or for dust control, shall not be paid for directly, but shall be included in various pay items of the proposal and the CONTRACTOR shall not be paid an additional amount for such work. When so ordered by the Project Coordinator, detours shall be surfaced and the materials needed shall be paid for by the cubic yard or ton as set forth in the pay items of the proposal.

SECTION 24: CLEANUP AND DUST CONTROL

It shall be the CONTRACTOR's responsibility to provide cleanup and dust control throughout all phases of construction, including suspension of work, and until final acceptance of the project. The CONTRACTOR shall keep the work site and other adjacent areas clean and free from rubbish and debris. The CONTRACTOR shall also abate dust nuisance by cleaning, sweeping, and sprinkling with water, or other means as necessary. A power broom will not be an acceptable means of cleaning the site unless used in conjunction with water to prevent dust from the power broom operation. The use of water resulting in mud on public streets will not be permitted as a substitute for sweeping or other methods. All water used for dust control must be from a potable water source.

All construction procedures shall conform to WCDHD-AQMD standards.

Excess excavated material from trenches, manholes, catch basins or similar structures in public streets shall be removed from the site immediately. Sufficient material may remain for use as backfill, but shall not remain during non-working hours. Forms and form lumber shall be removed from the site as soon as practical after stripping. No screening of excavated material will be allowed in the street. The CONTRACTOR shall remove all trash from the site in a timely manner. At no time shall the CONTRACTOR permit disposal of trash in any excavation.

Materials and equipment shall be removed from the site as soon as they are no longer necessary; and, upon completion of the work and before final inspection, the entire worksite shall be cleared of equipment, waste and unused materials, construction debris and rubbish so as to present a satisfactory clean and neat appearance.

Care shall be taken to prevent spillage on haul routes. Any such spillage shall be removed immediately and the area cleaned.

Failure of the CONTRACTOR to comply with the City's cleanup orders may result in an order to suspend work until the condition is corrected. Working days will continue to be counted during the suspension. No additional compensation will be allowed as a result of such suspension. No extension of contract time will be allowed as a result of such suspension.

If the contract time expires before final cleanup has been completed, liquidated damages, as specified in these Special Provisions, may be imposed.

SECTION 25: 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 26: 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 27: EXISTING DRIVEWAYS/DELIVERY ACCESS

The CONTRACTOR shall be responsible to maintain access to existing driveways and/or delivery access at all times. The Contractor shall not be permitted to close ANY driveway access and/or delivery access without approval of the City Project Coordinator and proper notification/coordination with the owner/residents of the affected property. The CONTRACTOR shall maintain access during construction operations whenever possible with the placement of steel traffic plates for the entire width of the driveway. At no time will the CONTRACTOR be allowed to use aggregate base, sand or decomposed granite for ramping material. Driveway/Delivery access shall be considered incidental to the project and no direct payment will be established for this work.

SECTION 28: GARBAGE PICK UP

This is for recycled materials and garbage. It will be the responsibility of the CONTRACTOR to coordinate with Waste Management and residents to ensure that garbage collection is uninterrupted.

SECTION 29: LOCATION OF WORK, PUBLIC RELATIONS

It shall be the CONTRACTOR’S responsibility to notify, in writing, all residents and businesses adjacent to this project of the construction working hours and duration of work. Notification shall be provided directly to impacted properties (i.e. properties abutting the work) seven (7) calendar days prior to beginning work at that location **excepting** notification for Monday and Tuesday work shall be provided no later than 7:00 PM Thursday. Notification shall be in the form of a “door hanger” or flyer that is hand-delivered by the CONTRACTOR to each residence/business. A copy of the written communication must be provided to the Project Coordinator and approved before being dispersed.

Special consideration shall be given to schools to accommodate schedules for pedestrians, student drop-off, and busses.

“NO PARKING” signs shall be displayed on streets at least 24 hours prior to operations. Signs shall be legible from inside vehicles and state the day and dates work will be performed. Signs shall be free from defects and unbroken.

In the event of delays that require rescheduling of work, the CONTRACTOR shall re-notify impacted properties in the same manner as described in the paragraphs above.

SECTION 30: CONSTRUCTION STAKING AND MATERIAL TESTING

Construction staking for utilities, centerline monument establishment, compaction testing, asphalt and concrete testing will be provided by the City. Twenty-four (24) hour notice must be given by the CONTRACTOR to the Project Coordinator or Inspector prior to any staking and/or testing.

SECTION 31: CONSTRUCTION PHASING

CONTRACTOR shall perform the work for this project while still always providing access to the local business and residence. This may require “Phasing” of any part of the work during the construction process. CONTRACTOR will be require to provide a project schedule with possible “phasing” considerations to

accommodate the local businesses and residence in this area. Phasing plan shall be review and approved by the city of Sparks prior to the commencement of work. Construction phasing shall be considered incidental to this project so no direct payment will be established.

**BID ITEM CLARIFICATIONS
AVENUE OF THE OAKS REALIGNMENT
BID #21/22-005 / PWP# WA-2022-084**

BID ITEM 1 and 2 ~ Remove Existing Street Lights including Foundations and Appurtenances and Remove Existing Bollard Lights including Foundations and Appurtenances.

The item includes providing all labor, materials, equipment, tools, excavation, and all incidentals necessary to complete the removal and disposal of streetlights and bollards, including their foundations at the locations indicated within the Plans and Specifications.

Streetlight poles and bollards shall be salvaged to the City of Sparks salvage site located at 701 E. Nugget Ave. Salvage shall be paid under Bid Item 13, Salvage and Delivery of Plaques, Manhole Covers, Victorian Square Logo Nozzle Covers, Tree Grates, Bollards, and Light Poles to City of Sparks Salvage Site Located at 701 E. Nugget Ave or 431 Prater Way, complete.

Quantity for payment will be per each removal, complete, for actual quantities measured in the field.

BID ITEM 3 ~ Remove and Dispose of Cast Stone Pedestals

This item includes providing all labor, materials, equipment, tools, excavation, loading, hauling, unloading, and all incidentals necessary to complete the removal and disposal of the 3'x3'x5'6" reinforced cast stone pedestals, including the foundations.

Quantity for payment will be per each removal, complete, for actual quantities measured in the field.

BID ITEM 4 ~ Remove Existing Hardscape Composite Materials to Subgrade Depth as outlined on Avenue of the Oaks Project Plan sheets DM-1 and DM-2

This item includes providing all labor, materials, equipment, and all incidentals necessary, but not limited to, excavation and disposal to complete the removal of the following anticipated items:

PCC Plaza Curb- Removal and disposal of PCC tapered Plaza curb, including sawcutting, excavation and disposal of existing aggregate base, subbase and/or sub grade material to subgrade depth, per Standard Specifications and Details.

**Estimated quantity of 330 LF.

Remove Existing Fountain Plaza PCC Hardscape - Removal and disposal of twelve inches (12") thick +/- reinforced and/or unreinforced decorative PCC fountain section and metal framework, including sawcutting, excavation and disposal of existing aggregate base, subbase and/or sub grade material to subgrade depth, per Standard Specifications and Details.

**Estimated quantity of 4,330 SF.

Remove Existing Fountain Plaza Paver Hardscape – Removal and disposal of at least one inch (1") bedding sand, four inches (4") PCC sub slab and four inch (4") thick decorative paver section and metal framework including sawcutting, per Standard Specifications and Details.

**Estimated quantity of 9,190 SF

**Estimate quantity for each item should be used as an estimate only and should not be understood as an exact quantity. Contractor should verify areas called out in the project plans match the quantities found in the field for this bid item. Contractor shall adjust the Lump Sum bid price for this bid item based on actual quantities verified in the field at bid time.

Quantity for payment will be per Lump Sum, complete.

BID ITEM 5 ~ Remove Existing Roadway Composite Materials to Subgrade Depth

The item includes providing all labor, equipment, materials, and incidentals necessary, but not limited to, sawcutting, excavation and removal of the existing asphalt concrete pavement, PCC concrete pavement, existing base and subbase materials to a depth of one foot (1') and grade and compact existing native, subgrade materials.

The contractor should be aware that the actual existing composite materials thickness may vary, that steep crowns, flat crowns, off-set crowns, quarter crowns, excessive existing pavement thicknesses, or other variations in the existing section may necessitate removal of existing materials to depths greater than shown on the plans. No additional payment shall be made for excess material removed from the site or import material that may be necessary to achieve the depths, lines, and grades shown on the plans.

Quantity for payment will be per square foot of removal, complete, for actual quantities measured in the field.

BID ITEM 6 ~ Remove / Abandon Fountain Vault Structure and all Appurtenances, as outlined in Avenue of the Oaks Project Plan Sheets DM-1 through DM-5

The item includes providing all labor, equipment, materials, and incidentals necessary, but not limited to, excavation, trenching, dewatering compaction, loading, hauling, unloading, and all incidentals necessary to complete the partial removal and abandonment of the fountain vault pit structure, fountain nozzle boxes, drain trenches, equipment and miscellaneous piping and appurtenances.

All miscellaneous items within the vault shall also be removed and properly disposed of prior to demolition of the vault structure. Appendix A of these specification shows some of the anticipated items located within the pit of the vault. The fountain vault pit structure which shall be removed and disposed of to the depth shown on the plan representing the lid/cover and the upper four (4) feet of the structure. The vault abandonment shall include sealing of abandoned vault penetrations. The bottom of the remaining vault shall have penetration placed along the floor of the vault to allow for proper drainage of the abandon vault structure and backfilled with one-foot (1') of 1-1/2" minus drain rock at the bottom of the vault, followed by a layer of filter fabric, Mirafi 180N or equivalent and then Type 2, Class B aggregate base compacted to 90% M.D.D. Work shall include all incidentals and appurtenances necessary to complete the demolition work and prepare the site for work to be performed in Bid Item 5.

Demolition plan sheets DM-3 and DM-4 include original 1998 structural design information of the structures for full or partial removal.

Quantity for payment will be per Lump Sum, complete.

BID ITEM 7 ~ Remove / Abandon Fountain Electrical Vault Structure and all Appurtenances, as outlined in Avenue of the Oaks Plan Sheets DM1 Through DM-5

The item includes providing all labor, equipment, materials, and incidentals necessary, but not limited to, excavation, trenching, dewatering compaction, loading, hauling, unloading, and all incidentals necessary to complete the partial removal and abandonment of the complete fountain vault electrical vault and removal all electrical facilities in or penetrating the vault.

All electrical and miscellaneous items within the vault shall also be removed and properly disposed of

prior to demolition of the vault structure. The electrical vault structure which shall be removed and disposed of to the depth shown on the plan representing the lid/cover and the upper three (3) feet of the structure. The vault abandonment shall include sealing of abandoned vault penetrations. The bottom of the remaining vault shall have penetration placed along the floor of the vault to allow for proper drainage of the abandon electrical vault structure and backfilled with one-foot (1') of 1-1/2" minus drain rock at the bottom of the vault, followed by a layer of filter fabric, Mirafi 180N or equivalent and then Type 2, Class B aggregate base compacted to 90% M.D.D. Work shall include all incidentals and appurtenances necessary to complete the demolition work and prepare the site for work to be performed in Bid Item 5.

Demolition plan sheets DM-3 and DM-5 include original 1998 structural design information of the structures for full or partial removal.

Contractor to note that the existing vault is assumed to be full of standing water.

Quantity for payment will be per Lump Sum, complete.

BID ITEM 8 ~ Over-Excavation of Unsuitable Material (Contingent)

This item is for over-excavation of any unsuitable material that is encountered during construction. Material that can be used is a Class E structural material or approved equal. Work shall include but is not limited to the removal of over-excavation materials, placement of geotextile stabilizing fabric (180N or equal), and full compensation for furnishing all backfill materials, equipment, and labor for the hauling, placing, spreading, watering, mixing, compacting and other incidentals necessary to complete the work, as specified. Over-excavation of unsuitable material shall be considered a contingent item and will not be subject to the 25% rule that is outlined within the Orange Book section 153.00. Final depth may vary based on field testing results or directed by the Engineer on Record.

Quantity for payment will be per cubic yard of removal, complete, in place for actual quantities measured in the field.

BID ITEM 9 ~ Remove, Salvage, and Relocate Existing Event Power Station

The item includes providing all labor, materials, equipment, tools, excavation, and all incidentals necessary to remove, salvage and relocate the existing event power station as shown on the project plans. Work shall include, but not be limited to removal of Existing Event Power Station foundations, placement of new Event Power Station foundation, coordination with the City Project Coordinator prior to placement and all incidentals necessary for a complete, working installation

Quantity for payment will be per each unit removed, salvaged and relocated, complete, in place for actual quantities measured in the field.

BID ITEM 10 ~ Remove Existing Light Pull Boxes

The item includes providing all labor, materials, equipment, tools, excavation, and all incidentals necessary to remove existing street light pull boxes at the location as indicated within the Plans and Specifications Work shall include, but not be limited to sawcutting, pavement removal, excavation, removal and disposal of pull boxes, backfill, and permanent pavement repair shown on the Plans.

Quantity for payment will be per each removal, complete, for actual quantities measured in the field.

BID ITEM 11 ~ Remove / Abandon Miscellaneous Pipe, Ducts, Conduits and Appurtenances.

This item includes providing all labor, materials, equipment, tools, excavation, trenching, compaction, loading, hauling, unloading, and all incidentals necessary to complete the

removal/abandonment and disposal of miscellaneous underground piping and conduit in the fountain and plaza area.

Quantity for payment will be per Lump Sum, complete.

BID ITEM 12 ~ Remove Existing Drop Inlet and Appurtenances

The item includes providing all labor, equipment, materials, and incidentals necessary, but not limited to, excavation and disposal up to 10 feet of existing curb, gutter and sidewalk including existing drain inlet, along with any unsuitable sub grade material including existing base. Grates to be salvaged to Sparks.

Quantity for payment will be per each removal, complete, for actual quantities measured in the field.

BID ITEM 13 ~ Salvage and Delivery of Plaques, Manhole Covers, Victorian Square Logo Nozzle Covers, Tree Grates, Bollards, and Light Poles to City of Sparks Salvage Site Located at 701 E. Nugget Ave or 431 Prater Way

The item includes providing all labor, equipment, materials, protections, and incidentals necessary, but not limited to offering listed material to the City of Sparks and delivery to one of two locations or proper disposal of materials rejected for salvage by the city of Sparks.

Salvaged materials including all Victorian Square logoed manhole and vault covers, logoed nozzle jet box covers, removed drop inlet grates, light poles, bollards, and tree grates, shall be delivered to the City of Sparks Denitrification Plant, 701 E. Nugget Avenue, Sparks, NV 89431. Items to be identified for salvage by the City of Sparks prior to commencement of demolishing operations.

Salvaged plaques obtained from the pilasters shall be delivered to the Sparks City Hall, 431 Prater Way, Sparks, NV 89431.

Quantity for payment will be per Lump Sum, complete.

BID ITEM 14 ~ Install 12-Inch, SDR-35 PVC Storm Drain Pipe, Inserta-Tee, and All Appurtenances, Removal and Disposal of Existing Pipe

The item includes providing all labor, materials, equipment, tools, excavation, trenching, compaction, loading, hauling, unloading, and all incidentals necessary to complete the installation of 12-inch SDR-35 PVC storm drainpipe as shown on the improvement plan sheets. Pipe shall be furnished complete with all joining materials and other necessary appurtenances. All damaged or defective pipe and appurtenances shall be rejected and removed from the project site. The work shall include, trenching, dewatering, shoring and bracing, bedding, backfill, installation of new pipe, connections to new/existing manholes or pipe with inserta-tee, sealing of manhole terminations, finishing of the connections to new/existing manholes, disposal of excavated materials, temporary pavement patching (as necessary), locator/warning tape, incidentals and appurtenances necessary to complete the pipeline installation work.

Installation of the storm drainpipe and any and all appurtenances as shown on the Improvement plan sheets is anticipated to be "field fit" at the time of placement. The Contractor shall be responsible for verifying that the proposed alignment, including manholes (if applicable) can be constructed both horizontally and vertically. Once the contractor has established an alignment, they shall review with the City Project Coordinator prior to placement. The "field fit" process shall be considered incidental and should be included in the unit price.

Quantity for payment will be per lineal feet placed, complete, in place for actual quantities measured in the field.

BID ITEM 15 and 16 ~ Install Type I – 48” Storm Drain Manhole, and Temporary Grate Cover and all Appurtenances and Install Type IV – 60” Storm Drain Manhole and All Appurtenances

This item includes providing all labor, materials, equipment, tools, excavation, trenching, dewatering, compaction, shoring, bedding, backfill, loading, hauling, unloading, and all incidentals necessary to complete the installation of Type I and Type IV Storm Drain Manhole at locations as shown on the improvement sheet. This item also includes installation of new manhole frames and covers or temporary grate cover, placement of the barrel, cone, grade rings, temporary asphalt patching (as necessary), excavation of the existing materials to accommodate the installation of the new storm drain manhole per the City Standard detail, disposal of the excavation materials and incidentals at a suitable facility.

Installation of the storm drainpipe and any and all appurtenances as shown on the Improvement plan sheets is anticipated to be “field fit” at the time of placement. The Contractor shall be responsible for verifying that the proposed alignment, including manholes (if applicable) can be constructed both horizontally and vertically. Once the contractor has established an alignment, they shall review with the City Project Coordinator prior to placement. The “field fit” process shall be considered incidental and should be included in the unit price.

Quantity for payment will be per each unit placed, complete, in place for actual quantities measured in the field.

BID ITEM 17 ~ Install Type 3R Storm Drain Drop Inlet and All Appurtenances.

The item includes providing all labor, equipment, materials, and incidentals necessary, but not limited to, excavation of existing composite materials, along with any unsuitable sub grade material including existing base, installation of new Type 2 aggregate base compact to 95% MDD, installing a new Type 3-R catch basin per the project plans, Standard Specifications and Details.

Quantity for payment will be per each unit placed, complete, in place for actual quantities measured in the field.

Bid Item 18 – Excavation and Backfill for NV Energy 2" and 4" PE Main/Service Replacements

The item includes providing all labor, materials, equipment, services and other incidentals necessary to provide excavation for the proposed 2” and 4” PE mains and services. Contractor shall complete all associated tasks including, but not limited to, coordinating with NV Energy and applicable agencies, sawcutting, excavating, trenching, proper disposal of excavated piping and material, placing NV Energy approved bedding sand and base, placing warning tape, backfilling, shoring, dewatering, protecting existing and installed natural gas facilities and installing valve cans, valve concrete collars, test stations and test station concrete collars. NV Energy to provide all piping materials listed on improvement plans and perform all piping work, hot work, and retirements of the existing gas mains and services.

Contractor performing tasks related to the backfilling of NV Energy gas facilities shall be listed on the NV Energy Gas Contractors or Backfill Contractors list. If prime contractor is not on the approved list, the prime contractor shall hire a subcontractor that is qualified. Qualified contractors are listed at <https://www.nvenergy.com/business/building-and-new-construction/gas-backfill-contractors>.

Quantity for payment will be per lineal feet of excavation and backfill, complete, in place for actual quantities measured in the field.

Bid Item 19 – Excavation and Backfill for NV Energy Main and Service Tie-Ins

The item includes providing all labor, materials, equipment, services and other incidentals necessary to provide excavation to allow NV Energy crews to safely perform system tie-ins, isolations, and retirements. Contractor shall complete all associated tasks including, but not limited to, coordinating with NV Energy and applicable agencies, sawcutting, excavating, trenching, proper disposal of excavated piping and material, placing NV Energy approved bedding sand and base, placing warning tape, backfilling, shoring, dewatering, protecting existing and installed natural gas facilities, plating tie-in excavations as needed and installing valve cans, valve concrete collars, test stations and test station concrete collars. NV Energy to provide all piping materials and perform all piping work, hot work, and retirements of the existing gas mains and services.

Each excavation tie-in location is anticipated to be 5’x5’x5’

Quantity for payment will be per each unit excavated and backfilled, complete, in place for actual quantities measured in the field.

Bid Item 20 – Install Two (2) - 4" AT&T PTS-77 (Type C) or Schedule 40 Conduits,

The item includes providing all labor, materials, equipment, services and other incidentals necessary to supply and install 2- 4” AT&T PTS-77 (Type C) or Schedule 40 Conduits including trenching and backfill as indicated in the Plans. Contractor shall complete all associated tasks including, but not limited to, coordinating with AT&T and applicable agencies, sawcutting, excavating, trenching, proper disposal of excavated piping and material, placing bedding sand and base, placing warning tape, backfilling, shoring, dewatering,. Work shall include, but not be limited to supplying, installation of conduit, surveying layout, coordination with City Project Coordinator and incidentals necessary for a complete installation.

Quantity for payment will be per lineal feet of excavation, conduits and backfill, complete, in place for actual quantities measured in the field.

Bid Item 21 – Install AT&T PTS-65 Intercept Telephone Manhole,

This item includes providing all labor, materials, equipment, tools, excavation, trenching, dewatering, compaction, shoring, bedding, backfill, loading, hauling, unloading, and all incidentals necessary to complete the installation of AT&T PTS-645 Intercept Manhole. Manhole is to be installed on existing AT&T conduit facilities and will include connection of new conduit facilities. This item also includes installation of new temporary and permanent manhole frames and covers temporary asphalt patching (as necessary), excavation of the existing materials to accommodate the installation of the new facility, and disposal of the excavation materials and incidentals at a suitable facility.

Quantity for payment will be per each unit placed, complete, in place for actual quantities measured in the field.

BID ITEM 22 ~ Install 48" Traffic Rated Electrical Manhole and All Appurtenances

This item includes providing all labor, materials, equipment, tools, excavation, trenching, dewatering, compaction, shoring, bedding, backfill, loading, hauling, unloading, and all incidentals necessary to complete the installation of 48” traffic rated electrical manhole at locations as shown on the improvement sheet. This item also includes installation of new manhole frames and covers placement of the barrel, cone, grade rings, temporary asphalt patching (as necessary), excavation of the existing materials to accommodate the installation of the electrical manhole per the City Standard detail, disposal of the excavation materials and incidentals at a suitable facility.

Quantity for payment will be per each unit placed, complete, in place for actual quantities measured in the field.

BID ITEM 23-25 - Install Various Sizes of Schedule 40 PVC Conduit, Including Trenching and Backfill

This item includes providing all labor, materials, equipment, tools, excavation, trenching, dewatering, compaction, shoring, bedding, backfill, loading, hauling, unloading, and all incidentals necessary to complete the installation of install 3-Inch (3"), 1-1/2-inch (1-1/2") and 3/4-inch (3/4") Schedule 40 PVC Conduit at locations as shown on the improvement Plans and Specifications. Work shall include, but not be limited to installation of conduit, surveying layout, coordination with City Project Coordinator and incidentals necessary for a complete installation.

Quantity for payment will be per lineal feet of each conduit placed, by size, complete, in place for actual quantities measured in the field.

BID ITEM 26 ~ Remove and Replace Existing Electrical Pull Boxes

This item includes providing all labor, equipment, materials, and incidentals necessary, but not limited to removal, replacement, and adjustment to grade of existing electrical pull boxes within the area work not specifically identified under separate bid items. All pull boxes within the area of work shall be traffic rated, Jensen Precast, HN1730 or Christy N36 reinforced concrete box and extension and slip resistant steel traffic rated cover per Standard Specifications and Details

Quantity for payment will be per each unit placed, complete, in place for actual quantities measured in the field.

BID ITEM 27 – Install N16 Handhole, Traffic Rated Box

This item includes providing all labor, equipment, materials, and all incidentals to install N16 handhole at the locations indicated within the Plans and Specifications. Work shall include, but not be limited to installation of N16 handhole, surveying layout, coordination with City Project Coordinator and incidentals necessary for a complete installation.

Quantity for payment will be per each unit placed, complete, in place for actual quantities measured in the field.

BID ITEM 28 ~ Install 50Amp, 208V, 1ph Power Panel

This item includes providing all labor, equipment, materials, and all incidentals to install 50Amp, 208V, 1ph Power panel at the locations indicated within the Plans and Specifications. Work shall include, but not be limited to install Power Panel, surveying layout, coordination with City Project Coordinator, and incidentals necessary for a complete installation.

Installation will be measured based upon the number of Power Panel installed regardless of the number of panels.

Quantity for payment will be per each unit placed, complete, in place for actual quantities measured in the field.

BID ITEMS 29 - 31 ~ Install Various Sizes of THWN Copper Wire

This item includes providing all labor, equipment, materials, and all incidentals to install #10, #3, or #2 THWN copper wire conductors at the locations indicated within the Plans and Specifications. Work shall include, but not be limited to installation THWN copper wire conductors, surveying layout, coordination

with City Project Coordinator and incidentals necessary for a complete installation.

Installation will be measured based upon the length of copper wire conductors installed regardless of the amount of copper wire conductors.

Quantity for payment will be per lineal feet of each wire placed, by size, complete, in place for actual quantities measured in the field.

BID ITEM 32-33 ~ Install Plaza Tapered PCC Curb and Install 8" PCC Retaining Curb

The item includes providing all labor, equipment, materials, and incidentals necessary, but not limited to, excavation and disposal of composite, along with any unsuitable sub grade material including existing base, installation of new Type 2 aggregate base to a depth of six inches (6") compact to 95% MDD, and placement of Plaza Tapered PCC Curb and 8" PCC Retaining Curb per Standard Specifications and Details. Asphalt patching in front of the newly placed curb and gutter shall be included in this bid item

Quantity for payment will be per lineal feet of tapered curb placed, complete, in place for actual quantities measured in the field.

BID ITEM 34 ~ Install Handrail

The item includes providing all labor, equipment, materials, and incidentals necessary, but not limited to, provision, fabrication, welding, coating (to match other handrails in area), and fastening stainless steel handrail on 8" retaining curb pursuant to plan details and Standard Specifications and Details.

Quantity for payment will be per lineal feet of handrail placed, complete, in place for actual quantities measured in the field.

BID ITEM 35 ~ Install ADA Accessible Ramps

The item includes providing all labor, equipment, materials, and incidentals necessary, but not limited to, excavation and disposal of existing unsuitable sub grade material including existing base, installation of new Type 2 aggregate base to a depth of six inches (6") compact to 95% MDD, installation of six inches (6") minimum thickness 4000 psi Portland cement concrete subslab and adjacent eight inch (8") wide Portland cement concrete band and jointing, expansion joint, truncated domes, per Standard Specifications and Details. Adjacent pavers shall be measured under bid item for paver construction.

Quantity for payment will be per each unit placed, complete, in place for actual quantities measured in the field.

BID ITEMS 36 - 38 ~ Install PCC Decorative/Colored Crosswalk and Install PCC for Roadway and PCC Pave Area and Install Permanent PCC Pavement Trench Patching

The item includes providing all labor, equipment, materials, and incidentals necessary, but not limited to, excavation and disposal of existing unsuitable sub grade material including existing base, installation of new Type 2 aggregate base to a depth of six inches (6") compact to 95% MDD, and placement of PCC sidewalk, roadway, decorative crosswalks and permanent pavement trench patching, including fiber reinforcement, steel reinforcement, jointing, dowels, joint sealant, sawcutting, integral concrete colors, stamp patterns, shop drawings for joint layout and reinforcement, per Standard Specifications and Details.

Quantity for payment will be per square feet placed, complete, in place for actual quantities measured in the field.

BID ITEM 39 ~ Install Concrete Pavers and All Appurtenances

The item includes providing all labor, equipment, materials, and incidentals necessary, but not limited to, excavation and disposal of existing unsuitable sub grade material including existing base, installation of new Type 2 aggregate base to a depth of six inches (6”) compact to 95% MDD, installation of 3000 psi PCC subslab four inches (4”), installation of bedding sand one inch (1”) and compaction and placement of brick pavers and all appurtenances, including installation of pavers to varying patterns per plan, edge restraints, sawcut, tooled and other joints, drilled or cored drainage holes per Standard Specifications and Details.

Quantity for payment will be per square feet placed, complete, in place for actual quantities measured in the field.

BID ITEM 40 ~ Lower and Raise Manholes, Including New Frame and Covers

The item includes providing all labor, equipment, materials, and incidentals necessary, but not limited to, lowering existing manhole rims, supplying new manhole frame and cover, and raising and installing new frame and cover per Standard Specifications and Details.

Quantity for payment will be per each unit lowered and raised, complete, in place for actual quantities measured in the field.

BID ITEM 41 ~ Lower and Raise Utility Valve Boxes, Sewer and Storm Drain Cleanouts

The item includes providing all labor, equipment, materials, and incidentals necessary, but not limited to lowering and raising of the-utility valve boxes per TMWA, NV Energy, other utilities, the sewer, and storm drain cleanouts, and the Standard Specifications and Details. The unit price shall be deemed full compensation for all labor, materials, equipment, delivery, placement and incidentals necessary to complete the work specified.

Quantity for payment will be per each unit lowered and raised, complete, in place for actual quantities measured in the field.

BID ITEMS 42 - 43 ~ Install Decorative Bollard and All Appurtenances and Install Collapsible Bollard and All Appurtenances

This item includes providing all labor, materials, equipment, tools, excavation, trenching, dewatering, compaction, shoring, bedding, backfill, loading, hauling, unloading, and all incidentals necessary to complete the installation of Decorative Bollards and Collapsible Bollards at locations as shown on the plans. This item includes excavation of the existing materials to accommodate the installation of the bollard, and disposal of the excavation materials and incidentals at a suitable facility, 4,000 psi Portland cement concrete foundation, and all necessary appurtenances and incidentals necessary to complete the work specified.

Quantity for payment will be per each unit placed, complete, in place for actual quantities measured in the field.

BID ITEM 44 ~ Install New Light Pole with New Decorative LED Fixture Including Foundation

This item includes providing all labor, materials, equipment, tools, excavation, trenching, dewatering, compaction, shoring, bedding, backfill, loading, hauling, unloading, and all incidentals necessary to complete the installation of new light poles including decorative LED fixture and pole foundations at locations as shown on the plans. Work shall include, but not be limited to installation of new concrete pole base foundations, new LED Luminaire and new 16’ decorative steel pole, surveying layout and coordination with City Project Coordinator, and incidentals necessary for a complete installation.

Quantity for payment will be per each unit placed, complete, in place for actual quantities measured in the field.

BID ITEM 45 ~ Remove & Replace Existing Plastic Irrigation Control Valve Box & Lid with Traffic Rated Control Valve Box & Lid.

This item includes providing all labor, equipment, materials, and incidentals necessary to remove and replace existing plastic irrigation control valve box and lid with traffic rated control valve box and lid. Work shall include, but not be limited to, excavation, furnish and installation of traffic rated irrigation valve box and lid, washed drain gravel base, backfill, and incidentals necessary for a complete installation.

Quantity for payment will be per each unit removed and replaced, complete, in place for actual quantities measured in the field.

BID ITEMS 46 - 47 ~ Install Ground Hydrant and 1-1/4" CTS HDPE Water Service and All Appurtenances

This item includes providing all labor, materials, equipment, tools, excavation, trenching, dewatering, compaction, shoring, bedding, backfill, loading, hauling, unloading, and all incidentals necessary to complete the installation of ground hydrants and 1-1/4" CTS HDPE Water Service at locations as shown on the improvement plans. This item also includes installation of new traffic rated boxes and cast iron covers, valves, drain rock, temporary asphalt patching (as necessary), excavation of the existing materials to accommodate the installation of the new facilities per their respective details, and disposal of the excavation materials and incidentals at a suitable facility.

Quantity for payment will be per each unit placed, complete, in place for actual quantities measured in the field.

BID ITEM 48 ~ Install 4-Inch (4") Schedule 40 PVC Conduit, Including Trenching and Backfill

This item includes providing all labor, materials, equipment, tools, excavation, trenching, dewatering, compaction, shoring, bedding, backfill, loading, hauling, unloading, and all incidentals necessary to complete the installation of install 4-Inch (4"), Schedule 40 PVC Conduit at locations as shown on the improvement Plans and Specifications. Work shall include, but not be limited to installation of conduit, surveying layout, coordination with City Project Coordinator and incidentals necessary for a complete installation.

Quantity for payment will be per lineal feet of conduit placed, by size, complete, in place for actual quantities measured in the field.

BID ITEM 49 ~ Install 12-Strand Irrigation Control Wire

This item includes providing all labor, equipment, materials, and all incidentals to install 12-strand irrigation control wire at field determined locations within the project where replacement is required as necessary for the work. Work shall include, but not be limited to installation of control wire, surveying layout, coordination with City Project Coordinator and incidentals necessary for a complete installation.

Quantity for payment will be per lineal feet of 12-strand wire placed, complete, in place for actual quantities measured in the field.

BID ITEM 50 ~ Install 3-1/2" Caliper "Red Oak" Tree, including Porous Pave per plan & details

This item includes providing all labor, equipment, materials and all incidentals necessary to install 3-1/2" Caliper "Red Oak" Tree in accordance with the plans and specifications. Work shall include, but not be

limited to, trenching, construction of amending soil, furnish and installation of trees, tree staking, and root barrier. Work shall also include the installation of porous pave, along with incidentals necessary for a complete installation.

Quantity for payment will be per each unit placed, complete, in place for actual quantities measured in the field.

BID ITEM 51 ~ Install Exterior Receptacles under Tree Grates

This item includes providing all labor, equipment, materials, and all incidentals necessary to install Exterior Receptacles under Tree Grates at the locations indicated within the Plans and Specifications. Work shall include, but not be limited to installation of new Exterior Receptacles under Tree Grates and incidentals necessary for a complete installation.

Quantity for payment will be per each unit placed, complete, in place for actual quantities measured in the field.

BID ITEM 52 ~ Install Irrigation to Street Tree per plan & details

This item includes providing all labor, equipment, materials and all incidentals necessary to install a complete irrigation system, in accordance with the plans and specifications. Work shall include, but not be limited to sawcutting, excavation, piping, sleeving below hard surfaces, laterals, control wire, drip system, emitters, irrigation valves/boxes, compaction, backfill, and incidentals necessary for a complete installation.

Quantity for payment will be per each unit placed, complete, in place for actual quantities measured in the field.

BID ITEM 53 ~ Install 4-inch Solid Double Yellow Stripe, (Type II Waterborne)

This item includes providing all labor, equipment, materials, and incidentals necessary, but not limited to, surface preparation, primer, installing centerlines, in NDOT Type II water based paint for the stop approach and centerlines.

All traffic paint shall have two (2) coats per application with a minimum dry thickness of 10 Mil (0.010) per coat. The final dry thickness of both the first and second coat of paint shall be a minimum of 20 Mil's of the designated material placed. The second coat of paint may be placed once the first coat is completely dry to the touch unless otherwise directed by the City Project Coordinator.

Double stripes are considered a single unit and quantities represent the length of the double stripe.

Quantity for payment will be per lineal feet placed, complete, in place for actual quantities measured in the field.

BID ITEM 54 ~ Install 24-Inch Stop Bar (Thermoplastic)

This item includes providing all labor, equipment, materials, and incidentals necessary, but not limited to, surface preparation, priming, application, surveying layout, and installing 24-inch, white, 0.90 mil. Thermoplastic markings (Pre mark or hot tape).

Length of striping is measured from end to end of the line.

Quantity for payment will be per lineal feet placed, complete, in place for actual quantities measured in the field.

BID ITEM 55 ~ Install 8-foot Stop Legend (Thermoplastic)

This item includes providing all labor, equipment, materials, and incidentals necessary, but not limited to, installation of various symbols and words that direct traffic. Typical symbols include, but are not limited to, arrows, bicyclist, yield triangles, etc. Typical words include, but are not limited to, STOP, SCHOOL, etc. Work shall include, but not be limited to surface preparation, priming, application, surveying layout, and incidentals necessary for a complete installation.

Quantity for payment will be per each unit placed, complete, in place for actual quantities measured in the field.

BID ITEM 56 ~ Install Roadway Delineators

This item includes providing all labor, materials, equipment, tools, loading, hauling, unloading, and all incidentals necessary to complete the installation of roadway delineators at locations as shown on the plans. This item includes surface mounting of the delineators in accordance with manufacturer's specifications on a PCC surface including all labor, survey layout, materials, hardware, and all necessary appurtenances and incidentals necessary to complete the work specified.

Delineators shall be Safe-Hit Type 2 Guide Posts, surface mounted, amber reflector, yellow post, 48" height, or approved equal.

Quantity for payment will be per each unit placed, complete, in place for actual quantities measured in the field.

BID ITEM 57 ~ Install Permanent Traffic Sign

This item includes providing all labor, materials, equipment, tools, excavation, compaction, backfill, loading, hauling, unloading, and all incidentals necessary to complete the installation of signs at locations as shown on the plans. This item includes excavation of the existing materials to accommodate the installation of the sign, and disposal of the excavation materials and incidentals at a suitable facility, 4,000 psi PCC foundation, signage, sign posts, and hardware in accordance with the plans and Standard Specifications and Details and all necessary appurtenances and incidentals necessary to complete the work specified.

The per each cost for "Stop" and "Do Not Enter" sign shall include both signs mounted on a single post. The per each cost for other permanent traffic signs shall be for a single sign mounted on a single post.

Quantity for payment will be per each unit placed, complete, in place for actual quantities measured in the field.

BID ITEM 58 ~ Paint Curb

This item includes providing all labor, equipment, materials, and incidentals necessary, but not limited to surface preparation, priming and application of the designated curb paint color. Painting of the curb shall include the tops and face of the curb.

Quantity for payment will be per lineal feet placed, complete, in place for actual quantities measured in the field.

BID ITEM 59~ Force Account

A force account has been established for this project and can be included in project bid items. The Force Account will be utilized for extra work authorized by the engineer per the bid document and Standard Specification.

**TECHNICAL SPECIFICATIONS
AVENUE OF THE OAKS REALIGNMENT
BID # 21/22-005 / PWP-WA-2022-084**

Unless otherwise amended in these Technical Specifications, all materials, construction methods, etc. shall follow the Standard Specifications for Public Works Construction (Orange Book), 2012 version.

300 CLEARING AND GRUBBING

300.02.03 Protection of plants. Trimming and Root Mitigation - If existing landscaping (trees, shrubs, roots, branches, etc.) encroach into the public right-of-way and interfere with construction activity, the contractor shall notify the adjacent property owner and the City of Sparks before commencing any landscaping modifications such as pruning, trimming, or removal of landscaping. City of Sparks Assistant Public Works Manager, Mark Andersen 353-2271, shall be notified within three (3) days notice of work to be performed. The Contractor shall employ an ISA certified Arborist to perform root crown excavation/root pruning, and shall coordinate this through the Urban Forester.

300.05 Basis of payment. There shall be NO DIRECT PAYMENT for clearing and grubbing. Compensation shall be deemed included in other items of work.

301 REMOVAL OF EXISTING IMPROVEMENTS

301.02.02 Bituminous Pavement. Item shall include the removal and disposal of bituminous pavement, base rock, or native subgrade to the depth as outlined on bid item description. The Contractor is advised that steep crowns, flat crowns, offset crowns, excessive pavement depths or other variations in the existing pavement may necessitate removal of existing to depths greater than the proposed pavement section.

301.02.05 Removal and Salvage of Materials. Item shall include the removal of materials which may include plaques, manhole covers, Victorian Square logo nozzle covers, tree grates, bollards and/or light poles. The Contractor shall take every measure possible to carefully remove and protect these items for salvage and future placement by the city of Sparks. All salvaged items shall be delivered and carefully placed at one of two locations as directed by the City Project Coordinator:

701 E. Nugget Avenue, Sparks, Nevada
431 Prater Way, Sparks, Nevada

All others items including anticipated equipment in the pit of the fountain vault, cast stone pedestals and concrete, pavers shall be removed and become the property of the contractor for proper disposal.

301.04.02 Responsibility. This section to include sod, topsoil, decorative rock, and weed barrier fabric. Where lawn or landscape areas have been disturbed, contaminated or removed, the Contractor shall replace the topsoil with an imported, high quality, garden topsoil. The topsoil shall be free of debris, weeds, harmful substances, and rocks larger than ¾" in any direction. Topsoil shall meet the specifications of 200.08. Where existing lawn is disturbed it shall be repaired with sod. Grass seed will not be accepted. There will be no direct payment for sod, topsoil, decorative rock, and weed barrier fabric.

Wherever necessary in order to provide proper evacuation of water from the trench and construction area, the Contractor shall at their expense, furnish and operate all necessary pumping equipment, drainage sumps, wellpoint systems and other drainage facilities.

Existing facilities whether above or below grade shall be protected from damage by the Contractor's operations. Any damage shall be repaired to the satisfaction of the Project Representative at the Contractor's expense.

The locations of existing underground utilities shown on the drawings were determined from various sources. It is the Contractor's responsibility to determine the actual location of underground facilities as noted in the design drawings. Potholing shall be required and shall be incidental to the most appropriate bid item.

Irrigation Systems - In the event an existing irrigation system is damaged, it shall be repaired within twenty-four (24) hours; the Contractor shall provide water to the affected area until such time the irrigation is repaired to the satisfaction of the Project Coordinator. There will be no direct payment for repairing the irrigation system, or watering of the affected area if needed.

Replacement of damaged irrigation parts shall be made with the same brand name and model.

Should the Contractor neglect or fail to repair the damaged irrigation within forty-eight (48) hours then the Project Coordinator may, after written notice to the Contractor, have the deficiencies repaired and deduct the cost from the monies owed to the Contractor.

301.05 Basis of Payment. Refer to the Bid Item Clarifications for compensation for removal of some items of work for this project. For all other removal of items not specifically called out in the Bid Schedule or Bid Item Clarifications, compensation shall be deemed included in other items of work.

302 SUBGRADE PREPARATION

302.02 Preparation of Subgrade. Subgrade below PCC roadway, curb, gutter, sidewalk, pedestrian ramps, concrete pavers and/or plantmix bituminous pavement s shall be prepared by removing all 4" plus material from the surface and static rolling with a smooth drum roller.

Cold weather protection of the exposed subgrade shall be required during the duration of the project. Contractor shall be responsible to protect the exposed subgrade from freezing by use of blankets, heaters, tents, aggregate base or other means acceptable to the City Project Coordinator. At no time shall fill materials, including aggregate base be allowed to be placed on frozen subgrade materials.

302.07 Basis of payment. There shall be NO DIRECT PAYMENT for excavation and preparation of the subgrade. Compensation shall be deemed included in other items of work.

305 TRENCH EXCAVATION AND BACKFILL

305.01 Description. This item shall include furnish all materials, equipment and labor for excavating, trenching, backfilling and temporary patching of all storm drain work delineated on the Improvement Plans, in these Specifications or as directed by the Engineer.

Trenching for the NV Energy facilities being placed as part of this project shall conform to NV Energy's Volume 15, ENGINEERING & CONSTRUCTION STANDARD, Section 3, TRENCHING AND EXCAVATION.

The Contractor shall verify all inverts, sizes of connection point, confirm grades, and make exploratory excavations as required to locate all possible conflicting utilities and notify the Engineer in writing of all conflicts prior to ordering materials and prior to commencement of underground construction.

It is anticipated that storm, surface and ground or other waters will be encountered at various times during the work herein contemplated. The contractor shall be responsible for all removal of said water to facilitate the work. All costs associated with removal of groundwater including, but not limited to, bypass pumping shall not be subject to additional payment and be included in applicable pipe installation bid item. Disposal of groundwater into the storm drain system shall not be allowed. The Contractor, by submitting a Proposal, acknowledges that they have investigated the risks arising from such waters and has prepared the Proposal accordingly, and the Contractor by submitting a Proposal assumes all of said risk.

The Contractor shall conduct their operation in such a manner that storm or other waters may proceed uninterrupted along their existing street and drainage courses. Drainage of water from existing catch basins and inlets shall be maintained at all times. Diversion of water for short reaches to protect construction in progress will be permitted if public or private properties are not damaged, or in the opinion of the Engineer, are not subject to probability of damage.

If public or private property becomes damaged by flood or other waters because of the Contractor's operations, the Contractor shall repair such damage to the satisfaction of the appropriate owner at their expense. The Contractor shall obtain written permission from the applicable public agency or property owner before any diversion of water will be permitted by the Engineer.

Wherever necessary in order to provide proper evacuation of water from the trench and construction area, the Contractor shall at their expense, furnish and operate all necessary pumping equipment, drainage sumps, wellpoint systems and other drainage facilities. Discharge of pumpage shall be at points approved by the Engineer.

305.02 Maximum Length of Open Trench. Maximum length of open trench shall be 300 feet or the amount that can be excavated, pipeline installed, and backfilled within one working day, whichever is less. For work across roads (transverse cuts) the maximum length of open trench shall be 200 feet. The length of time that intersections are closed to traffic must be kept to a minimum. All vehicle travel lanes affected by construction activities shall be opened to traffic before the end of each working day except where approved by the Engineer, or specifically indicated on the construction drawings.

The trench shall be backfilled before the end of each working day. The Contractor may use steel plating over excavations to satisfy the vehicle travel lane requirements before backfill and temporary pavement placing is completed. The use of steel plates shall conform to the following requirements:

- A. Steel plating shall be flush to existing grade with cold mix applied underneath and around all edges of plate to prevent vibration and minimize noise when vehicles travel over plate.
- B. Use plate locks around the perimeter of the road plate or plates. Plate Locks should not be extended beyond the end of the road plate.
- C. The appropriate sized Plate Shims shall be placed under the road plate where there is not direct contact with the road surface giving the plate full bearing aligning Plate Shim holes with Plate Locks mounting holes as per the manufacturers' recommendations.
- D. 3/8" x 4" threaded concrete anchors with washers shall be placed through the Plate Locks and Plate Shim securing holes into the road surface.
- E. Spacing for the concrete anchors shall be at minimum intervals of 24" or less. Anchor a

minimum of 4” and a maximum of 8” from each end. Under high traffic conditions, more frequent spacing may be required to eliminate plate creep.

- F. A “non-slip” surface plate shall be used in crosswalks or high pedestrian areas.
- G. Warning signs must be appropriately placed to caution motorists.
- H. Plate lock holes shall be filled with an epoxy grout. Excessive damage to existing asphalt due to plate locks shall be repaired to the satisfaction of the Engineer.

The use of trench plates shall be coordinated through the City Project Coordinator or on-site inspector. Steel trench plates will not be allowed if snow or freezing temperatures are expected.

305.08 Bedding. The bedding materials for storm drain improvements shall conform to the requirements of Section 200.03.02 “Class A Backfill” and 200.03.04 “Class C Backfill” of the Standard Specifications. A Geotextile fabric shall be non-woven MIRAFI 180N or approved equal shall be used with Class C Backfill. It shall be placed between the backfill and the pipe zone.

Bedding materials for the NV Energy facilities being placed as part of this project shall conform to NV Energy’s Volume 15, ENGINEERING & CONSTRUCTION STANDARD, Section 3, TRENCHING AND EXCAVATION.

Bedding materials for the AT & T facilities being placed as part of this project shall conform to the requirements of Section 200.03.02 “Class A Backfill” of the Standard Specifications

In addition to the Standard Specifications, bedding material shall be placed to the limits specified in the Improvement Plans or as shown on the Standard Details. Bedding material shall be compacted to 90% of maximum dry density. Compaction by jetting will not be permitted. Bedding material required for the work day use may only be stored within the limits of the section under construction that is properly cordoned off by traffic control.

305.09 Backfill. Trench backfill material shall be aggregate base materials that conform to the requirements of Section 200.01.03 – “Crushed Aggregate Base” Type 2, Class B or Section 200.01.04 -- “Recycled Aggregate Base” Type 1 (Import) of the Standard Specifications. Crushed or pulverized asphalt concrete, not meeting these requirements, will not be acceptable as aggregate base.

Backfill materials for the NV Energy facilities being placed as part of this project shall conform to NV Energy’s Volume 15, ENGINEERING & CONSTRUCTION STANDARD, Section 3, TRENCHING AND EXCAVATION.

Backfill materials for the AT & T facilities being placed as part of this project shall conform to the requirements of Section 200.01.03 “TYPE 2, CLASS B CRUSHED AGGREGATE BASE” of the Standard Specifications

Slurry backfill shall conform to Section 207.02.02 Slurry Cement Backfill, Class A – Excavatable, 50 to 200 psi 28-day strength – of the Standard Specifications for Road and Bridge Construction, Nevada Department of Transportation, latest edition. Excavatable slurry backfill in trenches shall cure for a minimum of 24 hours prior to backfill and compaction on top of slurry.

305.20 Basis of Payment. There shall be no direct payment for trench excavation, bedding, trench backfill (native, imported and/or slurry), filter fabric and densification for the storm drain improvements. Compensation for trench excavation, bedding, trench backfill (native, imported and/or slurry), filter fabric, densification and temporary patching as specified to perform the construction operations shall be

considered as included in the linear foot price bid for the applicable storm drain main replacement bid items, and no additional compensation will be allowed the Contractor.

Compensation for trench excavation, bedding, trench backfill (native, imported and/or slurry), filter fabric (if applicable), densification and temporary patching as specified to perform the construction operations for the NV Energy, AT & T, conduit and water service placement shall be paid under the applicable bid item as outlined in the Bid Item Schedule and the Bid Item Clarifications of the project specifications.

306 STORM DRAIN CONSTRUCTION

306.01 Description. Furnish all labor, equipment, and incidentals necessary for installation of storm drain mains and laterals.

306.02 Materials. Materials shall conform to Section 203 – “Non-Pressure and Pressure Pipes”, with the following exceptions;

1. PVC solid wall storm drain pipe

Materials for PVC storm drain pipe shall conform to the Standard Specifications unless otherwise specified in these specifications. SDR-35 PVC sewer pipe shall meet the requirements of ASTM D2412, and shall meet the minimum stiffness of 46 P.S.I. as defined by the requirements of ASTM D3034 or ASTM F679 applied based on diameter. PVC pipe shall be joined by means of gasketed bell and spigot joints and shall have a home mark on the spigot end to indicate proper penetration when joint is made.

2. Pipe connections

Pipe clamps shall be stainless steel, including bolts and lugs as manufactured by JCM Industries Type 108 or approved equal. Contractor shall furnish full circle, universal clamp couplings with a minimum three-sixteenths (3/16) inch thick neoprene, grid-type gasket. Clamps shall be constructed to fit outside diameter of pipe. Minimum clamp length shall be eighteen (18) inches for replacement pipe O.D. of less than ten and three-quarters (10.75) inches. Flexible couplings shall conform to ASTM C425, as manufactured by Fernco, Series 5000 strong back RC couplings or approved equal.

3. Pipe pillows at main connections

The concrete pillow shall be Portland Cement Concrete (P.C.C.), 3,000 PSI minimum compressive strength at 28 days, minimum of six sacks of cement per cubic yard with a slump of one to four inches.

4. Mechanical service lateral connections

Push on “wye” fittings shall be used for all service lateral connections into mains 8” to 15” unless otherwise approved.

306.04 Gravity Lines. Construction of gravity lines including storm drain laterals shall conform to Standard Specifications Subsection 306. In addition to the Standard Specifications, all storm drain pipe shall be constructed with SDR-35 PVC. Storm drain pipe shall be laid from the downstream discharge point or connection point to the existing system. The new system shall be constructed so laterals are connected so that any storm runoff will drain freely. Storm drain shall be laid with the socket or collar ends of the pipe upgrade unless otherwise authorized by the Engineer. Bell and spigot ends shall be cleaned and lubricated just prior to installation. Pipe shall not be stuck past the home mark.

Fernco, Series 5000 RC couplings or approved equal may be utilized for field joining new pipe to existing

pipe at all connection locations. Connections shall be watertight. A concrete pillow shall be constructed beneath the new pipe connection for support. The pillow material shall conform to Section 306.2.3 of these Specifications. The pillow shall have a minimum coverage of six (6) inches under the pipe and extend up to the flowline of the pipes. The length shall be determined in the field by the Engineer. Contractor shall allow sufficient time for concrete pillow to cure and harden prior to backfill. Contractor shall note it is critical that the transition flowlines at pipe junctions are flush and smooth. Joints that have settled causing a vertical offset or separation at the pipe connection flowline shall be repaired at the contractor's expense.

Connections to different types of pipe shall be made by means of flanges, specified adapters, or transition fittings. Where sleeve type couplings are used, both shall be uniformly torqued in accordance with pipe manufacturer's recommendation. Foreign material shall be removed from the interior of the pipe prior to assembly.

The Contractor shall verify all inverts and make exploratory excavations (potholing) as required to locate all possible conflicting utilities and notify the Engineer in writing of all conflicts at least forty-eight (48) hours prior to commencement of any underground construction unless stated otherwise on the Construction Drawings.

The Contractor shall coordinate the relocation of existing private utilities to be performed by said private utility where shown on the improvement plans and where it is determined during construction that said relocation will be necessary due to conflicts with new facilities to be installed or constructed under this Contract.

The Contractor shall cooperate fully with all utility forces, other Contractors, and forces of other public or private agencies engaged in any type of work which may interfere with the progress of the Contractor's work. The Contractor shall schedule the work so as to minimize any interference with the hereinbefore mentioned forces.

The Contractor shall in no way interfere with the operation of existing sewers, storm drains or other pipelines, except as specified herein and shall exercise every precaution to ensure that debris and material from construction operations do not enter the sewer system. Any debris or blockage entering into the sewer or storm drain as a result of the Contractor's work shall be immediately removed at the Contractor's expense.

Testing and inspection of new installations shall conform to Section 336 of these Specifications. The replacement pipe shall not have sags and/or bellies in the main that cause pooling. Contractor shall repair or replace any section of new sewer pipe with sags/bellies at their own expense.

306.07 Pipe Abandonment Grouting Material. Grout materials shall consist of Portland Cement and Fly Ash, and/or additives. Biodegradable materials shall not be permitted in the mixture. The grout shall have a minimum penetration resistance of 100 P.S.I in 24 hours when tested in accordance with ASTM C403 and minimum compressive strength of 300 P.S.I in 28 days when tested in accordance with ASTM C495 or C109. Grout material shall have less than 1% shrinkage by volume. The viscosity shall not exceed 20 seconds in accordance with ASTM C939 unless otherwise approved by the Project Coordinator.

306.08 Basis of Payment. Refer to Bid Item Clarification.

308 AGGREGATE BASE COURSES

308.02 Materials. Material used for Aggregate Base shall be Type 2, Class B, Aggregate Base per Standard Specifications Subsection 200.01.03.

New Type 2, Class B aggregate base shall be used under concrete curb and gutter, driveway aprons, pedestrian ramps, valley gutter, alley aprons, and sidewalks. Material submitted as Recycled Asphalt Base for use under bituminous pavement shall conform to the Standard Specifications, Subsection 200.01.04, for Type 1, imported, recycled asphalt concrete base.

308.03 Placing and Spreading. Cold weather protection of all exposed aggregate base materials shall be required during the duration of the project. Contractor shall be responsible to protect the exposed aggregate base from freezing by use of blankets, or other means acceptable to the City Project Coordinator. At no time shall compaction of or concrete be placed on frozen aggregate base materials.

308.07 Basis of Payment. There shall be NO DIRECT PAYMENT for preparation and placement of aggregate base course. Compensation shall be deemed included in other items of work.

There shall be NO DIRECT PAYMENT for tack coat, curing seal and sand blotter. Compensation shall be deemed included in other items of work.

312 CONCRETE CURB, CURB AND GUTTER, TAPER CURB, CROSSWALKS, SIDEWALK, DRIVEWAY APRONS, PCC ROADWAY, PCC PAVE AREA , PCC PAVER SUBSLAB AND VALLEY GUTTER

312.01.01 Description. This work shall consist of construction of Portland Cement Concrete curb and gutter, taper curb, sidewalks, driveways, roadway, Paver sub slab and ADA accessible ramps, including supplying six inches (6") of aggregate base (four inches (4") under sidewalks) per section 308. Sections of curb and gutter shall match existing style and construct per the project plans, except as noted below:

- a. In all instances curb and gutter is being removed and replaced on an adjacent roadway the Contractor shall match the existing top of curb and maintain the flow line of the gutter. If the curb height varies, there shall be NO Direct Payment for the additional work and materials to match the existing curb section on either side of the removed item
- b. The replacement of all disturbed landscaping and irrigation, in kind, and any plantmix bituminous pavement patching shall be included in the bid price for the curb and gutter, sidewalk, and ADA accessible ramps.

312.02 Materials. Concrete for curb, curb and gutter, taper curb, sidewalk, and driveway aprons shall be Type II Portland Cement which shall have: a coarse aggregate gradation conforming to Size 67 in subsection 200.05.03 of the Standard Specifications, between 6 to 8 sacks of cement per cubic yard, a maximum of 5 gallons of water added per sack of cement, a 1 to 4-inch slump, 6 percent plus or minus 1-1/2 percent entrained air, 0.45 maximum water to cement ratio, and have a minimum 28 day compressive

strength of 4,000 psi. **Polypropylene or Cellulose fibers shall be added to the P.C.C at 1.5 LBS. per cubic yard.**

Concrete for crosswalks, PCC Roadway and PCC Pave areas shall be Type II Portland Cement which shall have: a coarse aggregate gradation conforming to Size 67 in subsection 200.05.03 of the Standard Specifications, between 6 to 8 sacks of cement per cubic yard, a maximum of 5 gallons of water added per sack of cement, a 1 to 4 inch slump, 6 percent plus or minus 1-1/2 percent entrained air, 0.45 maximum water to cement ratio, and have a minimum 28 day compressive strength of 4,000 psi. Tuf Strand SF fibers are required at a minimum dosage of 5-6 lbs/CY.

Concrete for Paver sub slab shall be Type II Portland Cement which shall have: a coarse aggregate gradation conforming to Size 67 in subsection 200.05.03 of the Standard Specifications, a 1 to 4 inch slump, 6 percent plus or minus 1-1/2 percent entrained air, and have a minimum 28 day compressive strength of 3,000 psi. . **Polypropylene or Cellulose fibers shall be added to the P.C.C at 1.5 LBS. per cubic yard..**

The ADA truncated dome warning panel shall be CASTinTACT3, Tekway Dome Tiles, ADA Solutions or Access Tile approved equal. **Color shall be yellow.**

312.03.02.02 Finishing. The base shall be placed, compacted and available for inspection prior to placement of any concrete. The base shall be well-drained and be uniformly graded below finished grade. It must be moistened to a nominal depth, densified to 95% relative compaction and free of frost at the time of placing any concrete. If necessary, the base should be dampened with water just prior to placing concrete, but there shall be no free-standing water on the base surface.

The concrete shall be placed and consolidated to fill all spaces in the forms completely and to provide a suitable surface for finishing. The concrete adjacent to the forms shall be tamped to eliminate excess voids. Water must not be sprayed on the surface to re-temper the plastic concrete for troweling. Hard steel troweling shall be minimized to avoid trowel burns.

When concrete is placed in hot, cold or windy conditions, precautions must be taken to prevent cracking resulting from excessively rapid drying or freezing at the surface. Cold weather protection shall be per recommendations of ACI 306, "Guide to Cold Weather Concreting", Latest Revision.

Expansion joints ½ wide will NOT be placed in the curb and gutter unless otherwise directed by the Project Coordinator.

Transverse expansion joints ½ inch wide will NOT be placed in the sidewalk unless otherwise directed by the Project Coordinator. New sections of sidewalk shall be doweled into the existing adjacent concrete sidewalk with a minimum of two (2) No. 4 reinforcing bars equally spaced across the width of the sidewalk. Dowels shall penetrate a minimum of 4-inches into existing concrete. Epoxy will not be required.

312.03.02.03 Curing. Immediately after finishing operations have been completed, all exposed surfaces shall be sealed by applying an impervious curing compound membrane. Within 30 minutes after form work is removed, the concrete surface covered by the form shall be coated with curing compound.

The liquid curing compound shall conform to the requirements of the Standard Specifications for Liquid Membrane-Forming Compounds for Curing Concrete meeting both ASTM C 309, Type 2, Class B and ACI 302 specifications. The application rate shall be at 200 square feet per gallon of curing agent, unless a greater rate of coverage is specified by the manufacturer. The curing compound shall be W.R. Meadows 1200-White-Concrete Curing Compound or approved equal.

The placement of bituminous pavement adjacent to concrete curbs, gutters, or alley intersections shall not be permitted until the newly placed concrete has reached eighty percent (80%) of the mix design twenty-eight (28) day design strength.

312.04 Basis of Payment. Refer to Bid Item Clarification.

320 PLANTMIX BITUMINOUS PAVEMENT

320.01 Description. This work shall consist of furnishing all materials, equipment, and labor for the preparation, mixing, hauling, placement, and compaction of plantmix bituminous pavement as shown on the plans, as specified, and/or as directed by the City Project Coordinator.

Plantmix Bituminous Pavement shall be Type 3 aggregate, 50 Blow, 3% air voids with lime per NDOT Marination Method shall be used for all asphalt hot mix for this project.

Permanent Patching as required shall be constructed to match the thickness of the contiguous pavement, but in no instance shall the patch be less than four (4) inches in depth, which will be considered as the basic unit depth for patching. The Contractor shall obtain approval from the Project Coordinator, prior to patching any required extra depth.

320.02 Composition of Mixtures Plantmix Bituminous Pavement shall be a mixture of asphalt cement and plantmix aggregate. PG64-28NV shall conform to Table –IV of Section 201.02

The Contractor shall submit a mix design for review. The mix design shall be performed in accordance with Asphalt Institute MS-2, and the Standard Specifications. The mix design shall be submitted with design curves indicating relationships between various asphalt contents and stability, unit weight, voids, voids filled, and flow. Optimum oil content shall be that which yields air voids of 3% total mix. PG64-28NV asphalt mix designs shall meet the minimum criteria specified in the Asphalt Institute's Mix Design Methods Manual MS-2, latest edition. The mix shall not be more than twelve (12) months old, and shall be stamped by a registered Professional Engineer in the State of Nevada.

The allowable variance for Bitumen content shall conform to the following tolerance range: +/- 0.50% of volume or batch weight of aggregate.

In addition to the above criteria, the mix design shall reflect a voids in mineral aggregate (VMA) value in accordance with the 1994 edition of Manual Series No. 2 (MS-2) of the Asphalt Institute.

320.03.06.01 Lime Marination. Aggregate for Plantmix Bituminous Pavement shall be Type 3 per Standard Specifications Subsection 200.02.02. The preparation of the aggregates shall be accordance to the requirements outlined in Subsection 401.03.08 – Preparation of Aggregates, of the Nevada Department of Transportation (NDOT) Standard Specification for Road and Bridge Construction, latest addition. The mineral filler shall be added as summarized in subsection 401.03.08, 1. Marination Method.

Recycled Asphalt Pavement (RAP) up to 15% will be allowed; however, all virgin aggregates will be subject to lime pre-marinating per NDOT specification.

Mineral filler shall meet the requirements outlined in ASTM D-1097 in its entirety.

320.05 03.10.01 Spreading and Compacting. Plantmix bituminous pavement may be laid in equal courses (lifts) or may be laid in one lift as long as the compacted lift thickness does not exceed four (4) inches or as directed by the Project Coordinator.

Prime coat will not be required on untreated base. Tack coat shall be applied between paving courses, as directed by the Project Coordinator.

Saw cuts that extend into the existing pavement surface that was not removed shall be filled with a crack sealant compound such as CRAFCO Poly Flex 2 or equivalent, as approved by the Project Coordinator.

320.04 Acceptance Plantmix bituminous pavement shall be evaluated based on Section 320.04, "Acceptance" of the Standard Specifications.

Mitigation may follow Section 320.04 however the Project Coordinator will consider input from the Contractor, the materials testing laboratory, and sound Project Coordinating analysis and judgment before requiring mitigation (i.e. removal and replacement, increased thickness, or surface treatment) and/or payment reduction for plantmix bituminous pavement which deviates from specified target density ranges. The Project Coordinator may, upon consideration of the specific circumstances, reduce or waive mitigation and/or pay reduction, or combine portions of mitigation and pay reduction as outlined in Specifications.

If the Project Coordinator makes a preliminary determination that mitigation, and/or pay reduction is necessary, the Contractor may submit a written request to the City for retests. The retests may be performed by the City's testing consultant, or by any other approved independent testing laboratory. The Contractor shall submit a written request to the City for the approval of the laboratory. Retests shall be undertaken at the Contractor's expense. If the result of any retest is significantly different from initial testing, an independent testing laboratory that is mutually acceptable to the City and the Contractor will perform a "referee" test. Fifty percent (50%) of the cost of the "referee" tests shall be paid by the City and fifty percent (50%) shall be paid by the Contractor. The City may elect to make full payment, and deduct the Contractor's fifty percent (50%) from progress or final payment to the Contractor. The City shall make a final determination regarding mitigation and/or pay reduction based upon the preponderance of test results, and other factors.

320.05 Basis of Payment. Refer to Bid Item Clarification.

Asphalt concrete pavement that has been determined by the Project Coordinator to have unacceptable densities, air voids, or other specification parameters shall be mitigated and/or penalized in accordance with Subsection 320.04.

324 PAINTING, PAVEMENT STRIPING, AND MARKING

324.05 Surface Preparation Refer to NDOT Silver Book, Section 632 for preparation of PCC surfaces prior to application of painted and preformed striping markings in conjunction with manufactures recommendation for preparation of PCC surfaces.

324.13 Basis of Payment. Refer to Bid Item Clarification.

SECTION 260519 - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Copper building wire.
2. Nonmetallic underground conduit with conductors, Type NUCC.
3. Connectors and splices.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Product Schedule: Indicate type, use, location, and termination locations.

1.3 INFORMATIONAL SUBMITTALS

- A. Field quality-control reports.

PART 2 - PRODUCTS

2.1 COPPER BUILDING WIRE

- A. Description: Flexible, insulated and uninsulated, drawn copper current-carrying conductor with an overall insulation layer or jacket, or both, rated 600 V or less.
- B. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 1. Alpha Wire Company.
 2. American Bare Conductor.
 3. Belden Inc.
 4. Encore Wire Corporation.
 5. General Cable; Prysmian Group North America.
 6. Service Wire Co.
 7. Southwire Company.
 8. WESCO.
- C. Standards:

1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.
 2. Conductor and Cable Marking: Comply with wire and cable marking according to UL's "Wire and Cable Marking and Application Guide."
- D. Conductors: Copper, complying with ASTM B3 for bare annealed copper and with ASTM B8 for stranded conductors.
- E. Conductor Insulation:
1. Type THWN-2: Comply with UL 83.

2.2 CONNECTORS AND SPLICES

- A. Description: Factory-fabricated connectors, splices, and lugs of size, ampacity rating, material, type, and class for application and service indicated; listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.
- B. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
1. 3M Electrical Products.
 2. ABB, Electrification Business.
 3. AFC Cable Systems; Atkore International.
 4. Hubbell Incorporated, Power Systems.
 5. Ideal Industries, Inc.
 6. ILSCO.
 7. O-Z/Gedney; Emerson Electric Co., Automation Solutions, Appleton Group.
 8. Service Wire Co.
- C. Jacketed Cable Connectors: For steel and aluminum jacketed cables, zinc die-cast with set screws, designed to connect conductors specified in this Section.
- D. Lugs: One piece, seamless, designed to terminate conductors specified in this Section.
1. Material: Copper.
 2. Type: One hole with standard barrels.
 3. Termination: Compression.

PART 3 - EXECUTION

3.1 CONDUCTOR MATERIAL APPLICATIONS

- A. Branch Circuits:
1. Copper. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.
- B. ASD Output Circuits Cable: Extra-flexible stranded for all sizes.

3.2 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

- A. Exposed Branch Circuits: Type THWN-2, single conductors in raceway.
- B. Branch Circuits Concealed in Walls and Partitions: Type THWN-2, single conductors in raceway.
- C. Branch Circuits Concealed in Concrete, below Slabs-on-Grade, and Underground: Type THWN-2, single conductors in raceway.

3.3 INSTALLATION, GENERAL

- A. Conceal cables in finished walls unless otherwise indicated.
- B. Complete raceway installation between conductor and cable termination points according to Section 260533 "Raceways and Boxes for Electrical Systems" prior to pulling conductors and cables.
- C. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.
- D. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.
- E. Install exposed cables parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.
- F. Support cables according to Section 260529 "Hangers and Supports for Electrical Systems."

3.4 CONNECTIONS

- A. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A-486B.
- B. Make splices, terminations, and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.
- C. Wiring at Outlets: Install conductor at each outlet, with at least **6 inches** of slack.

3.5 IDENTIFICATION

- A. Identify and color-code conductors and cables according to Section 260553 "Identification for Electrical Systems."

- B. Identify each spare conductor at each end with identity number and location of other end of conductor and identify as spare conductor.

3.6 SLEEVE AND SLEEVE-SEAL INSTALLATION FOR ELECTRICAL PENETRATIONS

- A. Install sleeves and sleeve seals at penetrations of exterior floor and wall assemblies. Comply with requirements in Section 260544 "Sleeves and Sleeve Seals for Electrical Raceways and Cabling."

3.7 FIELD QUALITY CONTROL

- A. Tests and Inspections:

- 1. Perform each of the following visual and electrical tests:

- a. Inspect exposed sections of conductor and cable for physical damage and correct connection according to the single-line diagram.
- b. Test bolted connections for high resistance using one of the following:
 - 1) A low-resistance ohmmeter.
 - 2) Calibrated torque wrench.
 - 3) Thermographic survey.
- c. Inspect compression-applied connectors for correct cable match and indentation.
- d. Inspect for correct identification.
- e. Inspect cable jacket and condition.
- f. Insulation-resistance test on each conductor for ground and adjacent conductors. Apply a potential of 500 V(dc) for 300 V rated cable and 1000 V(dc) for 600 V rated cable for a one-minute duration.
- g. Continuity test on each conductor and cable.
- h. Uniform resistance of parallel conductors.

- B. Cables will be considered defective if they do not pass tests and inspections.

- C. Prepare test and inspection reports to record the following:

- 1. Procedures used.
- 2. Results that comply with requirements.
- 3. Results that do not comply with requirements, and corrective action taken to achieve compliance with requirements.

END OF SECTION 260519

SECTION 260526 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

SUMMARY

Section includes grounding and bonding systems and equipment.

ACTION SUBMITTALS

Product Data: For each type of product indicated.

INFORMATIONAL SUBMITTALS

Field quality-control reports.

CLOSEOUT SUBMITTALS

Operation and Maintenance Data: For grounding to include in emergency, operation, and maintenance manuals.

PRODUCTS

SYSTEM DESCRIPTION

Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

Comply with UL 467 for grounding and bonding materials and equipment.

MANUFACTURERS

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

ABB, Electrification Business.

Advanced Lightning Technology, Ltd.

Burndy; Hubbell Incorporated, Construction and Energy.

ERICO; nVent.
Harger Lightning & Grounding.
ILSCO.
O-Z/Gedney; Emerson Electric Co., Automation Solutions, Appleton Group.
Robbins Lightning, Inc.
Siemens Industry, Inc., Energy Management Division.

CONDUCTORS

Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.

Bare Copper Conductors:

Solid Conductors: ASTM B3.

Stranded Conductors: ASTM B8.

Bonding Conductor: No. 4 or No. 6 AWG, stranded conductor.

Bonding Jumper: Copper tape, braided conductors terminated with copper ferrules; 1-5/8 inches wide and 1/16 inch thick.

CONNECTORS

Listed and labeled by an NRTL acceptable to authorities having jurisdiction for applications in which used and for specific types, sizes, and combinations of conductors and other items connected.

Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.

Cable-to-Cable Connectors: Compression type, copper or copper alloy.

Conduit Hubs: Mechanical type, terminal with threaded hub.

Ground Rod Clamps: Mechanical type, copper or copper alloy, terminal with hex head bolt.

Lay-in Lug Connector: Mechanical type, copper rated for direct burial terminal with set screw.

Straps: Solid copper lugs. Rated for 600 A.

U-Bolt Clamps: Mechanical type, copper or copper alloy, terminal listed for direct burial.

GROUNDING ELECTRODES

Ground Rods: Copper-clad steel; 3/4 inch by 10 feet.

EXECUTION

APPLICATIONS

Conductors: Install solid conductor for No. 8 AWG and smaller, and stranded conductors for No. 6 AWG and larger unless otherwise indicated.

Grounding Conductors: Green-colored insulation with continuous yellow stripe.

Conductor Terminations and Connections:

Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.

Underground Connections: Welded connectors except at test wells and as otherwise indicated.

Connections to Ground Rods at Test Wells: Bolted connectors.

Connections to Structural Steel: Welded connectors.

EQUIPMENT GROUNDING

Install insulated equipment grounding conductors with all feeders and branch circuits.

INSTALLATION

Grounding Conductors: Route along shortest and straightest paths possible unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.

Ground Rods: Drive rods until tops are 2 inches below finished floor or final grade unless otherwise indicated.

Interconnect ground rods with grounding electrode conductor below grade and as otherwise indicated. Make connections without exposing steel or damaging coating if any.

Use exothermic welds for all below-grade connections.

Bonding Straps and Jumpers: Install in locations accessible for inspection and maintenance except where routed through short lengths of conduit.

Bonding to Structure: Bond straps directly to basic structure, taking care not to penetrate any adjacent parts.

Bonding to Equipment Mounted on Vibration Isolation Hangers and Supports: Install bonding so vibration is not transmitted to rigidly mounted equipment.

Use exothermic-welded connectors for outdoor locations; if a disconnect-type connection is required, use a bolted clamp.

Connections: Make connections so possibility of galvanic action or electrolysis is minimized. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact are galvanically compatible.

Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer in order of galvanic series.

Make connections with clean, bare metal at points of contact.
Make aluminum-to-steel connections with stainless-steel separators and mechanical clamps.
Make aluminum-to-galvanized-steel connections with tin-plated copper jumpers and mechanical clamps.
Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.

FIELD QUALITY CONTROL

Tests and Inspections:

After installing grounding system but before permanent electrical circuits have been energized, test for compliance with requirements.
Inspect physical and mechanical condition. Verify tightness of accessible, bolted, electrical connections with a calibrated torque wrench according to manufacturer's written instructions.

Grounding system will be considered defective if it does not pass tests and inspections.

Prepare test and inspection reports.

Report measured ground resistances that exceed the following values:

Power and Lighting Equipment or System with Capacity of 500 kVA and Less: 10 ohms.
Power and Lighting Equipment or System with Capacity of 500 to 1000 kVA: 5 ohms.
Power and Lighting Equipment or System with Capacity More Than 1000 kVA: 3 ohms.
Manhole Grounds: **10** ohms.

Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Engineer promptly and include recommendations to reduce ground resistance.

END OF SECTION 260526

SECTION 260533 - RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS

GENERAL

SUMMARY

Section Includes:

Type EMT-SS raceways and elbows.
Type EMT-S raceways and elbows.
Type EPEC raceways and fittings.
Type ERMC-SS raceways, elbows, couplings, and nipples.
Type ERMC-S raceways, elbows, couplings, and nipples.

Type FMC-S raceways.
Type FMT raceways.
Type IMC raceways.
Type LFMC raceways.
Type LFNC raceways.
Type PVC raceways and fittings.
Fittings for conduit, tubing, and cable.
Threaded metal joint compound.
Metallic outlet boxes, device boxes, rings, and covers.
Cabinets, cutout boxes, junction boxes, pull boxes, and miscellaneous enclosures.
Cover plates for device boxes.
Hoods for outlet boxes.

Related Requirements:

Section 260519 "Low-Voltage for Electrical Power Conductors and Cables" for nonmetallic underground conduit with conductors (Type NUCC).
Section 260543 "Underground Ducts and Raceways for Electrical Systems" for exterior duct banks, manholes, and underground utility construction.

ACTION SUBMITTALS

Product Data: For the following:

Cabinets, cutout boxes, and miscellaneous enclosures.

PRODUCTS

TYPE EMT-S RACEWAYS AND ELBOWS

Steel Electrical Metal Tubing (EMT-S) and Elbows:

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

Allied Tube & Conduit; Atkore International.

Calconduit; Atkore International.

Emerson Electric Co.

Picoma; Zekelman Industries.

Republic Conduit; Nucor Corporation, Nucor Tubular Products.

Western Tube; Zekelman Industries.

Wheatland Tube; Zekelman Industries.

Applicable Standards:

Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

General Characteristics:

Reference Standards: UL 797 and UL Category Control Number FJMX.
Material: Steel.
Exterior Coating: Zinc.
Interior Coating: Zinc with organic top coating.

Options:

Minimum Trade Size: 3/4 inch.

TYPE FMT RACEWAYS

Steel Flexible Metallic Tubing (FMT):

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

Electri-Flex Company.
International Metal Hose Co.
Liquid Tight Connector Co.
Southwire Company.

Applicable Standards:

Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

General Characteristics:

Reference Standard: UL 1652 and UL Category Control Number ILJW.

Options:

Minimum Trade Size: 3/4 inch.

TYPE IMC RACEWAYS

Steel Electrical Intermediate Metal Conduit (IMC):

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

ABB, Electrification Business.
Allied Tube & Conduit; Atkore International.
Calconduit; Atkore International.
Republic Conduit; Nucor Corporation, Nucor Tubular Products.
Topaz Lighting & Electric.
Western Tube; Zekelman Industries.

Wheatland Tube; Zekelman Industries.

Applicable Standards:

Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

General Characteristics:

Reference Standard: UL 1242 and UL Category Control Number DYBY.

Exterior Coating: Zinc.

Interior Coating: Zinc with organic top coating.

Options:

Minimum Trade Size: 3/4 inch.

TYPE LFMC RACEWAYS

Steel Liquid tight Flexible Metal Conduit (LFMC-S):

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

ABB, Electrification Business.

Anaconda Sealtite; Anamet Electrical, Inc.

Electri-Flex Company.

International Metal Hose Co.

Applicable Standards:

Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

General Characteristics:

Reference Standard: UL 360 and UL Category Control Number DXHR.

Material: Steel.

Options:

Minimum Trade Size: 3/4 inch.

TYPE LFNC RACEWAYS

Layered (Type A) Liquidtight Flexible Nonmetallic Conduit (LFNC-A):

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

AFC Cable Systems; Atkore International.
Electri-Flex Company.
Topaz Lighting & Electric.

Applicable Standards:

Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

General Characteristics:

Reference Standard: UL 1660 and UL Category Control Number DXOQ, for Type A conduit with smooth seamless inner core and cover bonded together with one or more reinforcement layers between core and cover.

Options:

Minimum Trade Size: 3/4 inch.

TYPE PVC RACEWAYS AND FITTINGS

Schedule 40 Rigid PVC Conduit (PVC-40) and Fittings:

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

ABB, Electrification Business.
Calconduit; Atkore International.
JM Eagle; J-M Manufacturing Co., Inc.
NAPCO; Westlake Chemical Corp.
Opti-Com Manufacturing Network, Inc (OMNI).
Topaz Lighting & Electric.

Applicable Standards:

Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

General Characteristics:

Reference Standards: UL 651 and UL Category Control Number DZYR.
Dimensional Specifications: Schedule 40.

Options:

Minimum Trade Size: 3/4 inch.

FITTINGS FOR CONDUIT, TUBING, AND CABLE

Fittings for Type ERM C, Type IM C, Type PVC, Type EPEC, and Type RTRC Raceways:

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

ABB, Electrification Business.

Crouse-Hinds; Eaton, Electrical Sector.

EGS; Emerson Electric Co., Automation Solutions, Appleton Group.

Konkore Fittings; Atkore International.

O-Z/Gedney; Emerson Electric Co., Automation Solutions, Appleton Group.

Raco Taymac Bell; Hubbell Incorporated, Commercial and Industrial.

Southwire Company.

Topaz Lighting & Electric.

Applicable Standards:

Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

General Characteristics:

Reference Standards: UL 514B and UL Category Control Number DWTT.

Material: Steel.

Coupling Method: Raintight compression coupling with distinctive color gland nut.

Options:

Conduit Fittings for Hazardous (Classified) Locations: UL 1203.

Expansion and Deflection Fittings: UL 651 with flexible external bonding jumper.

Fittings for Type EMT Raceways:

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

ABB, Electrification Business.

Allied Tube & Conduit; Atkore International.

Calconduit; Atkore International.

Crouse-Hinds; Eaton, Electrical Sector.

EGS; Emerson Electric Co., Automation Solutions, Appleton Group.

O-Z/Gedney; Emerson Electric Co., Automation Solutions, Appleton Group.

Raco Taymac Bell; Hubbell Incorporated, Commercial and Industrial.

Southwire Company.

Topaz Lighting & Electric.

Applicable Standards:

Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

General Characteristics:

Reference Standards: UL 514B and UL Category Control Number FKAV.

Material: Steel.

Coupling Method: Raintight compression coupling with distinctive color gland nut.

Options:

Conduit Fittings for Hazardous (Classified) Locations: UL 1203.

Expansion and Deflection Fittings: UL 651 with flexible external bonding jumper.

Fittings for Type FMC Raceways:

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

American Fittings Corp. (AMFICO).

Liquid Tight Connector Co.

Southwire Company.

Applicable Standards:

Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

General Characteristics:

Reference Standards: UL 514B and UL Category Control Number ILNR.

Fittings for Type LFMC and Type LFNC Raceways:

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

Liquid Tight Connector Co.

Applicable Standards:

Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

General Characteristics:

Reference Standards: UL 514B and UL Category Control Number DXAS.

ELECTRICALLY CONDUCTIVE CORROSION-RESISTANT COMPOUNDS FOR THREADED CONDUIT

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

ABB, Electrification Business.

Applicable Standards:

Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and approved by authorities having jurisdiction for application to threaded conduit assemblies.

General Characteristics:

Reference Standards: UL 2419 and UL Category Control Number FOIZ.

METALLIC OUTLET BOXES, DEVICE BOXES, RINGS, AND COVERS

Metallic Outlet Boxes:

Description: Box having pryout openings, knockouts, threaded entries, or hubs in either the sides of the back, or both, for entrance of conduit, conduit or cable fittings, or cables, with provisions for mounting outlet box cover, but without provisions for mounting wiring device directly to box.

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

ABB, Electrification Business.

Arlington Industries, Inc.

Crouse-Hinds; Eaton, Electrical Sector.

EGS; Emerson Electric Co., Automation Solutions, Appleton Group.

Hubbell Premise Wiring; Hubbell Incorporated, Commercial and Industrial.

Killark; Hubbell Incorporated, Construction and Energy.

MonoSystems, Inc.

O-Z/Gedney; Emerson Electric Co., Automation Solutions, Appleton Group.

Pass & Seymour; Legrand North America, LLC.

Raco Taymac Bell; Hubbell Incorporated, Commercial and Industrial.

Spring City Electrical Manufacturing Company.

Topaz Lighting & Electric.

Wiring Device-Kellems; Hubbell Incorporated, Commercial and Industrial.

Applicable Standards:

Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

General Characteristics:

Reference Standards: UL 514A and UL Category Control Number QCIT.

Options:

Material: Sheet steel.

Sheet Metal Depth: Minimum 2.5 inch.

Cast-Metal Depth: Minimum 2.4 inch.

Metallic Conduit Bodies:

Description: Means for providing access to interior of conduit or tubing system through one or more removable covers at junction or terminal point. In the United States, conduit bodies are listed in accordance with outlet box requirements.

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

ABB, Electrification Business.

Crouse-Hinds; Eaton, Electrical Sector.

EGS; Emerson Electric Co., Automation Solutions, Appleton Group.

Killark; Hubbell Incorporated, Construction and Energy.

O-Z/Gedney; Emerson Electric Co., Automation Solutions, Appleton Group.

Pass & Seymour; Legrand North America, LLC.

Patriot Aluminum Products, LLC.

Plasti-Bond; Robroy Industries.

Raco Taymac Bell; Hubbell Incorporated, Commercial and Industrial.

Topaz Lighting & Electric.

Applicable Standards:

Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

General Characteristics:

Reference Standards: UL 514A and UL Category Control Number QCIT.

Metallic Device Boxes:

Description: Box with provisions for mounting wiring device directly to box.

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

ABB, Electrification Business.

Arlington Industries, Inc.

Crouse-Hinds; Eaton, Electrical Sector.

EGS; Emerson Electric Co., Automation Solutions, Appleton Group.

Hubbell Premise Wiring; Hubbell Incorporated, Commercial and Industrial.

Killark; Hubbell Incorporated, Construction and Energy.

O-Z/Gedney; Emerson Electric Co., Automation Solutions, Appleton Group.

Patriot Aluminum Products, LLC.

Plasti-Bond; Robroy Industries.

Raco Taymac Bell; Hubbell Incorporated, Commercial and Industrial.

Topaz Lighting & Electric.

Wiring Device-Kellems; Hubbell Incorporated, Commercial and Industrial.

Applicable Standards:

Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

General Characteristics:

Reference Standards: UL 514A and UL Category Control Number QCIT.

Options:

Material: Sheet steel.

Sheet Metal Depth: minimum 2.5 inch.

Cast-Metal Depth: minimum 2.4 inch.

Metallic Extension Rings:

Description: Ring intended to extend sides of outlet box or device box to increase box depth, volume, or both.

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

ABB, Electrification Business.

B-line; Eaton, Electrical Sector.

Crouse-Hinds; Eaton, Electrical Sector.

EGS; Emerson Electric Co., Automation Solutions, Appleton Group.

O-Z/Gedney; Emerson Electric Co., Automation Solutions, Appleton Group.

Pass & Seymour; Legrand North America, LLC.

Raco Taymac Bell; Hubbell Incorporated, Commercial and Industrial.

Topaz Lighting & Electric.

Wiring Device-Kellems; Hubbell Incorporated, Commercial and Industrial.

Applicable Standards:

Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

General Characteristics:

Reference Standards: UL 514A and UL Category Control Number QCIT.

CABINETS, CUTOUT BOXES, JUNCTION BOXES, PULL BOXES, AND MISCELLANEOUS ENCLOSURES

Outdoor Sheet Metal Cabinets:

Description: Enclosure provided with frame, mat, or trim in which swinging door or doors are or can be hung.

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

ABB, Electrification Business.
B-line; Eaton, Electrical Sector.
Crouse-Hinds; Eaton, Electrical Sector.
Erickson Electrical Equipment Company.
Hoffman; nVent.
Killark; Hubbell Incorporated, Construction and Energy.
Milbank Manufacturing Co.
Raco Taymac Bell; Hubbell Incorporated, Commercial and Industrial.
Robroy Enclosures; Robroy Industries.
Siemens Industry, Inc., Building Technologies Division.
Square D; Schneider Electric USA.

Applicable Standards:

Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

General Characteristics:

Reference Standards: UL Category Control Number CYIV.

Non-Environmental Characteristics: UL 50.

Environmental Characteristics: UL 50E.

Options:

Degree of Protection: Type 3R.

Outdoor Sheet Metal Junction and Pull Boxes:

Description: Box with a blank cover that serves the purpose of joining different runs of raceway or cable.

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

Adalet.
B-line; Eaton, Electrical Sector.
EGS; Emerson Electric Co., Automation Solutions, Appleton Group.
FSR Inc.
Hoffman; nVent.
Hubbell Industrial Controls; Hubbell Incorporated, Commercial and Industrial.
Milbank Manufacturing Co.
N J Sullivan Company.
O-Z/Gedney; Emerson Electric Co., Automation Solutions, Appleton Group.
Raco Taymac Bell; Hubbell Incorporated, Commercial and Industrial.
Spring City Electrical Manufacturing Company.
Square D; Schneider Electric USA.
Wiring Device-Kellems; Hubbell Incorporated, Commercial and Industrial.

Applicable Standards:

Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

General Characteristics:

Reference Standards: UL Category Control Number BGUZ.

Non-Environmental Characteristics: UL 50.

Environmental Characteristics: UL 50E.

Options:

Degree of Protection: Type 3R.

Outdoor Sheet Metal Miscellaneous Enclosures:

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

ABB, Electrification Business.

B-line; Eaton, Electrical Sector.

EGS; Emerson Electric Co., Automation Solutions, Appleton Group.

Erickson Electrical Equipment Company.

Hoffman; nVent.

Metron; Hubbell Incorporated, Commercial and Industrial.

Milbank Manufacturing Co.

N J Sullivan Company.

Square D; Schneider Electric USA.

Applicable Standards:

Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

General Characteristics:

Reference Standards:

UL 1773 and UL Category Control Number XCKT.

Non-Environmental Characteristics: UL 50.

Environmental Characteristics: UL 50E.

Options:

Degree of Protection: Type 3R.

COVER PLATES FOR DEVICES BOXES

Metallic Cover Plates for Device Boxes:

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

ABB, Electrification Business.

Arrow Hart, Wiring Devices; Eaton, Electrical Sector.

Crouse-Hinds; Eaton, Electrical Sector.

EGS; Emerson Electric Co., Automation Solutions, Appleton Group.

Hubbell Premise Wiring; Hubbell Incorporated, Commercial and Industrial.

Intermatic, Inc.

Leviton Manufacturing Co., Inc.

O-Z/Gedney; Emerson Electric Co., Automation Solutions, Appleton Group.

Panduit Corp.

Pass & Seymour; Legrand North America, LLC.

Raco Taymac Bell; Hubbell Incorporated, Commercial and Industrial.

Topaz Lighting & Electric.

Wiremold; Legrand North America, LLC.

Wiring Device-Kellems; Hubbell Incorporated, Commercial and Industrial.

Applicable Standards:

Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

General Characteristics:

Reference Standards: UL 514D and UL Category Control Numbers QCIT and QCMZ.

Wallplate-Securing Screws: Metal with head color to match wallplate finish.

Options:

Wallplate Material: Galvanized steel.

HOODS FOR OUTLET BOXES

Extra-Duty, While-in-Use Hoods for Outlet Boxes:

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

ABB, Electrification Business.

Allied Tube & Conduit; Atkore International.

Arlington Industries, Inc.

Arrow Hart, Wiring Devices; Eaton, Electrical Sector.

EGS; Emerson Electric Co., Automation Solutions, Appleton Group.

Intermatic, Inc.

Leviton Manufacturing Co., Inc.

Raco Taymac Bell; Hubbell Incorporated, Commercial and Industrial.

Applicable Standards:

Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

General Characteristics:

Reference Standards: UL 514D and UL Category Control Numbers QCIT and QCMZ.

Marked "Extra-Duty" in accordance with UL 514D.

Receptacle, hood, cover plate, gaskets, and seals comply with UL 498 Supplement SA when mated with box or enclosure complying with UL 514A, UL 514C, or UL 50E.

Mounts to box using fasteners different from wiring device.

Options:

Damp and Wet Locations: Provide gray, weatherproof, extra-duty, "while-in-use" cover.

EXECUTION

SELECTION OF RACEWAYS

Unless more stringent requirements are specified in Contract Documents or manufacturers' written instructions, comply with NFPA 70 for selection of raceways. Consult Architect for resolution of conflicting requirements.

Outdoors:

Exposed Conduit: ERM or IMC.

Concealed Conduit, Aboveground: ERM, IMC, or EMT.

Direct-Buried Conduit: PVC-40.

Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFMC.

Indoors:

Hazardous Classified Locations: ERM or IMC.

Exposed and Subject to Physical Damage: ERM or IMC.

Exposed, Not Subject to Physical Damage: ERM or IMC.

Concealed in Ceilings and Interior Walls and Partitions: EMT.

Damp or Wet Locations: ERM or IMC.

Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFMC.

Raceway Fittings: Select fittings in accordance with NEMA FB 2.10 guidelines.

ERM and IMC: Provide threaded type fittings unless otherwise indicated.

SELECTION OF BOXES AND ENCLOSURES

Unless more stringent requirements are specified in Contract Documents or manufacturers' written instructions, comply with NFPA 70 for selection of boxes and enclosures. Consult Architect for resolution of conflicting requirements.

Degree of Protection:

Outdoors:

Type 3R unless otherwise indicated.
Locations Exposed to Hosedown: Type 4.
Locations Subject to Potential Flooding: Type 6P.
Locations Aboveground Where Mechanism Must Operate When Ice Covered: Type 3S.
Locations in-Ground or Exposed to Corrosive Agents: Type 4X.
Locations in-Ground or Exposed to Corrosive Agents Where Mechanism Must Operate When Ice Covered: Type 3SX.

Indoors:

Type 1 unless otherwise indicated.

Exposed Boxes Installed Less Than 6.5 ft. Above Floor:

Provide cast-metal boxes
Provide exposed cover. Flat covers with angled mounting slots or knockouts are prohibited.

INSTALLATION OF RACEWAYS

Installation Standards:

Unless more stringent requirements are specified in Contract Documents or manufacturers' written instructions, comply with NFPA 70 for installation of raceways. Consult Architect for resolution of conflicting requirements.

Comply with NFPA 70 limitations for types of raceways allowed in specific occupancies and number of floors.

Comply with requirements in Section 260529 "Hangers and Supports for Electrical Systems" for hangers and supports.

Comply with NECA NEIS 101 for installation of steel raceways.

Comply with NECA NEIS 102 for installation of aluminum raceways.

Comply with NECA NEIS 111 for installation of nonmetallic raceways.

Install raceways square to the enclosure and terminate at enclosures without hubs with locknuts on both sides of enclosure wall. Install locknuts hand tight, plus one-quarter turn more.

Terminate threaded conduits into threaded hubs or with locknuts on inside and outside of boxes or cabinets. Install bushings on conduits up to 1-1/4 inch trade size and insulated throat metal bushings on 1-1/2 inch trade size and larger conduits terminated with locknuts.

Raceway Terminations at Locations Subject to Moisture or Vibration:

Provide insulating bushings to protect conductors, including conductors smaller than No. 4 AWG.

General Requirements for Installation of Raceways:

- Complete raceway installation before starting conductor installation.
- Provide stub-ups through floors with coupling threaded inside for plugs, set flush with finished floor. Plug coupling until conduit is extended above floor to final destination or a minimum of 2 ft. above finished floor.
- Install no more than equivalent of three 90-degree bends in conduit run. Support within 12 inch of changes in direction.
- Make bends in raceway using large-radius preformed ells except for parallel bends. Field bending must be in accordance with NFPA 70 minimum radii requirements. Provide only equipment specifically designed for material and size involved.
- Conceal conduit within finished walls, ceilings, and floors unless otherwise indicated. Install conduits parallel or perpendicular to building lines.
- Support conduit within 12 inch of enclosures to which attached.
- Install raceway sealing fittings at accessible locations in accordance with NFPA 70 and fill them with listed sealing compound. For concealed raceways, install fitting in flush steel box with blank cover plate having finish similar to that of adjacent plates or surfaces. Install raceway sealing fittings in accordance with NFPA 70.
- Install devices to seal raceway interiors at accessible locations. Locate seals so no fittings or boxes are between the seal and the following changes of environments. Seal interior of raceways at the following points:

Where conduits pass from warm to cold locations, such as boundaries of refrigerated spaces.

Conduit extending from interior to exterior of building.

Where otherwise required by NFPA 70.

- Do not install raceways or electrical items on "explosion-relief" walls or rotating equipment.
- Cut conduit perpendicular to the length. For conduits 2 inch trade size and larger, use roll cutter or a guide to make cut straight and perpendicular to the length. Ream inside of conduit to remove burrs.
- Install pull wires in empty raceways. Provide polypropylene or monofilament plastic line with not less than 200 lb tensile strength. Leave at least 12 inch of slack at both ends of pull wire. Cap underground raceways designated as spare above grade alongside raceways in use.

Requirements for Installation of Specific Raceway Types:

Types ERMC and IMC:

Threaded Conduit Joints, Exposed to Wet, Damp, Corrosive, or Outdoor Conditions:
Apply listed compound that maintains electrical conductivity to threads of raceway and fittings before making up joints. Follow compound manufacturer's written instructions.

Types FMC, LFMC, and LFNC:

Comply with NEMA RV 3. Provide a maximum of 36 of flexible conduit for equipment subject to vibration, noise transmission, or movement; and for transformers and motors.

Types PVC:

Do not install Type PVC or Type EPEC conduit where ambient temperature exceeds 122 deg F. Conductor ratings must be limited to 75 deg C except where installed in a trench outside buildings with concrete encasement, where 90 deg C conductors are permitted.

Comply with manufacturer's written instructions for solvent welding and fittings.

Raceway Fittings: Install fittings in accordance with NEMA FB 2.10 guidelines.

ERMC-S-PVC: Provide only fittings listed for use with this type of conduit. Patch and seal joints, nicks, and scrapes in PVC coating after installing conduits and fittings. Provide sealant recommended by fitting manufacturer and apply in thickness and number of coats recommended by manufacturer.

EMT: Provide compression, steel fittings. Comply with NEMA FB 2.10.

Flexible Conduit: Provide only fittings listed for use with flexible conduit type. Comply with NEMA FB 2.20.

Expansion-Joint Fittings:

Install in runs of aboveground PVC that are located where environmental temperature change may exceed 30 deg F and that have straight-run length that exceeds 25 ft. (7.6 m). Install in runs of aboveground ERMC conduit that are located where environmental temperature change may exceed 100 deg F and that have straight-run length that exceeds 100 ft..

Install type and quantity of fittings that accommodate temperature change listed for the following locations:

Outdoor Locations Not Exposed to Direct Sunlight: 125 deg F temperature change.

Outdoor Locations Exposed to Direct Sunlight: 155 deg F temperature change.

Indoor Spaces Connected with Outdoors without Physical Separation: 125 deg F temperature change.

Install fitting(s) that provide expansion and contraction for at least 0.00041 inch per foot of length of straight run per deg F of temperature change for PVC conduits. Install fitting(s) that provide expansion and contraction for at least 0.000078 inch per foot of length of straight run per deg F of temperature change for metal conduits.

Install expansion fittings at locations where conduits cross building or structure expansion joints.

Install expansion-joint fitting with position, mounting, and piston setting selected in accordance with manufacturer's written instructions for conditions at specific location at time of installation. Install conduit supports to allow for expansion movement.

Raceways Penetrating Rooms or Walls with Acoustical Requirements:

Seal raceway openings on both sides of rooms or walls with acoustically rated putty.

INSTALLATION OF BOXES AND ENCLOSURES

Provide boxes in wiring and raceway systems wherever required for pulling of wires, making connections, and mounting of devices or fixtures.

Mount boxes at heights indicated on Drawings. If mounting heights of boxes are not individually indicated, give priority to ADA requirements. Install boxes with height measured to center of box unless otherwise indicated.

Recessed Boxes in Masonry Walls: Saw-cut opening for box in center of cell of masonry block, and install box flush with surface of wall. Prepare block surfaces to provide a flat surface for a raintight connection between box and cover plate or supported equipment and box, whether installed indoors or outdoors.

Support boxes of three gangs or more from more than one side by spanning two framing members or mounting on brackets specifically designed for purpose.

Fasten junction and pull boxes to, or support from, building structure. Do not support boxes by conduits.

Do not rely on locknuts to penetrate nonconductive coatings on enclosures. Remove coatings in the locknut area prior to assembling conduit to enclosure to ensure a continuous ground path.

Boxes and Enclosures in Areas or Walls with Acoustical Requirements:

Seal openings and knockouts in back and sides of boxes and enclosures with acoustically rated putty.

Provide gaskets for wallplates and covers.

PROTECTION

Protect coatings, finishes, and cabinets from damage and deterioration.

Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.

Repair damage to PVC coatings or paint finishes with matching touchup coating recommended by manufacturer.

CLEANING

Boxes: Remove construction dust and debris from device boxes, outlet boxes, and floor-mounted enclosures before installing wallplates, covers, and hoods.

END OF SECTION 260533

SECTION 260543 - UNDERGROUND DUCTS AND RACEWAYS FOR ELECTRICAL SYSTEMS

GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

SUMMARY

Section Includes:

- Metal conduits and fittings, including GRC and PVC-coated steel conduit.
- Rigid nonmetallic duct.
- Flexible nonmetallic duct.
- Duct accessories.
- Precast concrete handholes.
- Precast manholes.

DEFINITIONS

Direct Buried: Duct or a duct bank that is buried in the ground, without any additional casing materials such as concrete.

Duct: A single duct or multiple ducts. Duct may be either installed singly or as component of a duct bank.

Duct Bank:

- Two or more ducts installed in parallel, with or without additional casing materials.
- Multiple duct banks.

GRC: Galvanized rigid (steel) conduit.

Trafficways: Locations where vehicular or pedestrian traffic is a normal course of events.

ACTION SUBMITTALS

Product Data: For each type of product.

- Include duct-bank materials, including spacers and miscellaneous components.
- Include duct, conduits, and their accessories, including elbows, end bells, bends, fittings, and solvent cement.
- Include accessories for manholes, handholes, boxes.
- Include underground-line warning tape.

Shop Drawings:

- Precast or Factory-Fabricated Underground Utility Structures:

Include plans, elevations, sections, details, attachments to other work, and accessories.
Include duct entry provisions, including locations and duct sizes.
Include reinforcement details.
Include frame and cover design and manhole chimneys.
Include grounding details.
Include dimensioned locations of cable rack inserts, pulling-in and lifting irons, and sumps.
Include joint details.

Factory-Fabricated Handholes and Boxes Other Than Precast Concrete:

Include dimensioned plans, sections, and elevations, and fabrication and installation details.
Include duct entry provisions, including locations and duct sizes.
Include cover design.
Include grounding details.
Include dimensioned locations of cable rack inserts, and pulling-in and lifting irons.

INFORMATIONAL SUBMITTALS

Product Certificates: For concrete and steel used in precast concrete manholes and handholes, as required by ASTM C858.

Source quality-control reports.

Field quality-control reports.

FIELD CONDITIONS

Interruption of Existing Electrical Service: Do not interrupt electrical service to facilities occupied by Owner or others unless permitted under the following conditions, and then only after arranging to provide temporary electrical service according to requirements indicated:

Notify Engineer no fewer than two days in advance of proposed interruption of electrical service.

Do not proceed with interruption of electrical service without Engineer's written permission.

Ground Water: Assume ground-water level is at grade level unless a lower water table is noted on Drawings.

PRODUCTS

METAL CONDUIT AND FITTINGS

GRC: Comply with ANSI C80.1 and UL 6.

Coated Steel Conduit: PVC-coated GRC or IMC.

Comply with NEMA RN 1.
Coating Thickness: 0.040 inch, minimum.

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

ABB, Electrification Business.
AFC Cable Systems; Atkore International.
Allied Tube & Conduit; Atkore International.
Anaconda Sealtite; Anamet Electrical, Inc.
Calconduit; Atkore International.
Champion Fiberglass, Inc.
Electri-Flex Company.
FSR Inc.
Korkap.
NEC, Inc.
NewBasis.
Opti-Com Manufacturing Network, Inc (OMNI).
O-Z/Gedney; Emerson Electric Co., Automation Solutions, Appleton Group.
Patriot Aluminum Products, LLC.
Perma-Cote; Robroy Industries.
Picoma; Zekelman Industries.
Plasti-Bond; Robroy Industries.
Republic Conduit; Nucor Corporation, Nucor Tubular Products.
Southwire Company.
Topaz Lighting & Electric.
Western Tube; Zekelman Industries.
Wheatland Tube; Zekelman Industries.

Listed and labeled as defined in NFPA 70, by a nationally recognized testing laboratory, and marked for intended location and application.

RIGID NONMETALLIC DUCT

Underground Plastic Utilities Duct: Type EPC-40-PVC RNC, complying with NEMA TC 2 and UL 651, with matching fittings complying with NEMA TC 3 by same manufacturer as duct.

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

ARNCO Corp.
Beck Manufacturing.
Cantex Inc.
CertainTeed LLC; Saint-Gobain North America.
Champion Fiberglass, Inc.
Condux International, Inc.
Crown Line Plastics.
ElecSys, Inc.
Electri-Flex Company.
Endot Industries Inc.

IPEX USA LLC.
Lamson & Sessions.
Manhattan/CDT.
National Pipe & Plastics.
Opti-Com Manufacturing Network, Inc (OMNI).
Spiraduct/AFC Cable Systems, Inc.

Listed and labeled as defined in NFPA 70, by a nationally recognized testing laboratory, and marked for intended location and application.

Solvents and Adhesives: As recommended by conduit manufacturer.

DUCT ACCESSORIES

Duct Spacers: Factory-fabricated, rigid, PVC interlocking spacers; sized for type and size of duct with which used and selected to provide minimum duct spacing indicated while supporting duct during concreting or backfilling.

<Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

ABB, Electrification Business.
Allied Tube & Conduit; Atkore International.
Cantex Inc.
IPEX USA LLC.
PenCell Plastics.
Underground Devices, Inc.

Underground-Line Warning Tape: Comply with requirements for underground-line warning tape specified in Section 260553 "Identification for Electrical Systems."

PRECAST CONCRETE HANDHOLES AND BOXES

Description: Factory-fabricated, reinforced-concrete, monolithically poured walls and bottom unless open-bottom enclosures are indicated. Frame and cover shall form top of enclosure and shall have load rating consistent with that of handhole or box.

<Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

Christy Concrete Products.
Jensen Precast.
Oldcastle Infrastructure Inc.; CRH Americas.
Utility Concrete Products, LLC.
Utility Vault Co.

Comply with ASTM C858 for design and manufacturing processes.

Frame and Cover: Weatherproof cast-iron frame, with cast-iron cover with recessed cover hook eyes and tamper-resistant, captive, cover-securing bolts.

Cover Finish: Nonskid finish shall have a minimum coefficient of friction of 0.50.

Cover Legend: Molded lettering, "ELECTRIC."

Configuration: Units shall be designed for flush burial and have closed bottom unless otherwise indicated.

Extensions and Slabs: Designed to mate with bottom of enclosure. Same material as enclosure.

Extension shall provide increased depth of 12 inches.

Slab: Same dimensions as bottom of enclosure and arranged to provide closure.

Joint Sealant: Asphaltic-butyl material with adhesion, cohesion, flexibility, and durability properties necessary to withstand maximum hydrostatic pressures at the installation location with the ground-water level at grade.

Knockout Panels: Precast openings in walls, arranged to match dimensions and elevations of approaching duct, plus an additional 12 inches vertically and horizontally to accommodate alignment variations.

Splayed location.

Knockout panels shall be located no less than 6 inches from interior surfaces of walls, floors, or frames and covers of handholes, but close enough to corners to facilitate racking of cables on walls.

Knockout panel opening shall have cast-in-place, welded-wire fabric reinforcement for field cutting and bending to tie in to concrete envelopes of duct.

Knockout panels shall be framed with at least two additional No. 3 steel reinforcing bars in concrete around each opening.

Knockout panels shall be 1-1/2 to 2 inches thick.

Handholes 12 inches wide by 24 inches long and larger shall have inserts for cable racks and pulling-irons installed before concrete is poured.

PRECAST MANHOLES

Description: One-piece units and units with interlocking mating sections, complete with accessories, hardware, and features.

<Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

Carder Concrete Products.

Christy Concrete Products.

Jensen Precast.

Oldcastle Infrastructure Inc.; CRH Americas.

Utility Concrete Products, LLC.

Utility Vault Co.

Comply with ASTM C858.

Structural Design Loading: Comply with requirements in "Underground Enclosure Application" Article.

Knockout Panels: Precast openings in walls, arranged to match dimensions and elevations of approaching duct, plus an additional 12 inches vertically and horizontally to accommodate alignment variations.

Splayed location.

Knockout panels shall be located no less than 6 inches from interior surfaces of walls, floors, or roofs of manholes, but close enough to corners to facilitate racking of cables on walls.

Knockout panel opening shall have cast-in-place, welded-wire fabric reinforcement for field cutting and bending to tie in to concrete envelopes of duct.

Knockout panel shall be framed with at least two additional No. 3 steel reinforcing bars in concrete around each opening.

Knockout panels shall be 1-1/2 to 2 inches thick.

Ground Rod Sleeve: Provide a 3-inch PVC sleeve in manhole floors 2 inches from the wall adjacent to, but not underneath, the duct entering the structure.

Joint Sealant: Asphaltic-butyl material with adhesion, cohesion, flexibility, and durability properties necessary to withstand maximum hydrostatic pressures at the installation location with the ground-water level at grade.

SOURCE QUALITY CONTROL

Test and inspect precast concrete utility structures according to ASTM C1037.

EXECUTION

PREPARATION

Coordinate layout and installation of duct, duct bank, manholes, handholes, and boxes with final arrangement of other utilities, site grading, and surface features as determined in the field. Notify Architect if there is a conflict between areas of excavation and existing structures or archaeological sites to remain.

Coordinate elevations of duct and duct-bank entrances into manholes, handholes, and boxes with final locations and profiles of duct and duct banks, as determined by coordination with other utilities, underground obstructions, and surface features. Revise locations and elevations as required to suit field conditions and to ensure that duct and duct bank will drain to manholes and handholes, and as approved by Architect.

UNDERGROUND DUCT APPLICATION

Duct for Electrical Branch Circuits: Type EPC-40-PVC RNC, direct-buried unless otherwise indicated.

UNDERGROUND ENCLOSURE APPLICATION

Handholes and Boxes for 600 V and Less:

Units in Roadways and Other Deliberate Traffic Paths: Precast concrete. AASHTO HB 17, H-20 structural load rating.

Units in Driveway, Parking Lot, and Off-Roadway Locations, Subject to Occasional, Nondeliberate Loading by Heavy Vehicles: Precast concrete, AASHTO HB 17, H-20 structural load rating.

Units in Sidewalk and Similar Applications with a Safety Factor for Nondeliberate Loading by Vehicles: Precast concrete, AASHTO HB 17, H-10 structural load rating.

Cover design load shall not exceed the design load of the handhole or box.

Manholes: Precast concrete.

Units Located in Roadways and Other Deliberate Traffic Paths by Heavy or Medium Vehicles: H-20 structural load rating according to AASHTO HB 17.

Units Not Located in Deliberate Traffic Paths by Heavy or Medium Vehicles: H-10 load rating according to AASHTO HB 17.

EARTHWORK

Excavation and Backfill: Comply with Section 312000 "Earth Moving," but do not use heavy-duty, hydraulic-operated, compaction equipment.

Restoration: Replace area after construction vehicle traffic in immediate area is complete.

Restore surface features at areas disturbed by excavation, and re-establish original grades unless otherwise indicated. Replace removed sod immediately after backfilling is completed.

Cut and patch existing pavement in the path of underground duct, duct bank, and underground structures according to "Cutting and Patching" Article in Section 017300 "Execution."

DUCT AND DUCT-BANK INSTALLATION

Install duct according to NEMA TCB 2.

Curves and Bends: Use 5-degree angle couplings for small changes in direction. Use manufactured long sweep bends with a minimum radius of 48 inches, both horizontally and vertically, at other locations unless otherwise indicated.

Joints: Use solvent-cemented joints in duct and fittings and make watertight according to manufacturer's written instructions. Stagger couplings so those of adjacent duct do not lie in same plane.

Sealing: Provide temporary closure at terminations of duct with pulled cables. Seal spare duct at terminations. Use sealing compound and plugs to withstand at least 15-psig (1.03-MPa) hydrostatic pressure.

Pulling Cord: Install 200-lbf- (1000-N-) test nylon cord in empty ducts.

Direct-Buried Duct and Duct Bank:

Excavate trench bottom to provide firm and uniform support for duct. Comply with requirements in Section 312000 "Earth Moving" for preparation of trench bottoms for pipes less than 6 inches in nominal diameter.

Width: Excavate trench 3 inches wider than duct on each side.

Depth: Install top of duct at least 36 inches below finished grade unless otherwise indicated.

Set elevation of bottom of duct bank below frost line.

Support ducts on duct spacers coordinated with duct size, duct spacing, and outdoor temperature.

Install manufactured GRC elbows for stub-ups, at building entrances, and at changes of direction in duct.

Couple RNC duct to GRC with adapters designed for this purpose.

After installing first tier of duct, backfill and compact. Start at tie-in point and work toward end of duct run, leaving ducts at end of run free to move with expansion and contraction as temperature changes during this process. Repeat procedure after placing each tier. After placing last tier, hand place backfill to 4 inches over duct and hand tamp. Firmly tamp backfill around ducts to provide maximum supporting strength. Use hand tamper only. After placing controlled backfill over final tier, make final duct connections at end of run and complete backfilling with normal compaction. Comply with requirements in Section 312000 "Earth Moving" for installation of backfill materials.

Place minimum 3 inches of sand as a bed for duct. Place sand to a minimum of 6 inches above top level of duct.

Underground-Line Warning Tape: Bury nonconducting underground line specified in Section 260553 "Identification for Electrical Systems" no less than 12 inches above all duct banks and approximately 12 inches below grade. Align tape parallel to and within 3 inches of centerline of duct bank. Provide an additional warning tape for each 12-inch increment of duct-bank width over a nominal 18 inches. Space additional tapes 12 inches apart, horizontally.

INSTALLATION OF CONCRETE MANHOLES, HANDHOLES, AND BOXES

Precast Concrete Handhole and Manhole Installation:

Comply with ASTM C891 unless otherwise indicated.

Install units level and plumb and with orientation and depth coordinated with connecting duct, to minimize bends and deflections required for proper entrances.

Unless otherwise indicated, support units on a level bed of crushed stone or gravel, graded from 1-inch sieve to No. 4 sieve and compacted to same density as adjacent undisturbed earth.

Elevations:

Manhole Roof: Install with rooftop at least 15 inches below finished grade.

Manhole Frame: In paved areas and trafficways, set frames flush with finished grade. Set other manhole frames 1 inch above finished grade.

Install handholes with bottom below frost line.

Handhole Covers: In paved areas and trafficways, set surface flush with finished grade. Set covers of other handholes 1 inch above finished grade.

Where indicated, cast handhole cover frame integrally with handhole structure.

Field-Installed Bolting Anchors in Manholes and Concrete Handholes: Do not drill deeper than 3-7/8 inches for manholes and 2 inches for handholes, for anchor bolts installed in the field. Use a minimum of two anchors for each cable stanchion.

GROUNDING

Ground underground ducts and utility structures according to Section 260526 "Grounding and Bonding for Electrical Systems."

FIELD QUALITY CONTROL

Perform the following tests and inspections:

Demonstrate capability and compliance with requirements on completion of installation of underground duct, duct bank, and utility structures.

Pull solid aluminum or wood test mandrel through duct to prove joint integrity and adequate bend radii, and test for out-of-round duct. Provide a minimum 12-inch- long mandrel equal to duct size minus 1/4 inch. If obstructions are indicated, remove obstructions and retest.

Test manhole grounding to ensure electrical continuity of grounding and bonding connections. Measure and report ground resistance as specified in Section 260526 "Grounding and Bonding for Electrical Systems."

Correct deficiencies and retest as specified above to demonstrate compliance.

Prepare test and inspection reports.

CLEANING

Pull leather-washer-type duct cleaner, with graduated washer sizes, through full length of duct until duct cleaner indicates that duct is clear of dirt and debris. Follow with rubber duct swab for final cleaning and to assist in spreading lubricant throughout ducts.

Clean internal surfaces of manholes, including sump.

Sweep floor, removing dirt and debris.

Remove foreign material.

END OF SECTION 260543

SECTION 260544 - SLEEVES AND SLEEVE SEALS FOR ELECTRICAL RACEWAYS AND CABLING

GENERAL

SUMMARY

Section Includes:

- Round sleeves.
- Sleeve seal systems.
- Grout.
- Pourable sealants.
- Foam sealants.

ACTION SUBMITTALS

Product Data: For each type of product.

PRODUCTS

ROUND SLEEVES

Sheet Metal Sleeves, Galvanized Steel, Round:

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

- a. Advance Products & Systems, LLC.
- b. CCI Piping Systems.
- c. Flexicraft Industries.
- d. GPT; an EnPro Industries company.

Description: Galvanized-steel sheet; thickness not less than 0.0239 inch; round tube closed with welded longitudinal joint, with tabs for screw-fastening the sleeve to the board.

SLEEVE SEAL SYSTEMS

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

1. Advance Products & Systems, Inc.
2. BWM Company.
3. CALPICO, Inc.
4. Flexicraft Industries.
5. Metraflex Company (The).
6. Pipeline Seal and Insulator, Inc.

7. Proco Products, Inc.

Description: Modular sealing device, designed for field assembly, to fill annular space between sleeve and raceway or cable or between raceway and cable.

Sealing Elements: EPDM rubber interlocking links shaped to fit surface of pipe. Include type and number required for pipe material and size of pipe.

Pressure Plates: Carbon steel.

Connecting Bolts and Nuts: Carbon steel, with corrosion-resistant coating, of length required to secure pressure plates to sealing elements.

GROUT

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

1. W.R. Meadows, Inc.

Description: Nonshrink; recommended for interior and exterior sealing openings in non-fire-rated walls or floors.

Standard: ASTM C1107/C1107M, Grade B, post-hardening and volume-adjusting, dry, hydraulic-cement grout.

Design Mix: 5000 psi, 28-day compressive strength.

Packaging: Premixed and factory packaged.

POURABLE SEALANTS

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

1. Carlisle SynTec Incorporated.
2. GAF.
3. Johns Manville; a Berkshire Hathaway company.

Description: Single-component, neutral-curing elastomeric sealants of grade indicated below.

Grade: Pourable (self-leveling) formulation for openings in floors and other horizontal surfaces that are not fire rated.

FOAM SEALANTS

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

1. Dow Chemical Company (The).
2. Innovative Chemical Products (Building Solutions Group).

Description: Multicomponent, liquid elastomers that, when mixed, expand and cure in place to produce a flexible, nonshrinking foam. Foam expansion must not damage cables or crack penetrated structure.

EXECUTION

INSTALLATION OF SLEEVES FOR NON-FIRE-RATED ELECTRICAL PENETRATIONS

Sleeves for Conduits Penetrating Above-Grade, Non-Fire-Rated, Concrete and Masonry-Unit Floors and Walls:

Interior Penetrations of Non-Fire-Rated Walls and Floors:

Seal space outside of sleeves with mortar or grout. Pack sealing material solidly between sleeve and wall or floor so no voids remain. Tool exposed surfaces smooth; protect material while curing.

Seal annular space between sleeve and raceway or cable, using joint sealant appropriate for size, depth, and location of joint.

Use pipe sleeves unless penetration arrangement requires rectangular sleeved opening.

Size pipe sleeves to provide 1/4 inch annular clear space between sleeve and raceway or cable, unless sleeve seal system is to be installed.

Install sleeves for wall penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of walls. Cut sleeves to length for mounting flush with both surfaces of walls. Deburr after cutting.

Sleeves for Conduits Penetrating Non-Fire-Rated Wall Assemblies:

Use circular metal sleeves unless penetration arrangement requires rectangular sleeved opening. Seal space outside of sleeves with approved joint compound for wall assemblies.

Aboveground, Exterior-Wall Penetrations: Seal penetrations using **cast-iron** pipe sleeves and mechanical sleeve seal systems. Size sleeves to allow for 1 inch annular clear space between pipe and sleeve for installing mechanical sleeve seals.

Underground, Exterior-Wall and Floor Penetrations:

Install steel pipe sleeves. Size sleeves to allow for 1 inch annular clear space between raceway or cable and sleeve for installing sleeve seal system. Grout sleeve into wall or floor opening.

INSTALLATION OF SLEEVE SEAL SYSTEMS

Install sleeve seal systems in sleeves in exterior concrete walls and slabs-on-grade at raceway entries into building.

Install type and number of sealing elements recommended by manufacturer for raceway or cable material and size. Position raceway or cable in center of sleeve. Assemble mechanical sleeve

seals and install in annular space between raceway or cable and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.

END OF SECTION 260544

SECTION 260548.16 - SEISMIC CONTROLS FOR ELECTRICAL SYSTEMS

GENERAL

SUMMARY

Section Includes:

- Restraints- Rigid type.
- Restraints- Cable type.
- Post-installed concrete anchors.
- Concrete inserts.

COORDINATION

Tests and Inspections:

- Schedule test with Engineer, before connecting anchorage device to restrained component (unless postconnection testing has been approved) and provide notice at least seven days in advance.
- Obtain Engineer's approval before transmitting test loads to structure. Provide temporary load-spreading members.

ACTION SUBMITTALS

Product Data: For each type of product.

- Include rated load capacity for each seismic- and wind-load-restraint device.
- Illustrate and indicate style, material, strength, fastening provision, and finish for each type and size of seismic- and wind-load-restraint component used.
- Annotate types and sizes of seismic restraints and accessories, complete with listing markings or report numbers and load rating in tension and compression as evaluated by UL product listing.
- Annotate to indicate application of each product submitted and compliance with requirements.

Delegated Design Submittal, signed and sealed by qualified structural professional engineer, for Each Seismic-Restraint Device:

- For each seismic-restraint device, including concrete anchor and insert that is required by this Section or is indicated on Drawings, submit the following:

Seismic Restraints: Select seismic restraints complying with performance requirements, design criteria, and analysis data.

Post-Installed Concrete Anchors and Inserts: Include calculations showing anticipated seismic loads. Include certification that device is approved by an NRTL for seismic reinforcement use.

Delegated Design Submittal: Signed and sealed by qualified structural professional engineer, for each wind-load protection device.

For each wind-load protection device, including concrete anchor and insert that is required by this Section or is indicated on Drawings, submit the following:

Wind-Load Restraint: Select wind-load restraints complying with performance requirements, design criteria, and analysis data.

Post-Installed Concrete Anchors and Inserts: Include calculations showing anticipated wind loads. Include certification that device is approved by an NRTL for reinforcement use.

Wind-Load Design Calculations: Submit static and dynamic loading calculations.

Product Listing, Preapproval and Evaluation Documentation: By an evaluation service member of ICC-ES, showing maximum ratings of restraint items and the basis for approval (tests or calculations).

INFORMATIONAL SUBMITTALS

Field quality-control reports.

PRODUCTS

PERFORMANCE REQUIREMENTS

Delegated Design: Engage a qualified structural professional engineer to design seismic and wind-load control system in accordance with criteria specified.

Seismic- and Wind-Load-Restraint Device Load Ratings: Devices to be tested and rated in accordance with applicable code requirements and authorities having jurisdiction. Devices to be listed by a nationally recognized third party that requires periodic follow-up inspections and has a listing directory available to the public. Provide third-party listing by one or more of the following: UL product listing.

Consequential Damage: Provide additional seismic and wind-load restraints for suspended components or anchorage of floor-, roof-, or wall-mounted components so that failure of a non-essential or essential component does not cause failure of any other essential building component.

Component Supports:

Load ratings, features, and applications of all reinforcement components must be based on testing standards of an NRTL.

RESTRAINTS - RIGID TYPE

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

1. B-line; Eaton, Electrical Sector.
2. CADDY; nVent.
3. California Dynamics Corporation.
4. Hilti, Inc.
5. Isolation Technology, Inc.
6. TOLCO.
7. Unistrut; Atkore International.
8. Vibration Mountings & Controls, Inc.

Description: Shop- or field-fabricated bracing assembly made of ANSI/AISI S110-07-S1 slotted steel channels, ANSI/ASTM A53/A53M steel pipe, or other rigid steel brace member. Includes accessories for attachment to braced component at one end and to building structure at the other end and other matching components and with corrosion-resistant coating; rated in tension, compression, and torsion forces.

RESTRAINTS - CABLE TYPE

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

1. B-line; Eaton, Electrical Sector.
2. CADDY; nVent.
3. Loos & Co.
4. Vibration Mountings & Controls, Inc.

Seismic- and Wind-Load-Restraint Cables: ASTM A1023/A1023M galvanized or ASTM A603 galvanized-steel cables. End connections made of steel assemblies with thimbles, brackets, swivel, and bolts designed for seismic-restraining cable service; with fittings attached by means of poured socket, swaged socket or mechanical (Flemish eye) loop.

Restraint cable assembly and cable fittings must comply with ASCE/SEI 19. Cable fittings and complete cable assembly must maintain the minimum cable breaking force. U-shaped cable clips and wedge-type end fittings do not comply and are unacceptable.

RESTRAINT ACCESSORIES

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

1. B-line; Eaton, Electrical Sector.
2. CADDY; nVent.
3. Hilti, Inc.
4. Loos & Co.
5. Mason Industries, Inc.
6. TOLCO.
7. Unistrut; Atkore International.

Hanger-Rod Stiffener: Steel tube or steel slotted-support-system sleeve with internally bolted connections to hanger rod. Non-metallic stiffeners are unacceptable.

Hinged and Swivel Brace Attachments: Multifunctional steel connectors for attaching hangers to rigid channel bracings and restraint cables.

Bushings for Floor-Mounted Equipment Anchor Bolts: Neoprene bushings designed for rigid equipment mountings and matched to type and size of anchor bolts and studs.

Bushing Assemblies for Wall-Mounted Equipment Anchorage: Assemblies of neoprene elements and steel sleeves designed for rigid equipment mountings and matched to type and size of attachment devices used.

Resilient Isolation Washers and Bushings: One-piece, molded, oil- and water-resistant neoprene, with a flat washer face.

POST-INSTALLED CONCRETE ANCHORS

Mechanical Anchor Bolts:

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

- a. B-line; Eaton, Electrical Sector.
- b. Hilti, Inc.
- c. Mason Industries, Inc.
- d. Powers Fasteners.
- e. Simpson Strong-Tie Co., Inc.
- f. Unistrut; Atkore International.

Drilled-in and stud-wedge or female-wedge type in zinc-coated steel for interior applications and stainless steel for exterior applications. Select anchor bolts with strength for anchor and as tested according to ASTM E488/E488M.

Adhesive Anchor Bolts:

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

- a. B-line; Eaton, Electrical Sector.
- b. Hilti, Inc.
- c. Mason Industries, Inc.
- d. Powers Fasteners.
- e. Simpson Strong-Tie Co., Inc.
- f. Unistrut; Atkore International.

Drilled-in and capsule anchor system containing PVC or urethane methacrylate-based resin and accelerator, or injected polymer or hybrid mortar adhesive. Provide anchor bolts and hardware with zinc-coated steel for interior applications and stainless steel for exterior applications. Select anchor bolts with strength required for anchor and as tested according to ASTM E488/E488M.

Provide post-installed concrete anchors that have been prequalified for use in seismic and wind-load applications.

Prequalify post-installed anchors in concrete in accordance with ACI 355.2 or other approved qualification testing procedures.

Prequalify post-installed anchors in masonry in accordance with approved qualification procedures.

CONCRETE INSERTS

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

1. B-line; Eaton, Electrical Sector.
2. Hilti, Inc.
3. Mason Industries, Inc.
4. Powers Fasteners.
5. Simpson Strong-Tie Co., Inc.
6. Unistrut; Atkore International.

Provide preset concrete inserts that are seismically prequalified in accordance with ICC-ES AC446 testing.

Comply with MSS SP-58.

EXECUTION

EXAMINATION

Examine areas and equipment to receive seismic and wind-load control devices for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

Examine roughing-in for reinforcement and cast-in-place anchors to verify actual locations before installation.

Proceed with installation only after unsatisfactory conditions have been corrected.

APPLICATIONS

Multiple Raceways or Cables: Secure raceways and cables to trapeze member with clamps approved for application by an evaluation service member of ICC-ES.

Strength of Support and Seismic-Restraint Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry static, wind-load, and seismic loads within specified loading limits.

INSTALLATION OF SEISMIC-RESTRAINT AND WIND-LOAD CONTROL DEVICES

Provide seismic-restraint and wind-load control devices for systems and equipment where indicated in Equipment Schedules or Seismic and Wind-Load Controls Schedule, where indicated on Drawings, where the Specifications indicate they are to be installed on specific equipment and systems, and where required by applicable codes.

Install equipment and devices to withstand the effects of earthquake motions and high wind events.

Coordinate location of embedded connection hardware with supported equipment attachment and mounting points and with requirements for concrete reinforcement and formwork specified in Section 033000 "Cast-in-Place Concrete."

Installation of seismic and wind-load restraints must not cause any stresses, misalignment, or change of position of equipment or conduits.

Equipment Restraints:

Install resilient bolt isolation washers on equipment anchor bolts where clearance between anchor and adjacent surface exceeds 0.125 inch.

Install seismic-restraint and wind-load-restraint devices using methods approved by an evaluation service member of ICC-ES that provides required submittals for component.

Raceway, Cable, Wireway, and Hanger Restraints:

Install resilient bolt isolation washers on equipment anchor bolts where clearance between anchor and adjacent surface exceeds 0.125 inch.

Install seismic-restraint and wind-load-restraint devices using methods approved by an evaluation service member of ICC-ES that provides required submittals for component.

Equipment and Hanger Restraints:

Install resilient, bolt-isolation washers on equipment anchor bolts where clearance between anchor and adjacent surface exceeds 0.125 inch.

Install seismic-restraint devices using methods approved by an evaluation service member of ICC-ES providing required submittals for component.

Install cables so they do not bend across edges of adjacent equipment or building structure.

Install bushing assemblies for mounting bolts for wall-mounted equipment, arranged to provide resilient media where equipment or equipment-mounting channels are attached to wall.

Attachment to Structure: If specific attachment is not indicated, anchor bracing to structure at flanges of beams, at upper truss chords of bar joists, or at concrete members.

Post-Installed Concrete Anchors:

Identify position of reinforcing steel and other embedded items prior to drilling holes for anchors. Do not damage existing reinforcing or embedded items during coring or drilling. Notify structural engineer if reinforcing steel or other embedded items are encountered

during drilling. Locate and avoid prestressed tendons, electrical and telecommunications conduit, and gas lines.

Do not drill holes in concrete or masonry until concrete, mortar, or grout has achieved full design strength.

Mechanical-Type Anchor Bolts: Protect threads from damage during anchor installation. Heavy-duty sleeve anchors must be installed with sleeve fully engaged in the structural element to which anchor is to be fastened.

Adhesive-Type Anchor Bolts: Clean holes to remove loose material and drilling dust prior to installation of adhesive. Place adhesive in holes proceeding from the bottom of the hole and progressing toward the surface in such a manner as to avoid introduction of air pockets in the adhesive.

Set anchors to manufacturer's recommended torque using a torque wrench.

Install zinc-coated steel anchors for interior and stainless-steel anchors for exterior applications.

ACCOMMODATION OF DIFFERENTIAL SEISMIC MOTION

Install flexible connections in runs of raceways, cables, and wireways, where they cross seismic joints, where adjacent sections or branches are supported by different structural elements, and where connection is terminated to equipment that is anchored to a different structural element from the one supporting them as they approach equipment.

FIELD QUALITY CONTROL

Tests and Inspections:

Provide evidence of recent calibration of test equipment by a testing agency acceptable to authorities having jurisdiction.

Test no fewer than four of each type and size of installed anchors and fasteners selected by Engineer.

Test to 90 percent of rated proof load of device.

Seismic controls will be considered defective if they do not pass tests and inspections.

Prepare test and inspection reports.

END OF SECTION 260548.16

SECTION 260553 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Labels.
 - 2. Bands and tubes.
 - 3. Tapes and stencils.
 - 4. Tags.
 - 5. Signs.
 - 6. Cable ties.
 - 7. Miscellaneous identification products.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for electrical identification products.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Comply with ASME A13.1.
- B. Comply with NFPA 70.
- C. Comply with ANSI Z535.4 for safety signs and labels.
- D. Adhesive-attached labeling materials, including label stocks, laminating adhesives, and inks used by label printers, shall comply with UL 969.
- E. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.
 - 1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

2.2 COLOR AND LEGEND REQUIREMENTS

- A. Color-Coding for Phase- and Voltage-Level Identification, 600 V or Less: Use colors listed below for ungrounded branch-circuit conductors.
 - 1. Color shall be factory applied.
 - 2. Colors for 208/120-V Circuits:
 - a. Phase A: Black.
 - b. Phase B: Red.
 - c. Phase C: Blue.
 - 3. Color for Neutral: White.
 - 4. Color for Equipment Grounds: Green.
- B. Warning Label Colors:
 - 1. Identify system voltage with black letters on an orange background.

- C. Warning labels and signs shall include, but are not limited to, the following legends:
 1. Multiple Power Source Warning: "DANGER - ELECTRICAL SHOCK HAZARD - EQUIPMENT HAS MULTIPLE POWER SOURCES."
 2. Workspace Clearance Warning: "WARNING - OSHA REGULATION - AREA IN FRONT OF ELECTRICAL EQUIPMENT MUST BE KEPT CLEAR FOR 36 INCHES."
- D. Equipment Identification Labels:
 1. Black letters on a white field.

2.3 LABELS

- A. Self-Adhesive Wraparound Labels: Preprinted, 3-mil- thick, polyester flexible label with acrylic pressure-sensitive adhesive.
 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. A'n D Cable Products.
 - b. Brady Corporation.
 - c. Brother International Corporation.
 - d. emedco.
 - e. Grafoplast Wire Markers.
 - f. Ideal Industries, Inc.
 - g. LEM Products Inc.
 - h. Marking Services, Inc.
 - i. Panduit Corp.
 - j. Seton Identification Products; a Brady Corporation company.
 2. Self-Lamination: Clear; UV-, weather- and chemical-resistant; self-laminating, protective shield over the legend. Labels sized such that the clear shield overlaps the entire printed legend.
 3. Marker for Labels:
 - a. Machine-printed, permanent, waterproof, black ink recommended by printer manufacturer.
- B. Self-Adhesive Labels: Vinyl, thermal, transfer-printed, 3-mil- thick, multicolor, weather- and UV-resistant, pressure-sensitive adhesive labels, configured for intended use and location.
 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. A'n D Cable Products.
 - b. Brady Corporation.
 - c. Brother International Corporation.
 - d. emedco.
 - e. Grafoplast Wire Markers.
 - f. HellermannTyton.
 - g. Ideal Industries, Inc.
 - h. LEM Products Inc.
 - i. Marking Services, Inc.
 - j. Panduit Corp.
 - k. Seton Identification Products; a Brady Corporation company.

2. Minimum Nominal Size:
 - a. 1-1/2 by 6 inches for raceway and conductors.
 - b. 3-1/2 by 5 inches for equipment.
 - c. As required by authorities having jurisdiction.

2.4 TAPES AND STENCILS

- A. Marker Tapes: Vinyl or vinyl-cloth, self-adhesive wraparound type, with circuit identification legend machine printed by thermal transfer or equivalent process.
 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. Carlton Industries, LP.
 - b. Champion America.
 - c. HellermannTyton.
 - d. Ideal Industries, Inc.
 - e. Marking Services, Inc.
 - f. Panduit Corp.
- B. Self-Adhesive Vinyl Tape: Colored, heavy duty, waterproof, fade resistant; not less than 3 mils thick by 1 to 2 inches wide; compounded for outdoor use.
 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. Brady Corporation.
 - b. Carlton Industries, LP.
 - c. emedco.
 - d. Marking Services, Inc.
- C. Tape and Stencil: 4-inch- wide black stripes on 10-inch centers placed diagonally over orange background and are 12 inches wide. Stop stripes at legends.
 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. Brimar Industries, Inc.
 - b. HellermannTyton.
 - c. LEM Products Inc.
 - d. Marking Services, Inc.
 - e. Seton Identification Products; a Brady Corporation company.
- D. Floor Marking Tape: 2-inch- wide, 5-mil pressure-sensitive vinyl tape, with yellow and black stripes and clear vinyl overlay.
 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. Carlton Industries, LP.
 - b. Seton Identification Products; a Brady Corporation company.
- E. Underground-Line Warning Tape:
 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. Brady Corporation.

- b. Brimar Industries, Inc.
 - c. Ideal Industries, Inc.
 - d. LEM Products Inc.
 - e. Marking Services, Inc.
 - f. Reef Industries, Inc.
 - g. Seton Identification Products; a Brady Corporation company.
2. Tape:
- a. Recommended by manufacturer for the method of installation and suitable to identify and locate underground electrical utility lines.
 - b. Printing on tape shall be permanent and shall not be damaged by burial operations.
 - c. Tape material and ink shall be chemically inert and not subject to degradation when exposed to acids, alkalis, and other destructive substances commonly found in soils.
3. Color and Printing:
- a. Comply with ANSI Z535.1, ANSI Z535.2, ANSI Z535.3, ANSI Z535.4, and ANSI Z535.5.
 - b. Inscriptions for Red-Colored Tapes: "ELECTRIC LINE, HIGH VOLTAGE".
 - c. Inscriptions for Orange-Colored Tapes: "TELEPHONE CABLE, CATV CABLE, COMMUNICATIONS CABLE, OPTICAL FIBER CABLE".
4. Tape Type I:
- a. Pigmented polyolefin, bright colored, continuous-printed on one side with the inscription of the utility, compounded for direct-burial service.
 - b. Width: 3 inches.
 - c. Thickness: 4 mils.
 - d. Weight: 18.5 lb/1000 sq. ft..
 - e. Tensile according to ASTM D882: 30 lbf and 2500 psi.
- F. Stenciled Legend: In nonfading, waterproof, black ink or paint. Minimum letter height shall be 1 inch.

2.5 TAGS

- A. Metal Tags: Brass or aluminum, 2 by 2 by 0.05 inch, with stamped legend, punched for use with self-locking cable tie fastener.
- 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. Brady Corporation.
 - b. Carlton Industries, LP.
 - c. emedco.
 - d. Marking Services, Inc.
 - e. Seton Identification Products; a Brady Corporation company.
- B. Nonmetallic Preprinted Tags: Polyethylene tags, 0.015 thick, color-coded for phase and voltage level, with factory printed permanent designations; punched for use with self-locking cable tie fastener.
- 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. Brady Corporation.

- b. Carlton Industries, LP.
- c. emedco.
- d. Marking Services, Inc.
- e. Seton Identification Products; a Brady Corporation company.

2.6 SIGNS

A. Baked-Enamel Signs:

- 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. Carlton Industries, LP.
 - b. Champion America.
 - c. emedco.
 - d. Marking Services, Inc.
- 2. Preprinted aluminum signs, high-intensity reflective, punched or drilled for fasteners, with colors, legend, and size required for application.
- 3. 1/4-inch grommets in corners for mounting.
- 4. Nominal Size: 7 by 10 inches.

B. Metal-Backed Butyrate Signs:

- 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. Brady Corporation.
 - b. Champion America.
 - c. emedco.
 - d. Marking Services, Inc.
- 2. Weather-resistant, nonfading, preprinted, cellulose-acetate butyrate signs, with 0.0396-inch galvanized-steel backing, punched and drilled for fasteners, and with colors, legend, and size required for application.
- 3. 1/4-inch grommets in corners for mounting.
- 4. Nominal Size: 10 by 14 inches.

C. Laminated Acrylic or Melamine Plastic Signs:

- 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. Brady Corporation.
 - b. Carlton Industries, LP.
 - c. emedco.
 - d. Marking Services, Inc.
- 2. Engraved legend.
- 3. Thickness:
 - a. For signs up to 20 sq. in., minimum 1/16 inch thick.
 - b. For signs larger than 20 sq. in., 1/8 inch thick.
 - c. Engraved legend with black letters on white face.
 - d. Punched or drilled for mechanical fasteners with 1/4-inch grommets in corners for mounting.

- e. Framed with mitered acrylic molding and arranged for attachment at applicable equipment.

2.7 CABLE TIES

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - 1. HellermannTyton.
 - 2. Ideal Industries, Inc.
 - 3. Marking Services, Inc.
 - 4. Panduit Corp.
- B. General-Purpose Cable Ties: Fungus inert, self-extinguishing, one piece, self-locking, and Type 6/6 nylon.
 - 1. Minimum Width: 3/16 inch.
 - 2. Tensile Strength at 73 Deg F according to ASTM D638: 12,000 psi.
 - 3. Temperature Range: Minus 40 to plus 185 deg F.
 - 4. Color: Black, except where used for color-coding.
- C. UV-Stabilized Cable Ties: Fungus inert, designed for continuous exposure to exterior sunlight, self-extinguishing, one piece, self-locking, and Type 6/6 nylon.
 - 1. Minimum Width: 3/16 inch.
 - 2. Tensile Strength at 73 Deg F according to ASTM D638: 12,000 psi.
 - 3. Temperature Range: Minus 40 to plus 185 deg F.
 - 4. Color: Black.

2.8 MISCELLANEOUS IDENTIFICATION PRODUCTS

- A. Paint: Comply with requirements in painting Sections for paint materials and application requirements. Retain paint system applicable for surface material and location (exterior or interior).
- B. Fasteners for Labels and Signs: Self-tapping, stainless-steel screws or stainless-steel machine screws with nuts and flat and lock washers.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Self-Adhesive Identification Products: Before applying electrical identification products, clean substrates of substances that could impair bond, using materials and methods recommended by manufacturer of identification product.

3.2 INSTALLATION

- A. Verify and coordinate identification names, abbreviations, colors, and other features with requirements in other Sections requiring identification applications, Drawings, Shop Drawings, manufacturer's wiring diagrams, and operation and maintenance manual. Use consistent designations throughout Project.
- B. Install identifying devices before installing acoustical ceilings and similar concealment.
- C. Verify identity of each item before installing identification products.
- D. Coordinate identification with Project Drawings, manufacturer's wiring diagrams, and operation and maintenance manual.
- E. Apply identification devices to surfaces that require finish after completing finish work.
- F. Install signs with approved legend to facilitate proper identification, operation, and maintenance of electrical systems and connected items.
- G. System Identification for Raceways and Cables under 600 V: Identification shall completely encircle cable or conduit. Place identification of two-color markings in contact, side by side.
 - 1. Secure tight to surface of conductor, cable, or raceway.
- H. Elevated Components: Increase sizes of labels, signs, and letters to those appropriate for viewing from the floor.
- I. Self-Adhesive Wraparound Labels: Secure tight to surface at a location with high visibility and accessibility.
- J. Self-Adhesive Labels:
 - 1. On each item, install unique designation label that is consistent with wiring diagrams, schedules, and operation and maintenance manual.
 - 2. Unless otherwise indicated, provide a single line of text with 1/2-inch- high letters on 1-1/2-inch- high label; where two lines of text are required, use labels 2 inches high.
- K. Snap-around Color-Coding Bands: Secure tight to surface at a location with high visibility and accessibility.
- L. Heat-Shrink, Preprinted Tubes: Secure tight to surface at a location with high visibility and accessibility.
- M. Marker Tapes: Secure tight to surface at a location with high visibility and accessibility.
- N. Self-Adhesive Vinyl Tape: Secure tight to surface at a location with high visibility and accessibility.
- O. Floor Marking Tape: Apply stripes to finished surfaces following manufacturer's written instructions.
- P. Underground Line Warning Tape:

1. During backfilling of trenches, install continuous underground-line warning tape directly above cable or raceway at 6 to 8 inches below finished grade. Use multiple tapes where width of multiple lines installed in a common trench exceeds 16 inches overall.
 2. Install underground-line warning tape for direct-buried cables and cables in raceways.
- Q. Metal Tags:
1. Place in a location with high visibility and accessibility.
 2. Secure using general-purpose cable ties.
- R. Metal-Backed Butyrate Signs:
1. Attach signs that are not self-adhesive type with mechanical fasteners appropriate to the location and substrate.
 2. Unless otherwise indicated, provide a single line of text with 1/2-inch- high letters on 1-1/2-inch- high sign; where two lines of text are required, use labels 2 inches high.
- S. Laminated Acrylic or Melamine Plastic Signs:
1. Attach signs that are not self-adhesive type with mechanical fasteners appropriate to the location and substrate.
 2. Unless otherwise indicated, provide a single line of text with 1/2-inch- high letters on 1-1/2-inch- high sign; where two lines of text are required, use labels 2 inches high.
- T. Cable Ties: General purpose, for attaching tags, except as listed below:
1. Outdoors: UV-stabilized nylon.

3.3 IDENTIFICATION SCHEDULE

- A. Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment. Install access doors or panels to provide view of identifying devices.
- B. Identify conductors, cables, and terminals in enclosures and at junctions, terminals, pull points, and locations of high visibility. Identify by system and circuit designation.
- C. Power-Circuit Conductor Identification, 600 V or Less: For conductors in vaults, pull and junction boxes, manholes, and handholes, use self-adhesive wraparound labels to identify the phase.
 1. Locate identification at changes in direction, at penetrations of walls and floors, at 50-foot maximum intervals in straight runs, and at 25-foot maximum intervals in congested areas.
- D. Locations of Underground Lines: Underground-line warning tape for power, lighting, communication, and control wiring and optical-fiber cable.
- E. Workspace Indication: Apply floor marking tape to finished surfaces. Show working clearances in the direction of access to live parts. Workspace shall comply with NFPA 70 and 29 CFR 1926.403 unless otherwise indicated.
- F. Instructional Signs: Self-adhesive labels, including the color code for grounded and ungrounded conductors.

- G. Operating Instruction Signs: Laminated acrylic or melamine plastic signs.
- H. Equipment Identification Labels:
 - 1. Outdoor Equipment: Laminated acrylic or melamine sign.
 - 2. Equipment to Be Labeled:
 - a. Enclosures and electrical cabinets.
 - b. Access doors and panels for concealed electrical items.
 - c. Enclosed switches.
 - d. Enclosed circuit breakers.
 - e. Enclosed controllers.
 - f. Push-button stations.
 - g. Contactors.

END OF SECTION 260553

SECTION 265613 - LIGHTING POLES AND STANDARDS

GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

SUMMARY

Section Includes:

Poles and accessories for support of luminaires.

DEFINITIONS

EPA: Equivalent projected area.

Luminaire: Complete luminaire.

Pole: Luminaire-supporting structure, including tower used for large-area illumination.

Standard: See "Pole."

ACTION SUBMITTALS

Product Data: For each pole, accessory, and luminaire-supporting and -lowering device, arranged as indicated.

Include data on construction details, profiles, EPA, cable entrances, materials, dimensions, weight, rated design load, and ultimate strength of individual components.
Include finishes for lighting poles and luminaire-supporting devices.
Anchor bolts.

Shop Drawings:

Include plans, elevations, sections, and mounting and attachment details.
Include details of equipment assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
Detail fabrication and assembly of poles and pole accessories.
Foundation construction details, including material descriptions, dimensions, anchor bolts, support devices, and calculations, signed and sealed by a professional engineer licensed in the state of installation.
Anchor bolt templates keyed to specific poles and certified by manufacturer.
Method and procedure of pole installation. Include manufacturer's written installations.

INFORMATIONAL SUBMITTALS

Pole and Support Component Certificates: Signed by manufacturers of poles, certifying that products are designed for indicated load requirements according to AASHTO LTS-6-M and that load imposed by luminaire and attachments has been included in design. The certification shall be based on design calculations signed and sealed by a professional engineer.

Seismic Qualification Data: For poles, accessories, and components, from manufacturer.

Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.

Dimensioned Outline Drawings of Equipment Unit: Identify center of gravity and locate and describe mounting and anchorage provisions.

Detailed description of equipment anchorage devices on which the certification is based and their installation requirements.

Material Test Reports:

For each foundation component, by a qualified testing agency.

For each pole, by a qualified testing agency.

Source quality-control reports.

Field quality-control reports.

Sample Warranty: Manufacturer's standard warranty.

Soil test reports

CLOSEOUT SUBMITTALS

Operation and Maintenance Data: For poles to include in emergency, operation, and maintenance manuals.

DELIVERY, STORAGE, AND HANDLING

Store poles on decay-resistant skids at least 12 inches above grade and vegetation. Support poles to prevent distortion and arrange to provide free air circulation.

Retain factory-applied pole wrappings on metal poles until right before pole installation. Handle poles with web fabric straps.

WARRANTY

Special Warranty: Manufacturer agrees to repair or replace components of pole(s) that fail in materials or workmanship; that corrode; or that fade, stain, perforate, erode, or chalk due to effects of weather or solar radiation within a specified warranty period. Manufacturer may exclude lightning damage, hail damage, vandalism, abuse, or unauthorized repairs from special warranty period.

Warranty Period: Five years from date of Substantial Completion.

Warranty Period for Corrosion Resistance: Five years from date of Substantial Completion.

Warranty Period for Color Retention: Five years from date of Substantial Completion.

PRODUCTS

PERFORMANCE REQUIREMENTS

Seismic Performance: Foundation and pole shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.

The term "withstand" means "the system will remain in place without separation of any parts when subjected to the seismic forces specified and the system will be fully operational after the seismic event."

Component Importance Factor: 1.0.

Structural Characteristics: Comply with AASHTO LTS-6-M.

Dead Load: Weight of luminaire and its horizontal and vertical supports, lowering devices, and supporting structure, applied according to AASHTO LTS-6-M.

Ice Load: Load of 3 lbf/sq. ft., applied according to AASHTO LTS-6-M for applicable areas on the Ice Load Map.

Wind Load: Pressure of wind on pole and luminaire, calculated and applied according to AASHTO LTS-6-M.

Basic wind speed for calculating wind load for poles 50 feet high or less is 100 mph.

Wind Importance Factor: 1.0.
Minimum Design Life: 25 years.
Velocity Conversion Factor: 1.0.

Strength Analysis: For each pole, multiply the actual EPA of luminaires and brackets by a factor of 1.1 to obtain the EPA to be used in pole selection strength analysis.

Luminaire Attachment Provisions: Comply with luminaire manufacturers' mounting requirements. Use stainless-steel fasteners and mounting bolts unless otherwise indicated.

STEEL POLES

As indicated on the drawings, to match existing poles except black finish.

Source Limitations: Obtain poles from single manufacturer or producer.

Source Limitations: For poles, obtain each color, grade, finish, type, and variety of pole from single source with resources to provide products of consistent quality in appearance and physical properties.

Poles: Comply with ASTM A500/A500M, Grade B carbon steel with a minimum yield of 46,000 psig; one-piece construction up to 40 feet in height with access handhole in pole wall.

Shape: Round, tapered.

Mounting Provisions: Butt flange for bolted mounting on foundation or breakaway support.

Pole-Top Tenons: Fabricated to support luminaire or luminaires and brackets indicated, and securely fastened to pole top.

Fasteners: Galvanized steel, size and type as determined by manufacturer. Corrosion-resistant items compatible with support components.

Materials: Compatible with poles and standards as well as the substrates to which poles and standards are fastened and shall not cause galvanic action at contact points.

Anchor Bolts, Leveling Nuts, Bolt Caps, and Washers: Hot-dip galvanized after fabrication unless otherwise indicated.

Grounding and Bonding Lugs: Welded 1/2-inch threaded lug, complying with requirements in Section 260526 "Grounding and Bonding for Electrical Systems," listed for attaching grounding and bonding conductors of type and size indicated, and accessible through handhole.

Handhole: Oval shaped, with minimum clear opening of 2-1/2 by 5 inches, with cover secured by stainless-steel captive screws.

Powder-Coat Finish: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" recommendations for applying and designating finishes.

Surface Preparation: Clean surfaces according to SSPC-SP 1 to remove dirt, oil, grease, and other contaminants that could impair powder coat bond. Grind welds and polish surfaces

to a smooth, even finish. Remove mill scale and rust, if present, from uncoated steel, according to SSPC-SP 5/NACE No. 1 or SSPC-SP 8.

Powder Coat: Comply with AAMA 2604.

Electrostatic-applied powder coating; single application and cured to a minimum 2.5- to 3.5-mils dry film thickness. Coat interior and exterior of pole for equal corrosion protection.

Color: As indicated by manufacturer's designations.

POLE ACCESSORIES

Duplex Receptacle: Ground-fault circuit interrupter type, 120 V ac, 20 A in a weatherproof assembly. Comply with requirements in Section 262726 "Wiring Devices."

Recessed, height as indicated on the drawings.

NEMA 250, Type 3R, die-cast metal enclosure with cover; color to match pole. Lockable hasp and latch complying with OSHA lockout and tag-out requirements.

Base Covers: Manufacturers' standard metal units, finished same as pole, and arranged to cover pole's mounting bolts and nuts. To match existing poles.

Decorative accessories, supplied by decorative pole manufacturer, include the following:

Banner Arms: To match existing poles.

MOUNTING HARDWARE

Anchor Bolts: Manufactured to ASTM F1554, Grade 55, with a minimum yield strength of 55,000 psi.

Galvanizing: Hot dip galvanized according to ASTM A153, Class C.
Bent rods per manufacturer for length.
Threading: Uniform National Coarse, Class 2A.

Nuts: ASTM A563, Grade A, Heavy-Hex.

Galvanizing: Hot dip galvanized according to ASTM A153, Class C.
Two nuts provided per anchor bolt, shipped with nuts pre-assembled to the anchor bolts.

Washers: ASTM F436, Type 1.

Galvanizing: Hot dip galvanized according to ASTM A153, Class C.
One washer(s) provided per anchor bolt.

GENERAL FINISH REQUIREMENTS

Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

Appearance of Finished Work: Noticeable variations in same piece are unacceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

EXECUTION

EXAMINATION

Examine areas and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

Examine poles, luminaire-mounting devices, and pole accessories before installation. Components that are scratched, dented, marred, wet, moisture damaged, or visibly damaged are considered defective.

Examine roughing-in for foundation and conduit to verify actual locations of installation.

Proceed with installation only after unsatisfactory conditions have been corrected.

POLE FOUNDATION

Concrete Pole Foundations: Cast in place, with anchor bolts to match pole-base flange. Structural steel complying with ASTM A36/A36M and hot-dip galvanized according to ASTM A123/A123M; and with top-plate and mounting bolts to match pole-base flange and strength required to support pole, luminaire, and accessories. Concrete, reinforcement, and formwork are specified in Section 033000 "Cast-in-Place Concrete."

Anchor Bolts: Install plumb using manufacturer-supplied plywood template, uniformly spaced.

POLE INSTALLATION

Alignment: Align pole foundations and poles for optimum directional alignment of luminaires and their mounting provisions on pole.

Concrete Pole Foundations: Set anchor bolts according to anchor-bolt templates furnished by pole manufacturer. Concrete materials, installation, and finishing requirements are specified in Section 033000 "Cast-in-Place Concrete."

Foundation-Mounted Poles: Mount pole with leveling nuts and tighten top nuts to torque level according to pole manufacturer's written instructions.

Use anchor bolts and nuts selected to resist seismic forces defined for the application and approved by manufacturer.

Grout void between pole base and foundation. Use nonshrink or expanding concrete grout firmly packed to fill space.

Install base covers unless otherwise indicated.

Raise and set pole using web fabric slings (not chain or cable) at locations indicated by manufacturer.

CORROSION PREVENTION

Steel Conduits: Comply with requirements in Section 260533 "Raceways and Boxes for Electrical Systems." In concrete foundations, wrap conduit with 0.010-inch- thick, pipe-wrapping plastic tape applied with a 50-percent overlap.

GROUNDING

Ground Metal Poles and Support Structures: Comply with requirements in Section 260526 "Grounding and Bonding for Electrical Systems."

Install grounding conductor pigtail in the base for connecting luminaire to grounding system.

IDENTIFICATION

Identify system components, wiring, cabling, and terminals. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

FIELD QUALITY CONTROL

Special Inspections:

Inspect poles for nicks, mars, dents, scratches, and other damage.
System function tests.

END OF SECTION 265613

SECTION 265619 - LED EXTERIOR LIGHTING

GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

SUMMARY

Section Includes:

Luminaire types.
Materials.
Finishes.
Luminaire support components.

Related Requirements:

Section 265613 "Lighting Poles and Standards" for poles and standards used to support exterior lighting equipment.

DEFINITIONS

CCT: Correlated color temperature.

CRI: Color rendering index.

Fixture: See "Luminaire."

IP: International Protection or Ingress Protection Rating.

Lumen: Measured output of lamp and luminaire, or both.

Luminaire: Complete lighting unit, including lamp, reflector, and housing.

ACTION SUBMITTALS

Product Data: For each type of luminaire.

Arrange in order of luminaire designation.

Include data on features, accessories, and finishes.

Include physical description and dimensions of luminaire.

Lamps, include life, output (lumens, CCT, and CRI), and energy-efficiency data.

Photometric data and adjustment factors based on laboratory tests, complying with IES Lighting Measurements Testing and Calculation Guides, of each luminaire type. The adjustment factors shall be for lamps and accessories identical to those indicated for the luminaire as applied in this Project.

Manufacturer's Certified Data: Photometric data certified by manufacturer's laboratory with a current accreditation under the NVLAP for Energy Efficient Lighting Products.

Testing Agency Certified Data: For indicated luminaires, photometric data certified by a qualified independent testing agency. Photometric data for remaining luminaires shall be certified by manufacturer.

Wiring diagrams for power, control, and signal wiring.

Means of attaching luminaires to supports and indication that the attachment is suitable for components involved.

Product Schedule: For luminaires and lamps. Use same designations indicated on Drawings.

INFORMATIONAL SUBMITTALS

Seismic Qualification Data: For luminaires, accessories, and components, from manufacturer.

Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.

Dimensioned Outline Drawings of Equipment Unit: Identify center of gravity and locate and describe mounting and anchorage provisions.

Detailed description of equipment anchorage devices on which the certification is based and their installation requirements.

Product Certificates: For each type of the following:

Luminaire.

Product Test Reports: For each luminaire, for tests performed by manufacturer and witnessed by a qualified testing agency.

Source quality-control reports.

Sample warranty.

CLOSEOUT SUBMITTALS

Operation and Maintenance Data: For luminaires to include in operation and maintenance manuals.

Provide a list of all lamp types used on Project. Use ANSI and manufacturers' codes.

QUALITY ASSURANCE

Luminaire Photometric Data Testing Laboratory Qualifications:

Luminaire manufacturers' laboratory that is accredited under the NVLAP for Energy Efficient Lighting Products.

Provide luminaires from a single manufacturer for each luminaire type.

Each luminaire type shall be binned within a three-step MacAdam Ellipse to ensure color consistency among luminaires.

DELIVERY, STORAGE, AND HANDLING

Protect finishes of exposed surfaces by applying a strippable, temporary protective covering prior to shipping.

FIELD CONDITIONS

Verify existing and proposed utility structures prior to the start of work associated with luminaire installation.

Mark locations of exterior luminaires for approval by Engineer prior to the start of luminaire installation.

WARRANTY

Warranty: Manufacturer and Installer agree to repair or replace components of luminaires that fail in materials or workmanship within specified warranty period.

Failures include, but are not limited to, the following:

- Structural failures, including luminaire support components.
- Faulty operation of luminaires and accessories.
- Deterioration of metals, metal finishes, and other materials beyond normal weathering.

Warranty Period: 1 year from date of Substantial Completion.

PRODUCTS

PERFORMANCE REQUIREMENTS

Seismic Performance:

Luminaires shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.

Luminaires and lamps shall be labeled vibration and shock resistant.

The term "withstand" means "the luminaire will remain in place without separation of any parts when subjected to the seismic forces specified and the luminaire will be fully operational during and after the seismic event."

LUMINAIRE REQUIREMENTS

Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

NRTL Compliance: Luminaires shall be listed and labeled for indicated class and division of hazard by an NRTL.

UL Compliance: Comply with UL 1598 and listed for wet location.

Lamp base complying with ANSI C81.61 or IEC 60061-1.

Bulb shape complying with ANSI C79.1.

CRI of minimum 80. CCT of 5000 K.

L70 lamp life of 50,000 hours.

Internal driver.

Nominal Operating Voltage: 240 V ac.

In-line Fusing: Separate in-line fuse for each luminaire.

Lamp Rating: Lamp marked for outdoor use and in enclosed locations.

Source Limitations:

For luminaires, obtain each color, grade, finish, type, and variety of luminaire from single source with resources to provide products of consistent quality in appearance and physical properties.

LUMINAIRE TYPES

Decorative Post Top:

As noted on fixture schedule, to match existing units.

Luminaire-Mounting Height: As noted on drawings.

Mounting Type: Tenon.

Distribution: As noted on drawings.

Diffusers and Globes: Frosted polycarbonate.

Housings:

Extruded-aluminum housing and heat sink.

Black powder-coat finish.

MATERIALS

Metal Parts: Free of burrs and sharp corners and edges.

Sheet Metal Components: Epoxy-coated steel. Form and support to prevent warping and sagging.

Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed to permit relamping without use of tools. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during relamping and when secured in operating position. Doors shall be removable for cleaning or replacing lenses.

Diffusers and Globes:

Two-piece seamless Frosted Polycarbonate.

Lens and Refractor Gaskets: Use heat- and aging-resistant resilient gaskets to seal and cushion lenses and refractors in luminaire doors.

Reflecting surfaces shall have minimum reflectance as follows unless otherwise indicated:

White Surfaces: 85 percent.

Specular Surfaces: 83 percent.

Diffusing Specular Surfaces: 75 percent.

Housings:

Rigidly formed, weather- and light-tight enclosure that will not warp, sag, or deform in use.

Provide filter/breather for enclosed luminaires.

Factory-Applied Labels: Comply with UL 1598. Include recommended lamps. Labels shall be located where they will be readily visible to service personnel, but not seen from normal viewing angles when lamps are in place.

Label shall include the following lamp characteristics:

"USE ONLY" and include specific lamp type.
Lamp diameter, shape, size, wattage, and coating.
CCT and CRI for all luminaires.

FINISHES

Variations in Finishes: Noticeable variations in same piece are unacceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

Luminaire Finish: Manufacturer's standard paint applied to factory-assembled and -tested luminaire before shipping. Where indicated, match finish process and color of pole or support materials.

Factory-Applied Finish for Aluminum Luminaires: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.

Natural Satin Finish: Provide fine, directional, medium satin polish (AA-M32); buff complying with AA-M20 requirements; and seal aluminum surfaces with clear, hard-coat wax.

Class I, Color-Anodic Finish: AA-M32C22A42/A44 (Mechanical Finish: Medium satin; Chemical Finish: Etched, medium matte; Anodic Coating: Architectural Class I, integrally colored or electrolytically deposited color coating 0.018 mm or thicker), complying with AAMA 611.

Color: Black.

LUMINAIRE SUPPORT COMPONENTS

Comply with requirements in Section 260529 "Hangers and Supports for Electrical Systems" for channel and angle iron supports and nonmetallic channel and angle supports.

EXECUTION

EXAMINATION

Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

Examine roughing-in for luminaire electrical conduit to verify actual locations of conduit connections before luminaire installation.

Proceed with installation only after unsatisfactory conditions have been corrected.

GENERAL INSTALLATION REQUIREMENTS

Comply with NECA 1.

Use fastening methods and materials selected to resist seismic forces defined for the application and approved by manufacturer.

Install lamps in each luminaire.

Fasten luminaire to structural support.

Supports:

Sized and rated for luminaire weight.

Able to maintain luminaire position after cleaning and relamping.

Support luminaires without causing deflection of finished surface.

Luminaire-mounting devices shall be capable of supporting a horizontal force of 100 percent of luminaire weight and a vertical force of 400 percent of luminaire weight.

Wiring Method: Install cables in raceways. Conceal raceways and cables.

Install luminaires level, plumb, and square with finished grade unless otherwise indicated.

Coordinate layout and installation of luminaires with other construction.

Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables" and Section 260533 "Raceways and Boxes for Electrical Systems" for wiring connections and wiring methods.

CORROSION PREVENTION

Aluminum: Do not use in contact with earth or concrete. When in direct contact with a dissimilar metal, protect aluminum by insulating fittings or treatment.

Steel Conduits: Comply with Section 260533 "Raceways and Boxes for Electrical Systems." In concrete foundations, wrap conduit with 0.010-inch- thick, pipe-wrapping plastic tape applied with a 50 percent overlap.

IDENTIFICATION

Identify system components, wiring, cabling, and terminals. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

FIELD QUALITY CONTROL

Inspect each installed luminaire for damage. Replace damaged luminaires and components.

Perform the following tests and inspections with the assistance of a factory-authorized service representative:

Operational Test: After installing luminaires, switches, and accessories, and after electrical circuitry has been energized, test units to confirm proper operation.
Verify operation of photoelectric controls.

Illumination Tests:

Measure light intensities at night. Use photometers with calibration referenced to NIST standards. Comply with the following IES testing guide(s):

IES LM-5.
IES LM-50.
IES LM-52.
IES LM-64.
IES LM-72.

Operational Test: After installing luminaires, switches, and accessories, and after electrical circuitry has been energized, test units to confirm proper operation.

Luminaire will be considered defective if it does not pass tests and inspections.

Prepare a written report of tests, inspections, observations, and verifications indicating and interpreting results. If adjustments are made to lighting system, retest to demonstrate compliance with standards.

DEMONSTRATION

Train Owner's maintenance personnel to adjust, operate, and maintain luminaires.

END OF SECTION 265619

Basis of Payment. Refer to Bid Item Clarification.

333 LANDSCAPING

333.03 Site Preparation Elevation differences from existing back of sidewalk and landscaping will occur. The contractor will be required to repair this area to the satisfaction of the city and property owner. Elevations may vary however the maximum it will vary is +/- .15 of a foot. Turf patches will be a minimum of 18" wide. Maintenance of the new sod shall be the responsibility of the homeowner. Special care should be noted where sprinkler system are in place, damage and adjustment of these areas will be required.

333.18 Basis of Payment. Refer to Bid Item Clarification.

335 CLEANUP

335.01 Description. This work shall consist of furnishing all materials, equipment, and labor for the cleanup of construction areas as specified and/or as directed by the Project Coordinator. In addition, all requirements of the Washoe County District Health Department for the Dust Control Permit and NDEP's Stormwater Pollution Prevention Plan shall be complied with at all times during the work.

335.03 Pavement Surfaces. A power sweeper and/or water truck shall be used to clean the roadway section. A power broom will not be an acceptable means of cleaning the site. Throughout all phases of construction, including suspension of work, and until final acceptance of the project, the Contractor shall keep the work site clean and free from rubbish and debris.

The Contractor shall also abate dust nuisance by cleaning, sweeping and sprinkling with water, or other means necessary. The use of water resulting in mud on public streets will not be permitted as a substitute for sweeping or other methods.

Care shall be taken to prevent spillage and tracking on haul routes. Any such spillage and tracking shall be removed immediately and the area cleaned. There shall be no additional compensation for cleanup and maintenance of the site or for cleanup of spillage and tracking on haul routes.

All debris from any affected manholes and catch basins shall be removed at the time of the disturbance.

336 INSPECTION AND TESTING

336.01 Description. The City of Sparks reserves the right to eliminate the requirement for individuals performing acceptance or field testing and sampling to be certified in accordance with the Nevada Alliance for Quality Transportation Construction (NAQTC). This determination will be made prior to issuance of Contract Documents, and will be noted accordingly.

336.02 Control of Materials. ASTM D 2922, Nuclear Gauge Method, shall be included in the approved test methods for testing soils and aggregates. ASTM D 2950, Nuclear Gauge Method, shall be included in the approved methods for testing asphalt concrete.

Asphalt concrete material sampling for testing purposes may be taken at the batch plant as well as in the paving mat area immediately after the paving machine, as directed by the Project Coordinator.

The Contractor is advised that if the paving material does not meet project specifications, the Project Coordinator may apply a deduct to the contract price for said work in accordance with Subsection 320.07 of the Standard Specifications.

The Contractor shall be back charged for the cost of all tests that fail.

349 TRAFFIC CONTROL

349.01 Description. This work shall consist of furnishing all materials, equipment and labor to maintain proper traffic routing, parking control, access to all residences and businesses, and public safety for the duration of the project. All construction traffic control plans shall conform to the latest editions of either the NDOT Work Zone Traffic Control Handbook or Part VI of the MUTCD. All signs and barricades shall conform to Section 332 of the Standard Specifications, these Special Provisions, Construction Plans, Part VI of the MUTCD, and/or said Handbook, where applicable.

Flag persons shall be used during working hours to control traffic flows in accordance with the NDOT Work Zone Traffic Control Handbook and as directed by the Project Coordinator.

Traffic control signs shall include the names of the streets involved for detour or closure.

“Road Construction Ahead” signs shall be replaced with either the Road Work Ahead sign (W20-1). No “Road Construction Ahead” signs shall be allowed on the project.

All streets shall be open for normal traffic movement during night time and weekend periods, unless previously approved by the City Engineer. The closure of any two adjacent parallel streets at the same time is prohibited. A street will be considered closed to through traffic if it is barricaded, or a closed sign is posted on any portion of the street, including intersections of crossing streets.

The storage of construction materials within the public streets and alleys during nighttime and weekend periods is prohibited.

A minimum of two (2) working days written notification shall be given to adjacent residents, businesses, Police and Fire Departments, paramedic/ambulance services, Waste Management, and the Project Coordinator, of planned street closures and when parking restrictions are required. Where work is being performed along Citifare bus routes, the Regional Transportation Commission shall also be notified in similar fashion. Such notification shall be made separately for each work site and shall be made each time work commences at that site when operations are intermittent. This notification shall state the date work will commence and the hours and days to be worked. When construction will necessitate traffic control affecting access to any hospital, forty-eight (48) hours notification and coordination will be given in person mutually by the Contractor and the Project Coordinator.

The Police Department will not enforce parking restrictions indiscriminately applied. A "No Parking" notification, supplied by the contractor, shall be applied only as and when needed, and shall be removed unless absolutely necessary.

The Contractor shall submit a Project Work Schedule and a detailed Traffic Control plan to the Project Coordinator five (5) working days prior to the pre-construction conference. Prior to the start of construction the Contractor must have a Traffic Control plan approved by the Project Coordinator.

Any signs, barricades, or barriers which are necessary for night time hours or poor visibility shall utilize warning lights as specified in the latest editions of either the NDOT Work Zone Traffic Control Handbook or Part VI of the MUTCD.

The Contractor shall coordinate Traffic Control with the Sparks Police Department with respect to any special events that may be affected by construction activities.

The Contractor shall notify Sparks Dispatch (353-2231) 24 hours prior to any scheduled detour.

The Contractor shall be responsible for Traffic Control until such time as any street markings eradicated by the work are replaced with permanent markings. The Contractor shall be required to provide and install any temporary pavement markings as required and these shall conform to spacing and other requirements as established by the City.

The approval by the Project Coordinator of the submitted Traffic Control Plan shall in no way relieve the Contractor of his responsibility for safety requirements conforming to Section 22 of the Special

Provisions. Failure to comply with any specification herein or with direction from the Project Coordinator may result in a stoppage of work until compliance is restored.

349.04 Measurement of Quantities and Basis of Payment. There shall be NO DIRECT PAYMENT for Traffic Control. Compensation shall be deemed included in other items of work.

APPENDIX A

Existing Equipment Located in the Fountain Vault (Pictures)



Existing Equipment Located in the Fountain Vault



Existing Equipment Located in the Fountain Vault



Existing Equipment Located in the Fountain Vault



Existing Equipment Located in the Fountain Vault

Apprenticeship Utilization Act Information and Forms

APPRENTICESHIP UTILIZATION ACT

BACKGROUND

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

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

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

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

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

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

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

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

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

Determination of Availability of Apprentices

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

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

Waiver Requests

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

Contract Award

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

Post-Award Requests

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

Sample Forms

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

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

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

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

STEVE SISOLAK
Governor

TERRY REYNOLDS
Director

SHANNON M. CHAMBERS
Labor Commissioner

STATE OF NEVADA



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Department of Business & Industry

OFFICE OF THE LABOR COMMISSIONER

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

Senate Bill 207 – Apprenticeship Utilization Act becomes effective January 1, 2020
<https://www.leg.state.nv.us/App/NELIS/REL/80th2019/Bill/6351/Text>

APPRENTICE VERIFICATION PROCESS

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

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

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

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

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

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

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

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

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Department of Business & Industry

OFFICE OF THE LABOR COMMISSIONER

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

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

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

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

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

CITY OF SPARKS

Project Workforce Checklist

For Compliance with the Nevada Apprenticeship Utilization Act, 2019

Project: _____ Contractor: _____

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

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

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

Signed: _____

Name and Title: _____

Date: _____

Contractor Name: _____

STATE OF NEVADA
Office of the Labor Commissioner

REQUEST FOR APPRENTICE AVAILABILITY ON A PUBLIC WORK

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

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

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

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

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

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

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

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

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

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

Request Approved: Request Denied:

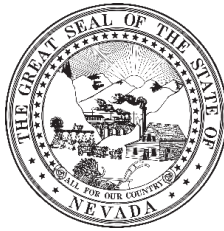
Notes: _____

 Print Name/Title _____ Signature ____/____/____ Date
 Date Received: _____ Date Returned: _____

**Governor's Office of Workforce
Innovation (OWINN)**

Main Phone # 702-486-8080

When completed, email to:
NVApprenticeship@gov.nv.gov



**REQUEST FOR NEVADA
REGISTERED APPRENTICE
VERIFICATION**

Name of requesting contractor/awarding body/organization:	
Name and title of person requesting this verification:	
Contact phone # of person requesting this verification:	
Email address of person requesting this verification:	
Date this request was submitted to OWINN:	
Additional information regarding current Public Works projects for requester: (for example, project owner(s), PWP/contract #(s), project name(s), etc.)	

*APPRENTICE NAME (First, Last)	RAPIDS ID #	OCCUPATION	APPRENTICESHIP PROGRAM (for example, Local 12)
Additional information regarding apprentice(s): (for example, apprentice status, wage %, etc.)			

*Apprentices only need to be verified once per year/per contractor, and once approved, can be used for multiple Public Works.

Note: The Requesting Contractor/Awarding Body/Organization certifies and assures the information above is true and correct. It also acknowledges that Journeymen wages must be paid for time worked during canceled or suspended time periods or when required ratios are not met. Furthermore, the OWINN office will not process this Apprentice Verification request unless this form is signed, and ALL FIELDS are completed.

Signed: _____ **Date:** _____

Name/Title: _____

FOR OWINN USE ONLY

Date Received: _____

Occupation	Initial Ratio		Ratio Thereafter	
	Apprentice(s)	per Journeymen	Apprentice(s)	per Journeymen
	_____ / _____		_____ / _____	
	_____ / _____		_____ / _____	

OWINN Verified by: _____ Date: _____

Forms

(to be used following award of bid)

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



TITLE
BID # BIDNUMBER
PWP# PWPNUMBER

THIS CONTRACT made and entered into on this DAY day of MONTH, YEAR by and between the City of Sparks, Nevada, a municipal corporation, existing under and by virtue of the laws of the State of Nevada, hereinafter called "City", and **CONTRACTORNAME**, a qualified Contractor in the class of work required, hereinafter called "Contractor".

W I T N E S E T H

WHEREAS, the City has awarded a contract to Contractor for providing material and/or performing the work hereinafter mentioned in accordance with the proposal of said Contractor;

WHEREAS, the Contractor will provide the material and/or perform the work for the compensation stated in said proposal, an amount which has been arrived at between the parties;

WHEREAS, each party is willing to and does assume joint liability for the contents of this Contract, and each party accordingly agrees that it shall not be construed against any party as a drafting party;

NOW, THEREFORE, IT IS AGREED as follows:

1. Scope of Work:

The scope of work for this contract is generally defined as **TITLE**. The City's Contract Documents and Contractor's Entire Proposal are on file with the City of Sparks. All terms, conditions and requirements contained within these Documents, including any and all bid documents, addenda and specifications issued by the City, are hereby incorporated by reference into this Contract.

The Contractor shall perform within the time stipulated, the Contract as herein defined and shall provide and furnish any and all of the labor, materials, methods or processes, equipment implements, tools, machinery and equipment, and all utility, transportation and other services required to construct, install and put in complete order for use in a good and workmanlike manner all of the work covered by the Contract in connection with strict accordance with the plans and specifications therein, which were approved by said City and are on file with the City, including any and all addenda issued by the City, and with the other contract documents hereinafter enumerated.

2. Payment for Project Services

As full consideration for the Services to be performed by Contractor, City agrees to pay Contractor as set forth in accordance with the bid and not to exceed fee of **\$AMOUNT** for the project.

A monthly progress payment in the amount of ninety-five percent (95%) of the value of the work completed may be made every thirty (30) days upon application by the Contractor and certification by the Project Manager that such work has been completed.

Partial payments will be made once each month as the work satisfactorily progresses and after acceptance



by the authorized City representative. The progress estimates shall be based upon materials in place, or on the job site and invoiced, and labor expended thereon. From the total of the amount ascertained will be deducted an amount equivalent to five percent (5%) of the whole, which five percent (5%) will be retained by the City until after completion of the entire Contract in an acceptable manner. Any time after fifty percent (50%) of the value of the work has been completed, the City will make any of the remaining partial payments in full.

No such estimates or payments shall be required to be made, when, in the judgment of the City Project Manager, the work is not proceeding in accordance with the provision of the Contract, or when in his judgment the total value of the work done since last estimate amounts to less than Five Hundred Dollars (\$500.00).

The cost of materials conforming to the plans and specifications (materials being those which are required to be contained and incorporated in a finished contract bid item) delivered to the project and not at the time incorporated in the work, may also be included in the estimate for payment. No such estimate or payment shall be construed to be an acceptance of any defective work or improper material. The Contractor shall be responsible for, and shall not remove from the project any material that has been included in the estimate for payment.

Final payment shall be made upon the Project Manager certifying that the Contractor has satisfactorily completed the work in conformity with the Contract Documents.

3. Time for Completion:

The Contractor shall deliver the material and/or services called for in the specifications/proposal and within the delivery time specified and in accordance with the terms of the contract. Work shall be completed within _____ days from the Notice to Proceed issued by the City of Sparks Purchasing Division. The Contractor shall not alter or vary any terms or conditions contained or incorporated herein, including but not limited to, the quantity, price, delivery date or date designated as After Receipt of Order (ARO) or date for commencement or completion of services as mutually agreed upon, unless such alteration or variation is consented to in writing by a duly authorized representative of the City.

The City reserves the right to cancel resultant Contract upon ten days written notice in the event the type and quality of the product or work performance is unsatisfactory or in default, subject to Contractor's right to cure as outlined in termination clause.

This is a non-exclusive Contract and the City reserves the right to acquire the material and/or services at its discretion, from other sources during the term of this Contract.

4. No Unlawful Discrimination:

In connection with the performance of work under this contract, the contractor agrees not to discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, sexual orientation, gender identity or expression, or age, including, without limitation, with regard to employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including, without



limitation, apprenticeship. The contractor further agrees to insert this provision in all subcontracts hereunder, except subcontracts for standard commercial supplies or raw materials.

Any violation of these provisions by Contractor shall constitute a material breach of contract. In all cases where persons are employed in the construction of public works, preference must be given when the qualifications of the applicants are equal:

- A) First: To honorably discharged soldiers, sailors and marines of the United States who are citizens of the State of Nevada.
- B) Second: To other citizens of the State of Nevada

If the provisions of this section are not complied with by the contractor engaged on the public work, the contract is void, and any failure or refusal to comply with any of the provisions of this section renders any such contract void and subject to the exceptions contained in this section, no money may be paid out of the State Treasury or out of the treasury of any political subdivision of the State to any person employed on any work mentioned in this section unless there has been compliance with the provisions of this section. Any contractor engaged on a public work or any other person who violates any of the provisions of this section is guilty of a misdemeanor. The penalties provided for in this section do not apply where violations thereof are due to misrepresentations made by the employee or employees.

5. No Illegal Harassment:

Violation of the City's harassment policy, which is incorporated by reference and available from the Human Resource Division, by the Contractor, its officers, employees, agents, vendors, consultants, subcontractors and anyone from whom it is legally liable, while performing or failing to perform Contractor's duties under this Contract shall be considered a material breach of contract.

6. Lawful Performance:

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

7. Preferences (This Section IS IS NOT Applicable to this contract):

To the extent Contractor has sought and qualified for a bidding preference and this project has a value of over \$250,000 pursuant to Nevada Revised Statutes Chapter 338, Contractor acknowledges and agrees that the following requirements will be adhered to, documented and attained for the duration of the Project:

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

Contractor recognizes and accepts that failure to comply with any requirements herein shall be a



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

To the extent Contractor has sought and qualified for a bidding preference and this project has a value of over \$250,000 pursuant to Nevada Revised Statutes Chapter 338, each contract between the contractor, applicant or design-build team and a subcontractor must provide for the apportionment of liquidated damages assessed pursuant to this section if a person other than the Contractor was responsible for the breach of a contract for a public work caused by a failure to comply with a requirement of Items 1-5 within this section. The apportionment of liquidated damages must be in proportion to the responsibility of each party for the breach.

8. Prevailing Wages:

The Contractor and subcontractors shall be bound by and comply with all federal, state and local laws with regard to minimum wages, overtime work, hiring and discrimination, including Chapter 338 of the NRS, which is entitled, "Public Works Projects."

The Contractor shall ensure that all employees on the work site are paid in accordance with the CURRENT PREVAILING WAGE RATES AS APPROVED BY THE STATE LABOR COMMISSIONER, whenever the actual value of the Contract totals One Hundred Thousand Dollars (\$100,000) or more, or when required by the Supplementary Conditions. If a Change Order causes a Contract to exceed One Hundred Thousand Dollars (\$100,000), the State Labor Commissioner may audit the entire Contract period.

Questions involving the Prevailing Wage Rates for the City of Sparks should be referred to the Labor Commissioner, State of Nevada, at (775) 687-4850.

When federal money is associated with the project making the Contract subject to both state and federal wage rates, the Contractor shall not pay less than the higher rate when the two rates differ for similar kinds of labor.

- A. Posting of Minimum Wage Rates - In accordance with NRS, Chapter 338, Section 338.020, the Contractor shall post the hourly and daily rate of wages to be paid to each of the classes of mechanics and workers on the site of Work of this Contract in a place generally visible to the workers.
- B. Pursuant to NRS 338.060 and 338.070, the Contractor hereby agrees to forfeit, as a penalty to the City of Sparks, not less than Twenty Dollars (\$20) nor more than Fifty Dollars (\$50) for each calendar day or portion thereof that each worker employed on the Contract is paid less than the designated rate for any work done under the Contract, by the Contractor or any subcontractor under him, or is not reported to the City of Sparks as required by NRS 338.070.
- C. The contractor and each subcontractor shall keep or cause to be kept an accurate record showing, for each worker employed by the contractor or subcontractor:
 - (1) The name of the worker;



-
- (2) The occupation of the worker;
 - (3) If the worker has a driver's license or identification card, an indication of the state or other jurisdiction that issued the license or card; and
 - (4) The actual per diem, wages and benefits paid to the worker.

In addition, the contractor and each subcontractor shall keep or cause to be kept an accurate record showing, for each worker employed by the contractor or subcontractor who has a driver's license or identification card:

- (1) The name of the worker;
- (2) The driver's license number or identification card number of the worker; and
- (3) The state or other jurisdiction that issued the license or card.

D. The records in Section C above must be open at all reasonable hours to the inspection of the City of Sparks, and its officers and agents. A copy of the each record for each calendar Month for the General Contractor and all Sub-Contractors must be submitted to the City of Sparks no later than 15 days after the end of each month for the previous months' wages.

9. Apprenticeship Utilization Act:

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

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

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

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



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

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

10. Acceptance by the City:

It is expressly understood and agreed that all materials provided and/or work done by the Contractor shall be subject to inspection and acceptance by the City at its discretion, and that any progress inspections and approval by the City of any item or work shall not forfeit the right of the City to require the correction of faulty workmanship or material at any time during the course of the work, although previously approved by oversight. Nothing herein contained shall relieve the Contractor of the responsibility for proper construction and maintenance of the work, materials and equipment required under the terms of this Contract until all work has been completed and accepted by the City.

11. Waiver:

No waiver of any term, provision or condition of this Contract, whether by conduct or otherwise, in any one or more instances, shall be deemed to be nor shall it be construed as a further or continuing waiver of any such term, provision or condition of this Contract. No waiver shall be effective unless it is in writing and signed by the party making it.

12. Notices:

All notices required to be given in writing by this Contract shall be deemed to be received (i) upon delivery if personally delivered, or (ii) when receipt is signed for if mailed by certified or registered mail, postage prepaid, or by express delivery service or courier, when addressed as follows (or sent to such other address as a Party may specify in a notice to the others):

PURCHASING MANAGER
CITY OF SPARKS
431 PRATER WAY
PO BOX 857
SPARKS, NV 89432-0857

CONTRACTOR:
CONTACT
CONTRACTORNAME
ADDRESS
CITY, STATE ZIP

13. Arbitration:

Any and all disputes, controversies or claims arising under or in connection with this Contract, including without limitation, fraud in the inducement of this Contract, or the general validity or enforceability of this Contract, shall be governed by the laws of the State of Nevada without giving effect to conflicts of law principles, may be submitted to binding arbitration before one arbitrator, and shall be conducted in accordance with the Commercial Arbitration Rules of the American Arbitration Association in a private



manner in Washoe County, Nevada. This award shall be final and judgment may be entered upon it in any court having jurisdiction thereof. In reaching this final award, the arbitrator shall have no authority to change or modify any provision of this Contract. All other expenses of arbitration shall be borne equally by the parties. All fees, including legal fees, shall be borne by the party who incurred them. All costs of enforcement shall be borne by the losing party. Each party shall have the right to discovery in accordance with the Nevada Rules of Civil Procedure.

14. Jurisdiction and Venue:

In the event the arbitration award is challenged, any action or proceeding seeking to do so must be brought in the courts of the State of Nevada, County of Washoe, or if the party can acquire subject-matter jurisdiction, in the United States District Court for the District of Nevada in the City of Reno. Each of the parties consents to the personal jurisdiction of such courts (and of the appropriate appellate courts) in any such action or proceeding and waives any objection to venue laid therein. Process in any action or proceeding referred to in the preceding sentence may be served on either party by sending it certified mail to the respective addresses designated for notice.

15. Indemnification:

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

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

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

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

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

If the insurer by which a Consultant is insured against professional liability does not so defend the City and applicable agents and/or staff, and the Consultant is adjudicated to be liable by a trier of fact,



the City shall be entitled to reasonable attorney's fees and costs to be paid to the City by the Consultant in an amount which is proportionate to the liability of the of the Consultant.

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

16. Licenses and Permits:

The Contractor shall procure at his own expense all necessary licenses and permits and shall adhere to all the laws, regulations and ordinances applicable to the performance of this Contract.

All Contractors, Sub-Contractors and Suppliers doing business within the City of Sparks are required to obtain a current business license from the City of Sparks prior to commencement of this contract. Per Sparks Municipal Code Section 5.08.020A: "It is unlawful for any person to transact business in the City without first having obtained a license from the City to do so and without complying with all applicable provisions of this title and paying the fee therefore."

17. Insurance:

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

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

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

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

Contractor shall provide proof of insurance for the lines of coverage, limits of insurance and other terms



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

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

Commercial General Liability

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

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

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

Minimum Limits of Insurance

- \$2,000,000** Each Occurrence Limit for bodily injury and property damage
- \$2,000,000** General Aggregate Limit
- \$2,000,000** Products and Completed Operations Aggregate Limit
- \$10,000** Medical Expense Limit

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



Coverage Form

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

Additional Insured

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

Primary and Non-Contributory

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

Waiver of Subrogation

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

Endorsements

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

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

Electronic Data Liability

If any underground work will be performed, Contractor shall maintain electronic data liability insurance applicable to the Project and insuring against liability arising out of the loss of, loss of use of, damage to, corruption of, inability to access, or inability to manipulate electronic data. This coverage shall be



maintained with a limit of liability of not less than \$1,000,000 and provide coverage at least as broad as electronic data liability coverage form CG 04 37 (or substitute form providing equivalent coverage).

Railroad Protective Liability

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

Business Automobile Liability

Minimum Limits of Insurance

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

Coverage Form

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

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

Additional Insured

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

Endorsements

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

Waiver of Subrogation.

Contractor waives all rights against City, its officers, agents, employees, and volunteers for recovery of damages to the extent these damages are covered by the commercial general liability or



commercial umbrella liability insurance maintained pursuant to this agreement. Contractor's insurer shall endorse policy to waive subrogation against City with respect to any loss paid under the policy.

Workers' Compensation and Employer's Liability

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

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

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

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

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

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

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

Minimum Limits of Insurance

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



\$1,000,000 Bodily Injury by Disease – Policy Limit

Coverage Form

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

OTHER INSURANCE COVERAGES (IF APPLICABLE)

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

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

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

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

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

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

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

ALL COVERAGES

Coverage shall not be suspended, voided, canceled, or non-renewed by either CONTRACTOR or by the insurer, reduced in coverage or in limits except after thirty (30) days' prior written notice has been given



to CITY except for ten (10) days' notice for nonpayment of premium.

DEDUCTIBLES AND RETENTIONS

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

OTHER INSURANCE PROVISIONS

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

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

ACCEPTABILITY OF INSURERS

Insurance is to be placed with insurers with a Best's rating of no less than A-VII and acceptable to the City. City, with the approval of the Risk Manager, may accept coverage with carriers having lower Best's ratings upon review of financial information concerning Contractor and insurance carrier. City reserves the right to require that Contractor's insurer be a licensed and admitted insurer in the State of Nevada, or meet any applicable state and federal laws and regulations for non-admitted insurance placement.

VERIFICATION OF COVERAGE

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

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

- A. Certificate of Insurance.** Contractor must provide a Certificate of Insurance form to the City of Sparks to evidence the insurance policies and coverage required of Contractor.
- B. Additional Insured Endorsements.** An original Additional Insured Endorsement, signed by an authorized insurance company representative, must be submitted to the City of Sparks, by attachment to the Certificate of Insurance, to evidence the endorsement of the City of Sparks as additional insured.
- C. Policy Cancellation Endorsement.** Except for ten (10) days' notice for non-payment of premium, each insurance policy shall be endorsed to specify that without thirty (30) days prior



written notice to the City of Sparks, the policy shall not be suspended, voided, cancelled or non-renewed, and shall provide that notices required by this paragraph shall be sent by certified mailed to the address specified above. A copy of this signed endorsement must be attached to the Certificate of Insurance. If endorsements are not available, Contractor shall be responsible to provide prior written notice to City as soon as practicable upon receipt of any notice of cancellation, non-renewal, reduction in required limits or other material change in the insurance required under this Agreement.

D. Bonds (as Applicable). Bonds as required and/or defined in the original bid documents.

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

SUBCONTRACTORS

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

MISCELLANEOUS CONDITIONS

1. Contractor shall be responsible for and remedy all damage or loss to any property, including property of City, caused in whole or in part by Contractor, any Subcontractor, or anyone employed, directed, or supervised by Contractor.
2. Nothing herein contained shall be construed as limiting in any way the extent to which Contractor may be held responsible for payment of damages to persons or property resulting from its operations or the operations of any Subcontractors under it, and such coverage and limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to City in this contract.
3. In addition to any other remedies City may have if Contractor fails to provide or maintain any insurance policies or policy endorsements to the extent and within the time herein required, City may, at its sole option:
 - a. Purchase such insurance to cover any risk for which City may be liable through the operations of Contractor under this Agreement and deduct or retain the amount of the premiums for such insurance from any sums due under the Agreement;
 - b. Order Contractor to stop work under this Agreement and/or withhold any payments which become due Contractor here under until Contractor demonstrates compliance with the requirements hereof; or,
 - c. Terminate the Agreement.
4. If Contractor's liability policies do not contain the standard ISO separation of insureds condition, or a substantially similar clause, they shall be endorsed to provide cross-liability coverage.

18. Liquidated Damages:

If the Product is not delivered/Project is not completed within the time stipulated in the bid, the Contractor shall pay to the City of Sparks as fixed, agreed and liquidated damages for delay and not as a



penalty (it being impossible to determine the actual damages occasioned by the delay) \$AMT for each _____ day of delay until delivery is completed; the Contractor shall be liable to the City of Sparks for the amount herein. This amount may be deducted from money due or to become due to the Contractor as compensation under this proposal in the event the Contractor fails to meet delivery schedules or product specifications.

19. Material Breach of Contract:

In the event Contractor fails to deliver the product and services as contracted for herein, to the satisfaction of the City of Sparks or otherwise fails to perform any provisions of this Contract, the City, after providing five (5) days written notice and Contractor's failure to cure such breach within the time specified in the notice, may without waiving any other remedy, make good the deficiencies and deduct the actual cost of providing alternative products and/or services from payment due the Contractor. Non-performance after the first notice of non-performance shall be considered a material breach of contract.

20. Force Majeure:

Neither party to the Contract shall be held responsible for delay or default caused by fire, riot, acts of God, and/or war which is beyond that party's reasonable control. City may terminate the Contract upon written notice after determining such delay or default will reasonably prevent successful performance of the Contract.

21. Termination:

The City may terminate the Contract for material breach of contract upon ten (10) days written notice and recover all damages, deducting any amount still due the Contractor from damages owed to the City, or seek other remedy including action against all bonds. The Contractor may terminate the Contract for material breach of contract upon thirty (30) days written notice to the City.

22. Assignment:

All of the terms, conditions and provisions of this Contract, and any amendments thereto, shall inure to the benefit of and be binding upon the parties hereto, and their respective successors and assigns. The Contractor shall not assign this Contract without the written consent of the City which will not be unreasonably withheld.

23. Entire Contract:

This Contract constitutes the entire agreement of the parties and shall supersede all prior offers, negotiations, agreements and contracts whether written or oral. Any modifications to the terms and conditions of this Contract must be in writing and signed by both parties.

24. Severability:

If any part of this Contract is found to be void it will not affect the validity of the remaining terms of this Contract which will remain in full force and effect.

25. Headings:

Paragraph titles or captions contained in this Contract are inserted only as a matter of convenience and for reference only, and in no way define, limit, extend, or describe the scope of this Contract or the intent of any provision herein.



26. Singular Includes the Plural; Gender; Title Reference:

Whenever the singular number is used in this Contract and when required by the context, the same shall include the plural, and the use of any gender, be it masculine, feminine or neuter, shall include all of the genders, and the word "person" or "entity" shall include corporation, firm, partnership, or any other combination or association.

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

27. Execution:

The parties agree to execute such additional documents and to take such additional actions as are reasonably necessary or desirable to carry out the purposes hereof. They also agree, acknowledge and represent that all corporate authorizations have been obtained for the execution of this Contract and for the compliance with each and every term hereof. Each undersigned officer, representative or employee represents that he or she has the authority to execute this Contract on behalf of the party for whom he or she is signing.

THIS SPACE INTENTIONALLY LEFT BLANK



IN WITNESS WHEREOF, the City of Sparks has caused this Contract to be executed by its officers thereunto duly authorized and the Consultant has subscribed same, all on the day and year first above written.

(Vendor)

CITY OF SPARKS, NEVADA
A Municipal Corporation

By: _____

By: _____
Ed Lawson, Mayor

(Title)

APPROVED AS TO FORM

ATTEST:

City Attorney

City Clerk

CITY OF SPARKS, NEVADA - BOND OF FAITHFUL PERFORMANCE

Bid #: _____

Bond #: _____

Surety Rating: _____

NV License #: _____

Appt. Agent Countersigning - List below with address

KNOW ALL MEN BY THESE PRESENTS: That WHEREAS, the City of Sparks in the State of Nevada has awarded to **CONTRACTORNAME** hereinafter designated as the "Principal" a contract for Bid # **BIDNUMBER**, PWP # **PWPNUMBER**, for the **TITLE** and

WHEREAS, said Principal is required under the terms of said contract to furnish a bond for the faithful and proper performance of the Contract and the Bonding Company has an "A" or better rating with Moody's or A.M. Best and T-Listed with the U.S. Treasury Department;

NOW, THEREFORE, we the Principal and _____ as Surety, are held and firmly bound unto the City of Sparks in the State of Nevada, in the penal sum of **WRITTENAMOUNT** dollars (**\$AMOUNT**), lawful money of the United States, being not less than one hundred percent (100%) of the estimated contract cost of the work, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if the above bound Principal, his or its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and faithfully perform the covenants, conditions and agreements in the said contract and any alterations made as therein provided on his or their part to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the City of Sparks in the State of Nevada, its officers and agents as therein stipulated, then this obligation shall become null and void; otherwise, it shall be and remain in full force and virtue.

As a condition precedent to the satisfactory completion of the said contract, the above obligation shall hold good for a period of one (1) year after the completion and acceptance of the said work, during which time, if the above bounden principal, his or its heirs, executors, administrators, successors or assigns shall fail to make full, complete and satisfactory repair and replacements or totally protect the said City of Sparks in the State of Nevada from loss or damage made evident during said period of one (1) year from the date of acceptance of said works, and resulting from or caused by defective materials or faulty workmanship in the prosecution of the work done, the obligation in the said sum of **WRITTENAMOUNT** dollars (**\$AMOUNT**), shall remain in full force and virtue; otherwise the above obligation shall be void.

And the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in anyway effect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the contract, to the work or to the specifications.

IN WITNESS WHEREOF, the above bound parties have executed this instrument under their seals this ____ day of _____, 20__, the name and corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Principal

By _____

Surety

By _____

CITY OF SPARKS, NEVADA – Payment Bond – Labor & Materials

Bid #: _____

Bond #: _____

Surety Rating: _____

NV License #: _____

Appt. Agent Countersigning - List below with address

KNOW ALL MEN BY THESE PRESENTS: That WHEREAS, the City of Sparks in the State of Nevada, has awarded to **CONTRACTORNAME** hereinafter designated as the “Principal” a contract for Bid # **BIDNUMBER**, PWP # **PWPNUMBER**, for the **TITLE** and

WHEREAS, said Principal is required under the terms of said contract to furnish a Bond for the faithful and proper performance of the Contract and the Bonding Company has an “A” or better rating with Moody’s or A.M. Best and T-Listed with the U.S. Treasury Department;

NOW, THEREFORE, we, the Principal, and _____ as Surety, are held and firmly bound unto the City of Sparks in the State of Nevada, in the penal sum of **WRITTENAMOUNT** dollars (\$**AMOUNT**), lawful money of the United States, being not less than one hundred percent (100%) of the estimated contract cost of the work for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally firmly by these presents.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH that if the above bounden principal, his or its heirs, executors, administrators, successors, or assigns, shall fail to pay for any materials, provisions, provender or other supplies, implements, or machinery used in, upon, for, or about the performance of the work contracted to be done or for any work or labor thereon of any kind, or for amounts due under the Unemployment Compensation Law with respect to such work or labor as required by the provisions of NRS 612, and provided that the claimant shall have complied with the provisions of said law, the Surety hereon will pay for the same within thirty (30) calendar days an amount not exceeding the sum specified in this bond, then the above obligation shall be null and void; otherwise to remain in full force and account. In case suit is brought upon this bond, the said Surety agrees to pay a reasonable attorney’s fees to be fixed by the Court.

The Bond shall insure to the benefit of any and all persons, companies and corporations entitled to file claims under NRS 339 as to give a right of action to them or their assigns in any suit brought upon this Bond.

IN WITNESS WHEREOF, the above bound parties have executed this instrument under their seals this ____ day of _____, 20____, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Principal

By _____

Surety

By _____